

**West Northamptonshire
Development Corporation**

**West Northamptonshire
Joint Planning Unit**

Infrastructure Delivery Plan
Final Report

February 2011

**Halcrow Group Limited
EC Harris**

Halcrow
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Infrastructure Delivery Plan Final Report

February 2011

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Executive Summary

- A The West Northamptonshire Infrastructure Delivery Plan (IDP) provides an important part of the evidence base for the Pre-Submission Joint Core Strategy (JCS) for West Northamptonshire. It builds on and supersedes work informing infrastructure delivery undertaken for the West Northamptonshire Development Corporation in 2008.
- B The IDP comprises a suite of documents which, together, provide evidence of the impact that the proposed growth for West Northamptonshire will have on its infrastructure up to 2026. Its purpose is to identify the infrastructure needed to deliver development in the JCS, to provide the phasing, cost and timing for each item of infrastructure identified, and to assess the extent to which this infrastructure may impact on the delivery of development. In addition, it identifies responsibility for delivery, potential funding sources and, importantly, highlights any funding gaps, as well as suggesting ways in which any impacts may be overcome.
- C The IDP comprises the following outputs:
- 1) A report providing a written commentary on the impact of a development strategy comprising 50,000 new homes for West Northamptonshire up to 2026, as proposed in the Pre-submission Joint Core Strategy (due to be published in February 2011). In addition, commentary and evaluation relating to the development strategy comprising 62,000 homes as outlined in the Emergent Joint Core Strategy of July 2009.
 - 2) An Excel-based Schedule, containing a list of infrastructure items required to deliver the development strategy outlined above for 50,000 new homes up to 2026, and showing the implications of 62,000 new homes over the same period.
 - 3) Two MS Office Programmes, showing the two levels of growth highlighted above, and indicating the relationship between key primary infrastructure (items with the potential to delay or prevent significant levels of development taking place in West Northamptonshire within the plan period up to 2026).
 - 4) Four Excel-based Housing Trajectories, showing the impact of key primary infrastructure on the timing of individual developments. For each development strategy, one trajectory shows the impact without mitigation, the other shows what could be achieved if sites were brought forward to compensate for those delayed by the provision of the required infrastructure.

- D Information for the Schedule was gathered from a broad range of sources, including planning policy and strategy documents, the WNDC Planning Obligations Strategy, and contact with individual infrastructure providers, as well as discussions with the local authorities of West Northamptonshire. These sources were collated to enable an accurate picture of infrastructure needs to be built up. Consultants from Halcrow and EC Harris provided professional views on the reliability of the data gathered for each category of infrastructure, and on its usefulness to the IDP. Where the information gathered was lacking in detail, or was not corroborated by other sources, the professional judgement of these consultants was applied to ensure the Schedule was robust.
- E Costs were generated from a range of sources. In many cases, the costs were supplied by the infrastructure providers themselves. In other cases, costs were provided by one of the local planning authorities. Where no cost was forthcoming, the consultant team generated costs using the database information. Fees were calculated from construction costs and a contingency applied.
- F The level of accuracy of the costs is commensurate to the level of information available at the time of assessment. Where limited information was available, the costs were approximated pending more information becoming available. Where more detail was known for a project and a cost had been built up, a level of variation of +/-20% to the rates used has been assumed.
- G The following infrastructure items were identified from the IDP Programme 50,000 trajectory as those with the greatest potential to delay or prevent development. In some cases, a funding and delivery mechanism has been agreed which would allow for provision of the items. In other cases, funding and delivery are yet to be determined. All the items shown below fall into the category of 'key primary infrastructure'. These are items which need to be in place before their associated development can be occupied (or, in some cases, started), but over which the developer and LPA do not have control.

Infrastructure Item	Development(s) Affected	Number of Dwellings Affected
Northampton Wastewater Treatment Expansion	Northampton North SUE	2000
	Northampton King's Heath	3500
	N'ton North of Whitehills	1000
	Northampton West SUE	1500
Nunn Mills / Ransome Road spine road – phases 1 & 2	Avon / Nunn Mills	950
London Road / Ransome Road junction improvements	Ransome Road	800
Northampton North West Bypass	Northampton King's Heath	3500
Sandy Lane Relief Road	Northampton West SUE	1500
	Norwood Farm	780
Towcester Wastewater Treatment Extension	Towcester Urban Extension	900
Brackley Wastewater Treatment Works	Brackley North	250
A45 Northampton to Daventry Link Road Corridor Improvements	Daventry North East	900
	Daventry Growth General – Urban Capacity	380
A5 / A45 Junction Improvements	Monksmoor	1000

H The impact of these, and all other items, was assessed against both the 50,000 and 62,000 housing trajectories supplied by the WNJPU. The key objective of this assessment was to

determine whether the programme for providing key primary infrastructure would allow the 50,000 dwellings proposed in the Pre-Submission Joint Core Strategy to be delivered within the Plan Period.

- I It became immediately clear from our assessment of the two trajectories that the 50,000 trajectory is not only more achievable than the 62,000, but that it allows all development proposed in the Pre-Submission JCS to be achieved by 2026, once individual developments have been brought forward to compensate for those delayed by KPI.
- J The IDP concludes that the 50,000 trajectory can be delivered without prejudice to the timetable of the JCS, and with only moderate changes to the timings and durations of development. The reason for this is simple: development is of such a scale that the few delays that are caused by KPI can be easily overcome without relying on unachievable yearly completions, or by making unrealistic assumptions on the length of time taken to gain planning permission. In other words, there is enough slack within the trajectory to allow for the management of change.
- K By contrast, the 62,000 trajectory cannot be delivered without extending the plan period beyond 2026. With more development required to be delivered in the same timeframe, yearly completions are higher and trigger points for utility upgrades and network reinforcement are reached sooner. This substantially limits scope for bringing forward developments to replace those delayed by KPI, without making changes based upon unrealistic assumptions.
- L It must be borne in mind that the trajectories shown in Appendix Four provide a 'best case' scenario, in that they assume KPI will be delivered to programme and that no further delaying factors exist. In reality, some programme slippage will occur, and unforeseen events will cause delays to some of the developments proposed in the Joint Core Strategy. This is particularly true where development is dependant upon KPI for which funding has not been secured.
- M Within West Northamptonshire, the main risks to the timely delivery of growth arising from key primary infrastructure are as follows:
- electrical reinforcement within Northampton - this is likely to be required at some point over the next fifteen years, but the scope and cost have yet to be established

- upgrade to Great Billing Wastewater Treatment Works - the current capacity will be taken up within the next ten years, and an upgrade will be needed to allow development to continue in Northampton after that. The work is not currently included within Anglian Water's investment (AMP5) programme.
- improvements to the A45 corridor west of the M1 - the A45 is currently a constraint on the growth of Daventry, and until funding is secured, development will continue to be delayed.
- application of the Highways Agency's access management strategy - this strategy covers the M1 and A45 where they abut Northampton, and will see capacity improvements at a number of junctions. Until funding is in place, and the scope of the changes is known, the growth of the town will continue to be constrained.

I Purpose of the Infrastructure Delivery Plan

I.1 Aims of the IDP

I.1.1 The West Northamptonshire Infrastructure Delivery Plan (IDP) identifies the future infrastructure and service needs of West Northamptonshire for the plan period up to 2026. As such, it provides an important part of the evidence base for the Pre-Submission Joint Core Strategy (JCS) for West Northamptonshire. The aim of the IDP, as set out in the project brief of 29th April 2010, is to provide: *"a refreshed list of prioritised infrastructure projects required to enable delivery of the level and location of growth proposed in the Joint Core Strategy for West Northamptonshire (comprising the Councils of Northampton, South Northamptonshire and Daventry) up to 2026."*

I.1.2 Specifically, the Infrastructure Delivery Plan identifies the items of infrastructure required to enable the proposed development for the area to take place. It also identifies:

- future infrastructure needs to support population change, housing growth and employment growth as detailed in the JCS
- potential costs and means of funding the required infrastructure through public funding, developer contribution and other sources
- the impact of key infrastructure on the timing and deliverability of development sites identified in the Core Strategy
- potential funding sources and responsibilities for delivery.

I.1.3 The statutory context for the IDP is provided by Planning Policy Statement 12 (Local Spatial Planning). This states that:

"The core strategy should be supported by evidence of what physical, social and green infrastructure is needed to enable the amount of development proposed for the area, taking account of its type and distribution. This evidence should cover who will provide the infrastructure and when it will be provided. The core strategy should draw on and, in parallel, influence, any strategies and investment plans of the local authority and other organisations" (paragraph 4.8).

1.2 Report Objectives

1.2.1 The Report addresses two phases of work. Phase One comprises the following:

- 1) review the current evidence base and refresh the need for infrastructure within West Northamptonshire up to 2026, in line with the need to deliver sustainable development and sustainable communities across the three districts.
- 2) consult with infrastructure providers to fill gaps in the current evidence base, and seek their views on what specific items of infrastructure are needed to deliver the planned growth of the three districts up to 2026.
- 3) identify the Primary, Secondary and Tertiary Infrastructure required to enable the delivery of growth identified in the Joint Core Strategy for West Northamptonshire.
- 4) highlight deficiencies in infrastructure (including funding gaps) and how these could be overcome.

1.2.2 Phase Two comprises the following:

- 1) demonstrate how the infrastructure identified in Phase One can be brought forward and prioritised to enable the delivery of sustainable growth within the plan area. In particular, to provide a Programme that relates specific items of infrastructure to future development, and shows clearly what is required and by when. The Programme should be flexible enough to allow it to react to changing circumstances throughout the plan period up to 2026.
- 2) provide a set of trajectories which makes clear how infrastructure influences the timing and delivery of the housing development proposed in both the Pre-Submission and Emergent versions of the Joint Core Strategy.
- 3) identify the most likely source of funding for each item of infrastructure. Further, to identify costs for all items of infrastructure, stating which constitute 'the key primary infrastructure projects' (those projects which have the greatest potential to prevent or hold up a significant level of housing development between now and 2026).
- 4) identify risks to delivery, in partnership with infrastructure providers and local authorities.

- 5) develop a clear and robust methodology which demonstrates how the process was undertaken, and provide conclusions which can be used to guide investment and shape developer contributions across the West Northamptonshire area.
- 1.2.3 For the purposes of the IDP, key primary infrastructure comprises those items which are required for development to take place, but over which the developer has limited control as they are typically linked to more than one development. These items have the potential to delay the development, regardless of the availability of developer contributions, as they are funded outwith normal developer-funded mechanisms.
- 1.2.4 This IDP builds on and supersedes work informing infrastructure delivery undertaken for the West Northamptonshire Development Corporation (WNDC) in 2008. The IDP incorporates the following changes:
- 1) The original evidence base has been updated to take account of changes to the joint core strategy investment programmes and infrastructure projects since 2008.
 - 2) The scope of the IDP has been expanded to include the whole of the Joint Core Strategy plan area. The main consequence of this has been the inclusion of Brackley.
 - 3) The format of the IDP schedule has been updated to reflect legislative requirements for the submission of evidence to ensure the provision of supporting infrastructure designed to provide for sustainable levels of growth across West Northamptonshire throughout the plan period up to 2026.
- 1.2.5 The IDP is a long term plan, covering the period up to 2026, and has been prepared during a time of particular economic uncertainty. It is recognised that the IDP provides a “snapshot” in time, and will require regular monitoring and updating over the remainder of the plan period. As the last few years have shown, it is not always possible to predict with any degree of accuracy what the prevailing social and economic conditions will be more than a few years ahead. For this reason, the IDP does not assume that the current, depressed housing market will continue into the long term, nor does it assume the economy will return to the boom conditions during the period from the late 1990s to 2008. Many of the infrastructure items identified in the IDP will be less easily funded now than they would have been a few years ago, and organisations using the IDP as a reference may need to come up with innovative and imaginative ways to generate support and funding for certain projects. This will be the case particularly where providers' budgets have been cut or reduced.

Likewise, new public / private initiatives will need careful future consideration, with strong partnership working likely to be required.

1.3 Structure of the IDP

1.3.1 The IDP is designed to be read alongside the Pre-Submission Joint Core Strategy for West Northamptonshire, for which it provides part of the evidence base.

1.3.2 The IDP charts the impact of identified infrastructure items on two housing trajectories, which seek to provide 50,000 and 62,000 homes up to 2026 respectively. The 62,000 trajectory is based upon the trajectory derived from the Emergent Joint Core Strategy, which was published for consultation in July 2009, and which reflected the housing targets contained in the Regional Spatial Strategy (RSS8). The 50,000 trajectory represents a revised level of housing provision as evidenced in the Pre-Submission version of the Joint Core Strategy, due to be published for consultation in February 2011. Whilst the focus of the Report relates to the Pre-Submission Strategy, it is considered important that the implications of the Emergent Strategy are also taken into account.

1.3.3 In addition to this report, the IDP comprises the following documents:

1.3.4 **Appendix One** provides two sets of maps showing the distribution of proposed developments in West Northamptonshire. Those labelled 6.1 to 6.4 show sites from the 2009 Emergent Joint Core Strategy, based upon a trajectory of 62,000 dwellings. Those labelled 8.1 to 8.4 show sites from the draft 2010 Pre-Submission JCS, based upon a trajectory of 50,000 dwellings.

1.3.5 **Appendix Two** provides a *MS Excel*-based schedule, listing all items of infrastructure known to be required to enable delivery of the developments proposed in the Pre-Submission JCS. The Schedule forms the main source of evidence for the remainder of the IDP.

1.3.6 **Appendix Three** provides two *MS Office* programmes, one based on the provision of 50,000 homes to 2026, the other on 62,000, both showing the relationship between key primary infrastructure and delivery of development.

1.3.7 **Appendix Four** provides four *MS Excel*-based trajectories: two are based on the higher estimate of 62,000 homes, and two on the lower estimate of 50,000. Each shows the impact of key primary infrastructure on the timing of individual developments. For both the higher and lower estimates, one trajectory is provided showing the impact without mitigation, one

showing what could be achieved if sites were brought forward to compensate for those delayed by infrastructure.

1.3.8 **Appendix Five** provides copies of the housing trajectories supplied by the WNJPU in relation to both the Emergent and Pre-Submission versions of the JCS.

1.3.9 **Appendix Six** provides a glossary of terms and acronyms used in the IDP report and appendices.

1.3.10 **Appendix Seven** provides a list of documents from which information was sourced, and to which reference was made, during the preparation of the IDP.

1.3.11 **Appendix Eight** provides a list of organisations contacted during the preparation of the IDP. These include infrastructure providers, local authorities and the consultants representing them

1.3.12 The remaining chapters of this report provide the following:

- an account of the work undertaken to prepare the IDP, including methods of engaging with local authorities and infrastructure providers
- a summary of the analysis undertaken by the consultant team to verify the accuracy of information received, and to assess the impact of key primary infrastructure on the timing and deliverability of development
- a description of the how the various appendices are to be used
- the results of the assessment of key primary infrastructure on the delivery of development, noting significant findings and making recommendations on how to overcome delays.

1.4 The 2008 West Northamptonshire Infrastructure Delivery Plan

- 1.4.1 Work to inform the delivery of infrastructure in West Northamptonshire was prepared in 2008 by EC Harris, on behalf of WNDC. This work listed and assessed the development required to deliver the future growth of the three towns within WNDC's remit (Northampton, Daventry and Towcester), along with their associated items of infrastructure. The 2008 work gave each item of infrastructure a score based upon the scale and desirability of development it enabled, and from this, produced a hierarchy of projects which could be used to prioritise investment. A report was produced setting out the purpose, process and findings of the 2008 exercise.
- 1.4.2 In May 2010, Halcrow was appointed by WNDC and the West Northamptonshire Joint Planning Unit (WNJPU) to refresh the work undertaken in 2008 in support of work being undertaken on the Pre-Submission Joint Core Strategy for West Northamptonshire. To ensure continuity, EC Harris were appointed as sub consultants.

2 Building the Evidence Base

2.1 The IDP Schedule

- 2.1.1 This chapter sets out how the evidence for the IDP Schedule was compiled, and gives the consultants' view on the quality and robustness of information gathered. It explains how engagement with infrastructure providers and local authorities was undertaken, and assesses the extent and quality of information provided for each type of infrastructure.
- 2.1.2 The range of infrastructure assessed in the IDP is wide ranging. Information has been gathered for the services and facilities detailed in Table 2.1 below.

Table 2.1: Infrastructure Types

Sector	Type	Sector	Type
Water	Water distribution Drainage and sewerage Flood defences Wastewater treatment	Energy	Electricity distribution Substations Gas distribution
Transport	Strategic highways Local highways Railways and stations Public transport Walking and cycling	Education	Primary schools Secondary schools Further education Higher education
Health	GPs and health centres Hospitals Dentists	Social and Cultural	Libraries Community halls Museums and galleries
Emergency Services	Police Fire and rescue Ambulance	Sport and Leisure	Sports centres Playing pitches Recreation grounds
Greenspace	Country parks River Nene corridor Children's playspace Parks and gardens	Training	Employment training

2.1.3 The IDP Schedule in Appendix Two provides the robust evidence base upon which the IDP Programmes (Appendix Three) are based. In turn, the IDP Programmes are used to calculate the impact of key primary infrastructure on the delivery of development proposed in the JCS, with reference to both the 50,000 and 62,000 housing trajectories. The results of this exercise appear in the four housing trajectories provided in Appendix Four.

2.1.4 The IDP Schedule lists all the items of infrastructure needed to support the delivery of the future level of growth proposed for West Northamptonshire. It provides information on the need, cost phasing, responsibility for delivery, funding sources and potential funding gaps for each item of infrastructure identified.

2.2 Preparing the Schedule

2.2.1 The Schedule was configured to bring work undertaken on the 2008 IDP into line with the growth options proposed in the Pre-Submission Joint Core Strategy. The Schedule now contains around 380 infrastructure items, split between the SUEs and other areas of development.

2.2.2 It was decided at the outset to remove from the Schedule all developments or infrastructure projects which had been started, completed, cancelled or superseded since 2008. It was also decided to differentiate between rows showing developments and rows showing infrastructure items. These two aspects are fundamentally different and it is important to draw a distinction between them.

2.2.3 The Schedule is laid out so as to show a nested hierarchy of SUEs / wider growth areas, individual developments within defined areas, followed by the infrastructure items relating to each development. A full explanation of how to read the Schedule is provided in Appendix Two.

2.2.4 Moving forward, the IDP Schedule will form the basis of a 'living document', which can be monitored and updated as required. The Schedule currently represents the evidence gathered up to December 2010. All other IDP appendices are based on the information gathered in the Schedule.

2.2.5 Each infrastructure item has been categorised as either Primary, Secondary and Tertiary. These categories reflect the sequence in which items will be delivered, and their role in relation to the development of sites and occupation of dwellings. The definitions of the three categories are set out below. The definitions were provided by the WNJPU, in

consultation with WNDC, and their use is consistent with previous documents produced by the WNJPU.

- a) Primary items are those which must be delivered to render the buildings usable. They tend to be basic physical items such as roads and sewers, and will generally be provided on-site. By definition, these items need to be delivered before the development is occupied.
- b) Secondary items are those which are needed to meet the everyday needs of residents, once the development is occupied. Some will need to be provided before the first building is occupied, others will be triggered by a certain number of completions. They can be provided on- or off-site, depending on what provision is available elsewhere. Good examples include education, healthcare and playspace.
- c) Tertiary items are those which help turn a development into a community. They contribute strongly to the residents' quality of life and to the creation of sustainable communities. Examples include libraries and country parks. Often, tertiary items will be provided off-site, sometimes serving more than one community.

2.3 Gathering the Evidence

- 2.3.1 Evidence for the Schedule was gathered from a broad range of sources. All incoming information was assessed for robustness by the consultant team, and against information contained in the WNDC 2008 IDP, to enable an accurate picture of infrastructure needs to be built up.

Information Provided by the WNJPU

- 2.3.2 The Joint Planning Unit provided a copy of information it had gathered from developers and infrastructure providers to date. This provided valuable information on the costs, start dates and durations of a number of infrastructure projects across the three authorities, along with information on funding sources, where known. This information was compiled specifically to capture the infrastructure needs of the developments and sustainable urban extensions identified in the Pre-Submission Joint Core Strategy.

WNDC Planning Obligations Strategy

- 2.3.3 WNDC's Planning Obligations Strategy (POS) sets out recommended levels of developer contribution towards a range of infrastructure items required for developments in Daventry, Towcester and Northampton.

- 2.3.4 The POS was used to generate typical costs for open space, public realm, sport and leisure, community facilities, health centres and employment training, where costed proposals were not supplied by the providers. Where actual proposals were in hand to provide these facilities (for example, if a sports centre was known to be planned within a development), the actual proposal took precedence.
- 2.3.5 Where WNDC had already used the POS to cost developments, this information was supplied for use in the Schedule. Typically, this information related to developments where planning applications had been submitted, so was most relevant to the longer-established SUEs, such as Upton Park and Northampton King's Heath.
- 2.3.6 Costs were taken from the adopted POS of December 2008. The POS is currently being updated by WNDC and is at public consultation stage. Therefore, costs are not yet available for this updated version.

Infrastructure Providers

- 2.3.7 Individual infrastructure providers were contacted to find out how they proposed to provide for the growth of West Northamptonshire over the next sixteen years. The information they provided was used to cross-check the sources listed above, and in some cases new items were added to the Schedule. The infrastructure providers were asked the following two questions:
- 1) What investment plans does your organisation have within West Northamptonshire over the next sixteen years?
 - 2) What infrastructure would your organisation need to put in place to enable the proposed growth of West Northamptonshire to take place?
- 2.3.8 To help the providers answer the second question, a copy of the IDP Schedule was provided, with an updated Schedule, containing a greater depth of information, sent later in the process. The providers were made aware of the reason for the refresh, and were informed that the IDP would be used as evidence to support the Pre-Submission Joint Core Strategy.
- 2.3.9 The information made available varied widely between providers. Some organisations were able to supply costed and programmed information in answer to both questions; others were only able to give an idea of what might be needed, without reference to costs.

2.3.10 Some organisations did not respond, or were unable to supply the type of input needed. Where this was the case, the consultant team used other sources to supplement the information. In some cases, industry experts were consulted. In others, consultants representing the providers were asked to provide information. This ensured that robust information was included for all infrastructure types.

Infrastructure Provider Workshop

2.3.11 A workshop was held with the providers on 16th July 2010. This provided an opportunity for the providers to supply further information on their investment plans with the IDP team, and to share their thoughts on risks to delivery. The day took the form of a series of mini-workshops, each focused on a particular type of infrastructure.

2.3.12 The list of mini-workshops held was as follows:

- Greenspace and Cultural Investment
- Transport
- Water
- Education and healthcare
- Power and Communications
- Emergency services

2.3.13 A small number of organisations were invited to the workshop, but were unable to attend. These organisations were contacted after the workshop, and were offered the chance to input to the IDP. Some subsequently attended meetings with members of the project team: others sent information by post and email. At the end of this process, gaps still remained in a number of areas, particularly with regard to utilities. Industry experts were commissioned to give advice on the expected level of gas and electricity infrastructure needed, and the consultant team's judgement was used to generate costs and descriptions for these items.

Local Authority Workshop

2.3.14 A workshop was held with local authority representatives on 2nd September 2010, to give the opportunity to comment on the Schedule and to help identify key primary infrastructure requirements within their areas. In addition, the workshop enabled them to outline the focus of investment and initiatives being delivered by their respective authorities. For a definition of key primary infrastructure, please refer to 1.2.3 above.

- 2.3.15 Taking each development in turn, the stakeholders flagged up any infrastructure items they considered needed to be delivered before that particular development could get underway. Where known, they gave an estimated start date and duration for the item in question.
- 2.3.16 This information, together with that gained from discussions with providers, enabled the project team to identify those items of infrastructure with potential to delay the delivery of the housing trajectory. This information was used to prepare the IDP Programmes in Appendix Three. The list of items identified was discussed by the IDP team to ensure all parties were agreed that the items should be classed as key primary infrastructure. These items were then combined with items identified from other sources, to form a comprehensive list of key primary infrastructure. The full list is provided in chapter three.

Water Cycle Study

- 2.3.17 Information on the need for water-related infrastructure in the three districts was sourced from the West Northamptonshire Water Cycle Study (WCS). The study provides information on four aspects: flood attenuation, water supply, wastewater treatment, and the wastewater network. The WCS does not supply costs, but does provide useful information on the scope of works and on the time taken to deliver the items.

Utilities Information

- 2.3.18 Additional information on electricity and gas supply was provided by industry experts at Scottish Power and WSP. Their expertise was used to plug gaps in the information supplied by the energy providers. They provided an overview of the scope of infrastructure likely to be needed for each development, and gave indicative costs and timings for the delivery of each item, based upon experience from similar developments elsewhere. Their expertise was also used to update information on likely levels of network reinforcement provided from other sources.

Planning Documents

- 2.3.19 A number of planning policy documents were consulted, as a means of cross-checking information received from other sources. These included the Northampton Central Area Action Plan (Pre-Submission version 2010), the Emergent West Northamptonshire Joint Core Strategy (consultation version 2009) and the Brackley Masterplan (draft version 2010). These documents were supplemented by information supplied by the West Northamptonshire Joint Planning Unit (WNJPU) from the draft Pre-Submission version of the JCS (2010), particularly in terms of housing targets and trajectories.

Robustness of Evidence

- 2.3.20 For all sources, both Halcrow and EC Harris have assessed the robustness and reliability of the data gathered for each category of infrastructure, and its usefulness to the IDP. Where the information gathered was lacking, detail was poor, or the information was not corroborated by other sources, Halcrow's professional judgement was applied to ensure the Schedule was as complete and robust as possible.
- 2.3.21 Where items from the WNDC 2008 IDP were used in the new IDP Schedule, the information carried forward was checked against information received from other sources, particularly from the infrastructure providers. Costs were not brought forward from 2008. All costs shown in the IDP have been reviewed by EC Harris, to ensure internal consistency and to ensure consistency with current known industry prices.

2.4 Interpreting the Evidence

- 2.4.1 Information was gathered from a broad range of sources, and by direct contact with a large number of individuals and organisations. In many cases, more than one organisation was contacted to obtain the information needed on a particular type of infrastructure. The paragraphs below summarise how each type of infrastructure is delivered, comment on the current level of provision and assess the reliability / robustness of the information provided, as well as highlighting any likely funding gaps.

Education

- 2.4.2 Information on the number and size of schools needed was provided by Northamptonshire County Council's (NCC) education department. The information provided was to a high standard, and included estimated costs, which were considered by the consultant team to be robust. The information covered both new schools and extensions to existing schools, with new provision expressed in terms of 'forms of entry' (one form of entry equals 210 school places).
- 2.4.3 Schools are provided in response to development, and therefore the delivery of new school places is linked to the occupation dates of their dependant developments, rather than tied to a long-term investment plan. Education is a legal requirement and NCC is obliged to meet the needs of all new development in its area. Therefore, there is limited potential for a lack of school places to hold up development.
- 2.4.4 Schools are provided directly by NCC, and are funded through a combination of NCC funding and developer contributions. These can be used to build new schools or to extend

existing premises. The current level of provision is good, with some spare capacity available. Due to the ongoing high political priority enjoyed by education, and to NCC's legal obligation to provide sufficient school places for children in its area, the risk of this infrastructure not being provided is considered to be slight.

Healthcare

- 2.4.5 Information on proposed healthcare facilities was provided by Northamptonshire NHS, the Primary Care Trust (PCT) for Northamptonshire. The information provided was generally of a high standard, although not all proposals had yet been costed by the provider. The PCT's information related to its larger proposals. Where a proposal had not been worked up for a particular development, or where the development was too small to have its own surgery or health centre, WNDC's Planning Obligations Strategy was used to generate a typical contribution to healthcare from the development.
- 2.4.6 The main items identified were a new health centre at Sixfields, to serve western Northampton, and a new primary care centre in Brackley, to serve the whole town. Current levels of provision are good, and Northamptonshire NHS has confirmed that no upgrade to Northampton General Hospital is currently planned, and that no upgrade is considered necessary as a result of the growth of west Northamptonshire.
- 2.4.7 The PCT confirmed that the way in which healthcare is provided is changing. From 2013, PCTs will no longer be responsible for providing new doctors' and dentists' surgeries; this responsibility will pass to the doctors and dentists themselves. This change is intended to make the NHS more responsive to the needs of the community, with surgeries able to open more swiftly where there is a clear demand. This will certainly have an impact on the delivery of health infrastructure in the West Northamptonshire SUEs, although it is too early to say what the precise impact will be.
- 2.4.8 While developers are required to contribute towards primary healthcare provision, hospital provision remains a nationally-funded item, dependant on NHS investment, and the amount of funding available from private finance initiatives. Providing hospital-related infrastructure is, therefore, beyond the control of authorities and developers within West Northamptonshire. As such, its provision remains a risk to the overall delivery of growth in West Northamptonshire.

Highways

- 2.4.9 Most information on highway infrastructure came from either the Highways Agency (HA) or Northamptonshire County Council (NCC). Their input was supplemented by information provided by WNDC and by the various local authorities. The information provided was as robust as practically possible at the time of compilation, but will be subject to further analysis in light of changes to the housing trajectory in the Pre-Submission JCS. Some costs were provided, and others were generated by the consultant team based upon current industry prices and experience elsewhere.
- 2.4.10 The HA plans its investment by looking at the cumulative impact of growth across the whole of West Northamptonshire, rather than by providing for the development of individual sites. This applies both to junction improvements and to carriageway (mainline) improvements. An appropriate contribution is then sought from each development served by these improvements. The HA is working in partnership with the West Northamptonshire Joint Planning Unit and Northamptonshire County Council to develop a transport evidence base to underpin the JCS. This encompasses a number of strands of work, including a study to consider the implications of growth on the M1 and A45 corridors and potential policy options in response.
- 2.4.11 An immediate priority for the HA is to conclude its A45 / M1 Access Management Strategy (AMS). The AMS will guide future investment along the strategically important A45 corridor between the M1 and A14, setting levels of change and investment for each junction and for the mainline carriageway. Individual proposals will then be worked up in response to the findings of the AMS. The HA only has responsibility for the mainline carriageway and sliproads on the M1 and A45; the junctions themselves are the responsibility of NCC.
- 2.4.12 The A5 Towcester bypass is currently subject to a study being undertaken by the HA, the results of which are due to be published in spring 2011. This study will determine the extent and nature of road improvements required to be funded by development, and the likely investment needed by the HA. The completion of the Towcester South Urban Extension depends upon this road being secured and delivered.
- 2.4.13 NCC provided information on a number of junction improvements. By their nature, these are more readily assigned to specific developments than the more strategic HA proposals. Among the more high profile proposals are the Sandy Lane Relief Road and Northampton Northern Relief Road Phase One, which between them will complete an orbital route around the western side of Northampton, giving access to the M1 and to SUEs to the north

and west of the town. Developments such as Northampton King's Heath, Northampton North of Whitehills and Norwood Farm are dependant upon this route being completed. NCC also intends to increase capacity at a number of junctions related to the A45, to help improve traffic flows in and out of Northampton, and to help the delivery of its proposed quality bus corridors.

2.4.14 Further west, improvements are needed to the A45 between Daventry and Northampton to enable the expansion of Daventry to be completed. Improvements to the existing A45 / A5 junction will form a key proposal for the early stages of development, and the Northampton to Daventry A45 Link Road improvements will provide the opportunity to enable development in the longer term.

2.4.15 It is acknowledged by both the HA and NCC that strategic highways around West Northamptonshire are under stress, and that improvements are needed to manage traffic more effectively. Changes enabled by the growth of the area, via developer contributions, will help towards these improvements, but central government funding will also be needed, and there remains a risk that highway improvements will be delayed if this funding is not forthcoming.

Sustainable Transport

2.4.16 The draft Pre-Submission JCS indicates that there are significant parts of the road network within West Northamptonshire which cannot cope with the expected number of trips as a result of traffic growth from existing residents, as well as from new development, if travel behaviour does not change.

2.4.17 In order to achieve wider sustainability goals, and to meet the future travel needs of the area, it is recognised that a change in travel behaviour is required. Transport-related infrastructure identified in the IDP Schedule reflects the need to provide for a minimum 20% modal shift away from private car trips from all new development. In addition to the provision of physical infrastructure, 'softer measures' such as improved ticketing, travel planning and improved travel information services will play a part in developing future strategies.

2.4.18 Northamptonshire County Council's Transport and Highways team has provided up to date information on the need for walking and cycling improvements, and the need for improved bus routes and services. In some cases, costs still need to be supplied for these items: estimates have been made by the consultant team with regard to some of these.

- 2.4.19 The main thrust of Northamptonshire County Council's strategy is to promote walking and cycling throughout the county, and to provide quality bus corridors along the main roads in and out of Northampton, with improved transport interchanges and the provision of additional park and ride sites (for example, on the A4500 west of the town, and on the A508 north and south of the town). Elsewhere, infrastructure is generally limited to improvements to specific bus routes, with a commitment to providing services into the SUEs.
- 2.4.20 Bus services are generally provided in response to development, and provision is not required before the first dwellings are occupied. Planning permissions may, however, be conditioned so that only a certain number of dwellings may be occupied before the services are provided. In this sense, sustainable transport does have the ability to delay at least some development. It is likely that some of the developments identified in the Schedule will be conditioned in this way, if and when planning permission is granted for them. The provision of bus services has potential, therefore, to delay the completion (though not, in most cases, the start) of these sites. Until the planning process begins, however, it will not be possible to quantify these delays, as this will depend on how the SUEs are split for development.
- 2.4.21 Public transport provision varies across West Northamptonshire, with bus services in some rural areas in need of improvement. The area also suffers from a historic lack of rail infrastructure, with only three railway stations in the three districts, and no railways serving Towcester, Daventry or Brackley. Extensions to the local rail network i.e. new lines or stations are not proposed for the foreseeable future, and some bus services continue to rely on subsidies from NCC. There is a risk, therefore, that sustainable transport infrastructure may not keep pace with growth.
- 2.4.22 It should be borne in mind that sufficient investment in public transport could negate the need for some of the road and junction improvements proposed around West Northamptonshire. The cost of providing this public transport infrastructure will need to be compared to that of providing the equivalent road improvements to determine the level of spend that could be saved.

Water

- 2.4.23 Information on water was taken largely from the West Northamptonshire Water Cycle Study (WCS), and the scope, duration and description of infrastructure needs was considered to be robust. The water supply and disposal infrastructure set out in the WCS will be provided by Anglian Water, with flood defence infrastructure being installed by the Environment Agency. Anglian Water's infrastructure will be delivered in one of two ways:

- 1) Connections from developments to sewers and water supply pipes will be requisitioned by the developer: that is to say, the developer will pay Anglian Water to provide the necessary pipes and connections. The requisition process is triggered by development, and is therefore entirely dependant on the timing of individual developments. This means there is no risk of these connections not being provided when growth goes ahead.
 - 2) Improvements to trunk sewers, main water supply pipes and wastewater treatment will be provided in accordance with Anglian Water's own investment plan, which takes into account committed development, and future growth, where known.
- 2.4.24 In common with other utilities, water companies plan in five-year periods. In the case of Anglian Water, the current five-year plan (AMP5) has just begun, and plans for the next period, to begin in 2015, are yet to be developed. As a result of this, neither the WCS, nor Anglian Water, were able to provide costs for infrastructure needed beyond 2015. In planning for growth, not knowing Anglian Water's plans beyond 2015 is a clear risk, and one which can only be overcome in co-operation with Anglian Water. There is also a risk that infrastructure required for the period 2016-2020 may not be included in the next five-year plan.
- 2.4.25 Development will only be possible where there is sufficient capacity at the four wastewater treatment works serving the west Northamptonshire area. An upgrade of the Whilton Works, to serve Daventry, is programmed to begin in 2013, and will be complete by 2016. this will resolve the current capacity issues here.
- 2.4.26 The Great Billing Works, which serves Northampton, has capacity for the first five years of the 62,000 housing trajectory (upon which Anglian Water's latest estimates were based). This equates to the first eight years of the 50,000 housing trajectory. Beyond this period, capacity is likely to become constrained, and further expansion will be needed. It is possible that the expansion of these works could be included in AMP6, due to begin in 2015, but a case for this would need to be made to Anglian Water.
- 2.4.27 Towcester Treatment Works is acknowledged by the WCS to have capacity for a further one thousand homes, before a higher flow consent application is needed. We understand that an extension is unlikely to be considered before AMP7, due to begin in 2020.
- 2.4.28 There are no long-term insurmountable constraints to providing wastewater treatment in Brackley. However, further work is needed to determine the available capacity at Brackley Treatment Works, and it may be that upgrading is needed at some point between now and

2026. We understand that it may be possible to mitigate any upgrade by diverting stormwater drainage away from the works, through which it currently passes, taking up capacity that could be used for sewage.

- 2.4.29 Surface water drainage is the responsibility of the three district councils. Until such time as a Surface Water Management Plan (SWMP) is completed, the extent of infrastructure needed to combat this source of flooding will not be known. However, if the SWMP for Northamptonshire follows the examples of other SWMPs currently in production, its focus will be on personal resilience, rather than new infrastructure. In terms of strategic flood defences, Northampton has recently benefitted from the completion of the Upton flood Attenuation Area, and the Environment Agency has confirmed that no strategic flood defences are proposed within West Northamptonshire for the foreseeable future.

Power

- 2.4.30 Information on power supply - both gas and electricity - came from a range of sources. A number of items were included from the 2008 IDP and these were checked against information supplied by Central Networks and National Grid. In addition to this, estimates of the expected demand for gas and electricity for each development were supplied by industry experts from WSP and Scottish Power. These estimates were drawn from experience of similar developments elsewhere. The infrastructure required to meet this demand was then supplied for use in the Schedule.
- 2.4.31 WSP and Scottish Power provided typical costs for the energy-related items shown on the Schedule. Following the involvement of the industry experts, the utilities information was considered to be of an acceptable standard by the consultant team. However, it would be improved by input from the energy companies, and it is recommended that any future revision of the IDP treats this as a priority.
- 2.4.32 Electricity supply infrastructure is supplied by Central Networks, which is part of Eon. As with water infrastructure, connections to the grid are requisitioned by developers, who pay Central Networks to provide the cables and secondary substations needed to serve the development. Because the requisition process is triggered by development, the provision of this infrastructure is entirely dependant on the timing of individual developments.
- 2.4.33 Gas supply infrastructure is requisitioned the same way, with developers paying National Grid to provide the low pressure pipes needed to serve the development. The risk of either gas or electricity connections not being provided is, therefore, judged to be small.

- 2.4.34 Where primary substations (for electricity), or high pressure regulators (for gas) are required, the first developer to trigger such a need pays the full cost of the facility. If further developments come along which draw on the same facility, the developers who paid for the substation or regulator to be installed may claim back a proportion of what they paid from the new developer. Either way, the infrastructure is provided in response to the development. It is possible that this method of procurement may prevent or delay development if the cost of the infrastructure is too onerous for the first developer, in which case the developer would need to come to an arrangement with other developers in the area, to see whether an agreement could be reached to split or swap costs.
- 2.4.35 Reinforcement of the existing network will be needed if the current housing trajectory is to be delivered. In Northampton, a new 132kV electricity supply is likely to be needed at some point in the IDP period, and possibly a new 132kV substation. Both of these will serve the whole town. Direct input from Central Networks will be needed in order to establish when exactly these items will be required.
- 2.4.36 In Daventry, the industry experts consulted in the course of preparing the IDP have suggested that a new high / medium pressure gas main may be required during the IDP period. The need for this item, and its timing in relation to levels of growth, will need to be verified by National Grid at a later date.

Sport and Leisure

- 2.4.37 In the majority of cases, contributions towards sport and leisure provision have been derived from WNDC's Planning Obligations Strategy. This provides a high degree of accuracy over costs, but does not allow for specific facilities to be scoped.
- 2.4.38 The West Northamptonshire Sports Facilities Strategy makes a number of recommendations for new or improved sports facilities around the three districts, but does not tie these to specific SUEs or developments. It advocates a partnership approach in providing sports facilities, whereby provision and funding is shared between private clubs, developers, local authorities, healthcare providers, Sport England and the national governing bodies of individual sports. It also advocates the sharing of space with community buildings, shops and offices, schools and libraries.
- 2.4.39 The Strategy makes a case for a 'Sporting Quarter' in the Moulton area, but does not suggest this is necessary to enable development. Elsewhere, it is assumed that growth will be

catered for by extensions to existing facilities, and by private investment in new facilities once market demand makes this viable.

2.4.40 The Strategy reports that facilities in Northampton are largely adequate, but that better community access is needed, specifically by encouraging shared use of school facilities. In Daventry District, the West Northamptonshire Sports Facilities Strategy identifies a shortfall in swimming pool and sports hall provision, but notes that this is largely in rural areas, away from the SUEs. Facilities in South Northamptonshire are stated as meeting demand, with the exception of astroturf pitches, which are a good example of a facility which could be shared with schools.

2.4.41 The improvements suggested in the Sports Facilities Strategy should be regarded as a guide indicating how the developer contributions set out in the Schedule against each development should be spent.

Telecommunications

2.4.42 Telecommunications operators follow a different pattern to other providers in that they pay developers to provide their developments with infrastructure, rather than seek contributions from them. This information was obtained through contact with BT Openreach, which provides the required infrastructure for all wire- and cable-based telecoms. BT Openreach was able to guarantee that they would provide phone and cable lines wherever it proved possible, in response to development on the ground.

2.4.43 Current levels of provision are good, and no difficulties are foreseen in providing the infrastructure needed to serve new development.

Green Infrastructure

2.4.44 Direct contact was made with a number of green infrastructure providers. Where these providers identified specific proposals, these were included in the Schedule. Where no proposals were identified within a particular SUE, a typical cost for green infrastructure was obtained from the Planning Obligations Strategy. These costs are considered to be robust overall, but actual spending will, of course, vary from one development to the next, depending on the extent and standard of green infrastructure already present. As green infrastructure proposals are worked up in more depth, and costs become available, these should be applied to the IDP for greater accuracy.

- 2.4.45 Long term plans have been drawn up by a number of greenspace providers to create large areas of linked open space across the county, the prime example being the River Nene regional park, which will link together a number of parks and open areas along the river valley, with Becket's Park as its hub. Where specific items are proposed, such as the country parks at Upton and Harpole, these have been included in the IDP. Smaller proposals exist at Towcester Water Meadows, Daventry Country Park and Borough Hill (near Daventry).
- 2.4.46 Funding is known to be a problem for longer term green infrastructure proposals, as it is with cultural and leisure investment generally. While major items, such as Harpole Country Park, proposed as part of larger planning applications, are likely to be funded, indications are that some of the longer term ambitions, such as the intention to create links to and from Salcey Forest, may be delayed for the foreseeable future.
- 2.4.47 There is, therefore, a risk that some of these wider area green initiatives may not be funded. However, green space and playspace within and adjoining developments is more certain, as it can be funded from developer contributions.

Community Facilities

- 2.4.48 In the majority of cases, the provision of community facilities has been derived from the Planning Obligations Strategy. This provides a high degree of accuracy over costs, but does not allow for specific facilities to be scoped.
- 2.4.49 Where applications have been submitted, community facilities are generally included in proposals for local centres: these are shown on the Schedule. Typically, the expectation is that these facilities will be provided in shared buildings which also provide space for other uses, such as healthcare, leisure or emergency services.
- 2.4.50 In large developments, community facilities are often provided directly by developers, giving a high degree of confidence in their provision. This is likely to be the case in some of the larger SUEs in West Northamptonshire. In smaller developments, contributions will be sought towards the upgrade of existing facilities and the provision of new ones, but the facilities themselves will be provided by third parties, often local authorities. Where additional funding is needed on top of any developer contributions, there is a clear risk that facilities may not be provided.

Emergency Services

- 2.4.51 Information on the emergency services was sourced largely through contact with the services themselves, and is considered reliable by the consultant team. Costs were made available for a number of new facilities by Northamptonshire Police.
- 2.4.52 As a general rule, while the emergency services do take account of planned population growth in developing their investment plans, they do not provide infrastructure to cater for specific developments, but plan on a countywide basis. Major new facilities may be located in or beside SUEs, but could just as easily be provided elsewhere. Access is the main consideration, as the facilities will generally serve a large area. Facilities are provided directly by the emergency services, but may draw on contributions from developers, particularly where relocation of buildings is concerned.
- 2.4.53 Northamptonshire Police is presently reviewing its assets, following a restructuring of the force, and will be able to make more information on its needs available during 2011. In terms of current proposals, the force is shortly to begin construction of a major new holding facility at Brackmills, and has plans for a number of 'Safer Community Team' facilities. These are buildings within residential neighbourhoods which community safety officers can use, but which do not have the full services of a police station. At the time of writing, Northamptonshire Police was unsure how many of these facilities could be delivered, due to the impact of budget cuts.
- 2.4.54 Northamptonshire Fire and Rescue are not proposing any new built infrastructure, but are instead focusing their investment on vehicles and equipment. Population growth will be taken into account when planning budgets and priorities, but this will need to be considered in the light of overall budget cuts.

2.5 Additional Risks

- 2.5.1 In addition to the risks identified above for specific types of infrastructure, some general risks were raised by the providers at the infrastructure provider workshop, supplemented with information supplied later by email.
- 2.5.2 The principal risk identified by most providers was lack of funding. This was particularly true of local authority-funded organisations. There was a general feeling among those providing green or cultural infrastructure that their budgets would be first to be reduced as the cuts outlined in the spending review came into effect. In some cases, the lack of certainty over funding meant the providers were unwilling to share any information on costs and timings, as

this might have opened them up to unwanted scrutiny at a later date. Notwithstanding this, where there was a clear will to see a certain item of infrastructure provided, the item was included in the Schedule, even when few details were shared.

- 2.5.3 The implications of the revocation of the Regional Spatial Strategy housing figures was mentioned as a risk by the transport providers, as their investment plans largely depend on funding from development, which impacts upon both their ability to mitigate new development, and to resolve existing traffic problems. This was taken into account in the consideration of key primary infrastructure.

3 Establishing the Impact of Key Primary Infrastructure

3.1 Introduction

- 3.1.1 This chapter assesses the impact of key primary infrastructure on the growth of West Northamptonshire. In particular, it looks at how specific items of key primary infrastructure impact on the delivery of development proposed in the Pre-Submission Joint Core Strategy.
- 3.1.2 Key primary infrastructure (KPI) comprises those items which are required for development to take place, but over which the developer has limited control. Often, these items will be linked to more than one development. KPI has the potential to delay the start or the completion of development, regardless of the availability of developer contributions, as funding for the items in question will depend upon third party organisations.
- 3.1.3 The two housing trajectories provided by the West Northamptonshire Joint Planning Unit show two contrasting scenarios. The first scenario, which is taken from the current, Pre-Submission, version of the Joint Core Strategy, provides for 50,000 dwellings up to 2026. This trajectory forms the focus of the assessment in this chapter. The second scenario is taken from the earlier, Emergent JCS, and provides for 62,000 dwellings. The Emergent JCS was produced in response to the Regional Spatial Strategy, and is being assessed to provide a comparison with the Pre-Submission JCS.
- 3.1.4 The two housing trajectories are shown in the two programmes in Appendix Three, alongside the primary infrastructure items. A number of the primary infrastructure items shown in these programmes have a direct impact, or potential direct impact, on the start or completion of certain developments, and thereby the delivery of the JCS. These items are the 'key primary infrastructure' items referred to above.
- 3.1.5 The timings of the developments shown in the two IDP Programmes have been adjusted to reflect the impact of the key primary infrastructure items. These adjustments either put back the start of a development or create a time gap at some point during the development. The Programmes therefore show the impact of key primary infrastructure on the delivery of housing in West Northamptonshire. Amended trajectories have been produced showing this impact, and these are provided at Appendix Four.

50,000 Housing Trajectory

3.2 Key Primary Infrastructure

3.2.1 Key primary infrastructure projects affecting the 50,000 housing trajectory are listed in Tables 3a and 3b below. 3a lists those with a direct impact on the trajectory, and 3b those with a potential impact. (Impacts are considered in the IDP Programme):

Table 3a: Key primary infrastructure projects affecting the 50,000 housing trajectory

SUE / Wider Area	Key Primary Infrastructure	Schedule reference	Comments
Northampton Town Centre	Nunn Mills / Ransome Road spine road – phase I	F4	Phase I of spine road needs to be in place to provide access to Avon / Nunn Mills development
Northampton Town Centre	London Road / Ransome Road junction improvements	F5	These junction improvements are to be completed prior to the start of the Ransome Road development.
Brackley Town Centre & General	Brackley Waste Water Treatment Works	V5	In the short term, the WWTW has capacity for the five-year housing land supply. In the longer term, an extension will need to be funded and delivered through the AWS business planning process. The environmental capacity assessment and infrastructure feasibility assessment have not identified any constraints to providing this infrastructure. There are currently high unaccounted for flows at Brackley WWTW. A new consent may be needed by 2016 dependant on the success of the unaccounted for flow reduction scheme. Developments at Brackley North and Brackley East would be interrupted whilst awaiting completion of works to increase capacity.
Daventry District General	A5/A45 crossroads	AC3	The delivery of Monkmoor development is dependent on completion of this infrastructure.

Table 3b: Key primary infrastructure projects with potential to affect the 50,000 housing trajectory

SUE / Wider Area	Key Primary Infrastructure	Schedule reference	Comments
Northampton Town Centre	Waste Water and Surface Water Infrastructure	E5	<p>There is limited capacity in the combined sewer network, and limited capacity in the river network for additional runoff from new impermeable areas. If developers are unable to manage the rate and volume of runoff and sewage from their site through SUDS, major new surface water infrastructure will be required.</p> <p>This infrastructure serves the developments of Northampton West SUE, Northampton King's Heath and Northampton North of Whitehills</p>
Northampton Town Centre	Nunn Mills / Ransome Road spine road – phase 2	F4	Phase 2 of spine road is required to be in place by the time of 450 completions on the Ransome Road development.
Dallington Grange Area	North West Bypass	J1	<p>Comprises two sections. The longer western section will be delivered by Northampton King's Heath as a necessary access to the development; the shorter eastern section will not (shown as a single scheme on the IDP).</p> <p>Limits the development of Northampton King's Heath and Northampton North of Whitehills. Delivery to be within 0 - 3 years of first completions.</p>
Northampton West	Electrical supply – reinforcement to Countess Rd bulk supply sub-station	L1	Whilst this has the potential to be infrastructure that could cause delay, it has not been identified in the planning process as affecting any specific development.
Northampton West	Northampton West 33/11kV reinforcement	L4	<p>Replace transformers with higher rated units or install 132/11kV sub-station.</p> <p>Whilst this has the potential to be infrastructure that could cause delay, it has not been identified in the planning process as</p>

SUE / Wider Area	Key Primary Infrastructure	Schedule reference	Comments
			affecting any specific development.
Northampton West	Sandy Lane Relief Road	O2	New single carriageway road alongside Norwood Farm development – southern section already built by HCA. Until completed, this road will restrict development at Northampton North, Northampton King's Heath and Northampton North of Whitehills, Northampton West, and Norwood Farm. Other developments in Northampton West are adequately served by the existing road system.
Northampton General	Northampton Wastewater Treatment Works	R16	Subject to the planned capital maintenance improvements being delivered, the WWTW has capacity for the five-year housing land supply (to 2015 from WCS). Beyond this, a new consent will be required, and additional infrastructure will need to be funded and delivered through the AWS business planning process, but the environmental capacity assessment and infrastructure feasibility assessments have not identified any constraints to providing this infrastructure. Infrastructure has potential to affect Avon/Nunn Mills, Ransome Rd, Northampton South - Collingtree, Northampton North, Northampton King's Heath, Northampton North of Whitehills, Northampton West, Upton Lodge, Upton Park, Norwood Farm, Pineham, Grange Park, Northampton Urban Capacity, Northampton Medium & Small Commitments, and Former School Sites.
SNC General	A5 Bypass	Y4	Bypass proposed from the A43 to the Whittlebury Turn east of the Town is currently the subject of a study expected to be issued in March 2011. Whilst not identified as causing a delay to development, it has the potential to impact on the Towcester's development.
Daventry North East	Oil pipelines	AA13	Reinforcement / protection of BPA oil pipelines. If work necessary, it could affect Daventry North East / Churchfields development.

SUE / Wider Area	Key Primary Infrastructure	Schedule reference	Comments
Daventry North East	Daventry Wastewater Treatment works	AA16	Upgrading of the Whilton Sewage Treatment Works to ensure sufficient capacity. Works to start in 2011 with completion in 2015.
Daventry General	A45 corridor measures, including A45 Northampton to Daventry Link Road improvements	AC2	Required to enable growth of the Daventry North East SUE/Churchfields and Daventry Urban Capacity beyond 1250 completions. Duration at 5 years with earliest start 2013.

3.2.2 It should be noted that there are some primary infrastructure items for which the start date and duration are not known, as identified on the 50,000 IDP Programmes. Accordingly, there may be other key primary infrastructure works which could impact upon the Housing Trajectories, but which have not been considered due to inadequate information. In particular improvements to the A45 and M1 around Northampton, known as the A45/M1 Access Management Strategy, have been identified by the Highways Agency as a requirement to accommodate the growth of the town. Mitigation to address the cumulative impact of development on this part of the Strategic Road Network will require a co-ordinated approach. The Highways Agency has identified that successful implementation of the strategy will be dependent on partnership working to secure developer contributions.

3.3 Explanation of the Programme

- 3.3.1 The 50,000 Programme shows developments by yearly completion, alongside the primary infrastructure items, some of which are KPIs with a direct or potential impact on development.
- 3.3.2 The Programme shows the primary infrastructure items identified on the IDP Schedule, with start dates and durations where known. If the start date is known but the duration is not, the duration is shown as one year: while it is recognised that the delivery times for each item will differ, the one-year duration is taken for consistency. Any attempt to put a duration to these items may give the false impression that the duration is known. Where neither the duration nor start date are known, this is noted against the item. Assumptions have also had to be made where information is incomplete, in order for the infrastructure to be programmed.
- 3.3.3 The IDP Programme (Appendix Three) shows all the housing developments, with each row giving the annual completion rates. The developments shown on the IDP Programme reflect the annual completion rates according to the housing trajectories provided by the WNJPU, with adjustments made for the impact of KPI.
- 3.3.4 Key primary infrastructure items are listed in Tables 3a and 3b above. In common with other primary infrastructure items, these items appear as red bars in the Programmes. Where KPI impacts, or has the potential to impact, on a development, a connection between the two is shown in red.
- 3.3.5 Where a primary infrastructure item needs to be in place before a development can exceed a given number of occupations (the trigger point), the primary infrastructure item is shown as being completed at the same time that the trigger point is reached. Where the trigger point is not specified, or has not yet been calculated, a trigger of 100 homes has been assumed. These primary infrastructure items often relate to utilities where reinforcement is required to enable the existing supply to continue to operate effectively.
- 3.3.6 The primary infrastructure items so linked to development are assumed to have a duration of one year. These primary infrastructure items, and the developments to which they relate, are linked in grey. On the assumption that they will have a year's duration, they are shown as starting one year prior to the date of completion.

3.4 Analysis of the 50,000 Programme

Note: all references pre-fixed 'ID' related to the IDP Programme in Appendix Three.

Northampton

- 3.4.1 The Nunn Mills / Ransome Road spine road, phase 1 (ID 36), is planned to be completed by 2012/13, and needs to be in place before the first occupation in the Avon / Nunn Mills development. According to the original WNJPU housing trajectory, the first occupations were due in 2011/12. However, the impact of phase 1 of the spine road has delayed occupation by two years to 2013/14. With a planned completion date of 2012/13, and pre-construction work currently ongoing, the planned completion date of the spine road seems realistic, with little opportunity to bring it forward.
- 3.4.2 Improvements to the London Road / Ransome Road junction (ID 38) are required before the Ransome Road development yields its first occupations, originally planned for 2011/12. However, these improvements are not due to be completed until 2011/12, enabling the first occupations to be realised in 2012/13 and thereby delaying the development by one year.
- 3.4.3 The main sewer running through the town centre (ID 8 & 307) is near full capacity. Whilst not currently restricting redevelopment, it will limit new development that would increase flows in the town centre, and this may result in objections to planning applications. However, as this sewer serves the Northampton West SUE (ID 157 & 167), Northampton King's Heath (ID 97) and North of Whitehills (ID 119), it could impact on these developments. The scale and type of solution to overcome this limitation will be determined by the Northampton Central Drainage assessment that reports by May 2011. Anglian Water has programmed work to increase capacity of the sewage network serving the North and West of Northampton over the years 2014-16 and 2017-19. With developments starting to be occupied in 2017/18 for Northampton West SUE, and in 2014/15 for both King's Heath and North of Whitehills, this KPI has the potential to delay development if the existing system is unable to take further flows by these dates.
- 3.4.4 Phase 2 of the Nunn Mills / Ransome Road spine road (ID 37) is required to be in place by the time 450 dwellings have been occupied on the Ransome Road development (ID 17). With the spine road due to be completed in 2015/16 and the 450 occupations being reached in 2018/19, the risk of this infrastructure affecting the development is very low.
- 3.4.5 The North West Bypass (ID 110) comprises two sections, with the longer section required to be provided within the first three years of first completions at King's Heath. The third year of the development occurs in 2016/17, which gives five years to plan, requisition and

construct the bypass. Accordingly, this KPI is not currently seen as having a direct impact on the King's Heath (ID97) or North of Whitehills (ID119) developments, but could potentially cause a delay should the bypass not be delivered within the next five years.

- 3.4.6 Northampton North SUE (ID 74), Northampton King's Heath (ID 97), North of Whitehills (ID 119), Northampton West SUE (ID 157 & 167) and Norwood Farm (ID 211) are developments which need the Sandy Lane Relief Road (ID 219) to be in place before they can begin. Providing the Relief Road is completed by 2013/14, none of these developments are affected. However, with a start date of 2013/14, any delay to this road would impact immediately on Norwood Farm. Of the other developments, a delay to completion of the Relief Road of more than one year would put back the start of Northampton North SUE, Northampton King's Heath and North of Whitehills, all of which commence in 2014/15. The two remaining developments of Northampton West start four years after the completion of the Relief Road, and therefore the risk of delay to these is minimal.
- 3.4.7 Neither of the Northampton West electrical primary infrastructure projects of Reinforcement to Countess Road bulk supply sub-station (ID 153) and the 33/11kV Reinforcement (ID 154), are seen as impacting on Northampton West developments. The planning process has not identified these as affecting applications but there is the potential that the existing supply would need reinforcing, depending on demand from elsewhere, to meet the needs for development in Northampton West.
- 3.4.8 The West Northamptonshire Water Cycle Study, which has identified capacity issues within the area, is based upon the 62,000 trajectory. As a general conclusion, current capacity for the wastewater treatment works in the area is able to accommodate developments over the next five years to 2015/16. Under the 62,000 trajectory, developments would have produced between 18,000 and 19,000 dwellings by 2015/16; the 50,000 trajectory will not reach this number until 2018/19. Any delays to developments for the 50,000 housing trajectory, therefore, would not occur until 2018/19.
- 3.4.9 In Northampton generally, work to increase the capacity of the Great Billing Wastewater Treatment Works (WWTW) (ID 309) is expected to be completed by 2018/19, at the same time as the maximum capacity of the existing system is reached. Accordingly, the WWTW works will not cause any delay to development in Northampton, providing completion of the works is achieved when planned. Should the works be delayed, this would have an immediate impact on the developments of Avon / Nunn Mills, Ransome Road, Northampton South, Northampton North SUE, Northampton King's Heath and North of Whitehills, Northampton West SUE, Upton Lodge, Upton Park, Norwood Farm, Pineham, Grange Park,

Northampton Urban Capacity, Northampton Medium and Small Commitments and Former School Sites.

Towcester & Brackley

- 3.4.10 The Towcester Wastewater Treatment Works (WWTW) (ID 329) has capacity for developments to 2015/16 under the 62,000 trajectory, but under the 50,000 trajectory this translates to 2018/19, as explained under 3.4.7 above. Work to extend the WWTW is to be completed in 2018/19. Consequently, providing the works are completed to the timescale planned, there is no impact on development in Towcester, or on the Towcester Urban Extension (ID315). However, as the completion of the WWTW works occurs at the same time as the existing works reaching capacity, any delay in completing the works would have an immediate corresponding delay to the Towcester Urban Extension development.
- 3.4.11 Likewise, the Brackley Wastewater Treatment Works (WWTW) (ID 340) can accommodate flows to 2018/19, as explained in 3.4.7 above. The scheme to increase capacity starts in also in 2018/19 and will take four years to complete. With completion in 2021/22, this creates a delay to both the Brackley North (ID 343) and Brackley East (ID 363) developments of three years.
- 3.4.12 Whilst awaiting the outcome of a study due to report in March 2011, the A5 bypass (ID 405) has the potential to affect developments in Towcester. The study is looking at connections to the A43 as well as the need for this bypass which, owing to its longer route than passing through the town, would require other measures to encourage its use.

Daventry

- 3.4.13 Two primary infrastructure projects have the potential to delay the start of the Daventry North East development (ID 416). These are the diversion of high voltage electricity supplies (ID 431) and the reinforcement / protection of oil pipelines (ID 432). Both these projects need to be completed in advance of Daventry North East, the first occupations of which are due in 2017/18. With six years to carry out these two projects, and with work able to start on those parts of the development site free from constraint, the risk of delay to the development is small.
- 3.4.14 With the Whilton Wastewater Treatment Works (ID 433) operating at near capacity, Anglian Water plans to upgrade the WWTW within the current AMP period, starting in 2011 and taking four years to complete. This is not expected to affect development in the short term and, therefore, is not shown as delaying any development in Daventry.

3.4.15 Development in Daventry could be affected by two highway projects. The first, the A45 Northampton to Daventry Link Road (ID 488), has to be completed to enable development of dwellings over 1000 at Daventry North East (ID 422) and over 250 on the Daventry Urban Capacity Sites (ID 467). The Link Road is planned to start in 2013/14, with three years of planning and two years of construction, bringing completion by 2018/19. With this completion date, neither development is delayed: as Daventry North East will not reach the 1000 threshold until 2021/22, three years ahead of the Link Road completion, and the Urban Capacity sites will not reach the 250 threshold in 2020/21, two years after the Link Road completion.

3.4.16 The second highway KPI in Daventry is the A5/A45 crossroads (ID 489), which needs to be completed before Monksmoor can begin. With the housing trajectory showing completions at Monksmoor from 2012/13, the development has been put back a year due to the A5/A45 crossroads not being completed until 2013/14. Should the infrastructure not be completed by the planned date, the development will be correspondingly delayed.

3.5 Explanation of the Housing Trajectories

3.5.1 Housing Trajectories have been prepared to determine what effects key primary infrastructure projects will have on the WNJPU housing trajectories, and to identify the potential to bring forward developments to compensate for those developments that have been delayed.

3.5.2 The Housing Trajectories show the impact that key primary infrastructure has on the yearly completion totals of the WNJPU housing trajectory. Yearly completions are taken from the 50,000 IDP Programme and entered onto the Housing Trajectory, with the annual figures totalled at the bottom. The amended totals are compared with the original WNJPU trajectory to give a difference in yearly completions which demonstrates the impact of KPI.

3.6 50A Housing Trajectory

3.6.1 This Trajectory shows the WNJPU's 50,000 housing trajectory once the KPI items have been factored in. The impact of the KPI items is to delay the start or to interrupt the continuity of some developments.

3.6.2 The start of the Avon/Nunn Mills development can only go ahead once the first of two phases of the Nunn Mills / Ransome Road spine road is completed. Consequently, the start is put back two years to 2013/14, by which time phase I of the spine road is forecast to be in

- place. Despite the delay to the start, completion of the development is still within the Plan period.
- 3.6.3 From the 50,000 IDP Programme, the need for improvements to the London Road / Ransome Road junction has delayed the start of the Ransome Road development by one year to 2012/13. It is anticipated that Avon/Nunn Mills will still be completed within the Plan period.
- 3.6.4 The need to complete an upgrade of the Brackley Waste Water Treatment Works (WwTV) in order accommodate flows from 2018/19 onwards has created a time gap in both the Brackley North and Brackley East developments. For Brackley North, this has delayed the completion of 650 dwellings by three years, from 2019/20 to 2021/22. In doing so, the last year of the development now falls beyond the Plan period, finishing in 2026/27. For Brackley East, the number of completions delayed over the same three year period is 155, but all completions occur within the Plan period.
- 3.6.5 The last development shown in the 50,000 Housing Trajectory as incurring a delay is Monksmoor. This is a result of the A5/A45 crossroads improvements having to be in place before the first occupations occur at Monksmoor. Instead of occupation of the development beginning in 2012/13, it is delayed by a year to 2013/14. Despite this delay, the development is completed within the Plan period.
- 3.6.6 The 'Yearly difference' between the WNJPU's housing trajectory and the 50A Housing Trajectory shows shortfalls in completions from 2011/12 to 2020/21, with the exception of a surplus of 71 in 2017/18. From 2021/22 onwards, a surplus occurs. The yearly shortfalls range from 16 in 2015/16 to 279 in 2020/21. At the end of the plan period, the cumulative shortfall is 100, which is fully compensated for in the following year, 2026/27.

3.7 50B Housing Trajectory

- 3.7.1 The 50B Housing Trajectory shows the potential for development to be brought forward to compensate for shortfalls caused key primary infrastructure. The developments that can be brought forward, and the period by which they can be advanced, are derived from the 50,000 IDP Programme. The developments brought forward are those which are not constrained by key primary infrastructure. Where there are no constraints, the earliest date to which developments have been brought forward is 2013/14, which is assessed as a realistic start date allowing for the time to gain planning permission.

3.7.2 The developments that have been brought forward, together with their earliest start dates are:

SUE / wider dev't area	Development
Northampton South	Collingtree brought forward from 2017/18 to 2013/14
Northampton South	South of Brackmills brought forward from 2019/20 to 2013/14
Dallington Grange	King's Heath brought forward from 2014/15 to 2013/14
Dallington Grange	North of Whitehills brought forward from 2014/15 to 2013/14
Northampton West	Northampton West SUE brought forward from 2017/18 to 2013/14
Northampton South East	Wootton Fields brought forward from 2018/19 to 2013/14
Northampton General	Urban Capacity sites brought forward from 2017/18 to 2013/14
Brackley North	The last five years of Brackley North completions brought forward from 2022/23 to 2021/22
Brackley East	The first three years of Brackley East completions brought forward from 2016/17 to 2013/14
South Northamptonshire General	Urban Capacity sites brought forward from 2020/21 to 2013/14
Daventry North East	Daventry North East brought forward from 2016/17 to 2014/15
Daventry District General	Urban Capacity sites – the first three years brought forward from 2017/18 to 2013/14 and the last six years brought forward from 2020/21 to 2018/19.

3.7.3 The one development that finishes outside the Plan period is Brackley North, which runs until 2026/27. The last five years of this development have been brought forward by one year to bring it within the period. To achieve this, the delay caused by work to increase the capacity of the Brackley North Waste Water Treatment Works (WWTW) has to be overcome. The three-year delay caused by work to the WWTW would be overcome if work could be started earlier than 2018/19. A reduction in the construction period would have the same effect, as could reducing the scope of works. However, this last option may jeopardise the longer-term capacity of the WWTW and create a problem in future years. If

the trajectory figures are open to change, reducing completions in the pre-2015/16 years would lower flows and enable another year's completions to be accommodated by the WWTW. This would bring forward the last five years of the development by the one year needed to bring the development within the Plan period. Adopting this approach would increase the number of completions in the post 2019/20 years; however, this would alter the balance of completions over the Plan period and could give unrealistically high number of completions in post 2019/20 years.

3.7.4 The 'Yearly difference' for the 50B Housing Trajectory shows no difference in the first year but a shortfall in the next two years, 2011/12 and 2012/13. Over this two-year period, the start of three developments is delayed, with no developments brought forward to compensate. For the following seven years to 2019/20, there is a surplus of between 150 and 824 completions per year. This is the period that benefits most from developments brought forward. The concentration of completions in this period is emphasised by the shortfall that occurs in the remaining six years of the Plan period.

3.7.5 The surplus in the middle years of the Plan period, 2013/14 to 2019/20, provides a contingency against possible delays that could push developments back. While the 50B Housing Trajectory shows all developments brought forward where feasible, there is scope to bring forward only some of these developments, or to bring forward developments partway, so as not to put the WNJPU's housing trajectory's completions at risk.

3.8 Summary

3.8.1 The impact of the key primary infrastructure projects as seen on the 50A Housing Trajectory is limited to the delayed start for three developments and to a break in the development of another two. As a result, the yearly differences in completions varies between a shortfall of 279 and a surplus of 334. The significant aspect of the trend in differences is the shortfalls for all years bar one from 2011/12 to 2020/21 and the surpluses in the last years of the Plan period. Any delay in developments would exacerbate this imbalance between the years to 2020/21 and the years after 2021/22, and possibly pushing completions beyond the Plan period.

3.8.2 By bring forward developments to compensate for the shortfalls created by the key primary infrastructure projects, as shown in 50B Housing Trajectory, the surpluses in the years 2013/14 to 2019/20 provides a contingency should developments be delayed such that a shortfall could be compensated for by bringing forward one or more developments. Whilst the 50B Housing Trajectory shows the effect of bringing forward all developments where

possible, there is clearly the opportunity to bring forward certain development to suit any shortfall or to bring forward developments partway so as to ensure that the WNJPU housing trajectory is not put at risk.

- 3.8.3 The limited impact of the key primary infrastructure on developments under the 50,000 housing trajectory coupled with the opportunity to bring forward developments to make up for shortfalls make this trajectory achievable.

62,000 Housing Trajectory

3.9 Key Primary Infrastructure

3.9.1 Key primary infrastructure projects affecting the 62,000 housing trajectory are listed in Tables 3c and 3d below. 3c lists those with a direct impact on the trajectory, and 3d those with a potential impact. Impacts are considered in the IDP Programme):

Table 3c: Key primary infrastructure projects affecting the 62,000 housing trajectory

SUE / Wider Area	Key Primary Infrastructure	Schedule reference	Comments
Northampton Town Centre	Nunn Mills / Ransome Road spine road – phase I	F4	Phase I of spine road needs to be in place to provide access to Avon / Nunn Mills development
Northampton Town Centre	London Road / Ransome Road junction improvements	F5	These junction improvements are to be completed prior to the start of the Ransome Road development.
Northampton West	Sandy Lane Relief Road	O2	New single carriageway road alongside Norwood Farm development – southern section already built by HCA. Until completed, this road will delay the start of development at Northampton North and Northampton West SUE.
Northampton General	Northampton Waste Water Treatment Works	R16	Subject to the planned capital maintenance improvements being delivered, the WWTW has capacity for the five-year housing land supply (to 2015 from WCS). Beyond this, a new consent will be required, and additional infrastructure will need to be funded and delivered through the AWS business planning process, but the environmental capacity assessment and infrastructure feasibility assessments have not identified any constraints to providing this infrastructure. Infrastructure has delayed Avon/Nunn Mills, Ransome Rd, Northampton South - , Northampton North, Northampton King's Heath, Northampton North of Whitehills,

SUE / Wider Area	Key Primary Infrastructure	Schedule reference	Comments
			Princess Marina Hospital site, Northampton West, Upton Park, Upton Lodge, Norwood Farm, Pineham, Grange Park, Northampton South East, Northampton Medium & Small Commitments, and Former School Sites.
Towcester South	Towcester Waste Water Treatment Works	T8	In the short term, the WWTW has capacity for the five-year housing land supply (to 2016 from WCS). In the longer term, an extension will need to be funded and delivered through the AWS business planning process. The environmental capacity assessment and infrastructure feasibility assessment have not identified any constraints to providing this extension. The development delayed is Towcester Urban Extension.
Brackley Town Centre & General	Brackley Waste Water Treatment Works	V5	In the short term, the WWTW has capacity for the five-year housing land supply. In the longer term, an extension will need to be funded and delivered through the AWS business planning process. The environmental capacity assessment and infrastructure feasibility assessment have not identified any constraints to providing this infrastructure. There are currently high unaccounted for flows at Brackley WWTW. A new consent may be needed by 2016 dependant on the success of the unaccounted for flow reduction scheme. The development delayed is Brackley North.
Daventry General	A45 corridor measures, including A45 Northampton to Daventry Link Road	AC2	Required to enable growth of the Daventry North East SUE/Churchfields and Daventry Urban Capacity beyond 1250 completions. Duration at 5 years with earliest start 2013/14. Infrastructure delays Daventry North East SUE/Churchfields.
Daventry General	A5 / A45 crossroads	AC3	Before occupation of the Monksmoor development, junction improvements at the A5/A45 crossroads are to be completed.

Table 3d: Key primary infrastructure projects with potential to affect the 62,000 housing trajectory

SUE / Wider Area	Key Primary Infrastructure	Schedule reference	Comments
Northampton Town Centre	Waste Water and Surface Water Infrastructure	E5	<p>There is limited capacity in the combined sewer network, and limited capacity in the river network for additional runoff from new impermeable areas. If developers are unable to manage the rate and volume of runoff and sewage from their site through SUDS, major new surface water infrastructure will be required.</p> <p>This infrastructure is assumed to be completed before the start of the developments it serves, Northampton West SUE, Northampton King's Heath and Northampton North of Whitehills.</p>
Northampton Town Centre	Nunn Mills / Ransome Road spine road – phase 2	F4	Phase 2 of spine road is required to be in place by the time of 450 completions on the Ransome Road development.
Dallington Grange Area	North West Bypass	J1	<p>Comprises two sections. The longer western section will be delivered by Northampton King's Heath as a necessary access to the development; the shorter eastern section will not (shown as a single scheme on the IDP).</p> <p>Limits the development of Northampton King's Heath and Northampton North of Whitehills. Delivery to be within 0 - 3 years of first completions.</p>
Northampton West	Electrical supply – reinforcement to Countess Rd bulk supply sub-station	L1	Whilst this has the potential to be infrastructure that could cause delay, it has not been identified in the planning process as affecting any specific development.
Northampton West	Northampton West 33/11kV reinforcement	L4	<p>Replace transformers with higher rated units or install 132/11kV sub-station.</p> <p>Whilst this has the potential to be</p>

SUE / Wider Area	Key Primary Infrastructure	Schedule reference	Comments
			infrastructure that could cause delay, it has not been identified in the planning process as affecting any specific development.
Northampton West	Sandy Lane Relief Road	O2	New single carriageway road alongside Norwood Farm development – southern section already built by HCA. Until completed, this road has the potential to delay the start of development at Norwood Farm, Northampton King's Heath and Northampton North of Whitehills. Other developments in Northampton West are adequately served by the existing road system.
SNC General	A5 Bypass	Y4	Bypass proposed from the A43 to the Whittlebury Turn east of the Town is currently the subject of a study expected to be issued in March 2011. Whilst not identified as causing a delay to development, it has the potential to impact on the Towcester's development.
Daventry North East	Diversion of high voltage electricity supplies	AA12	Diversion / undergrounding of 132kV overhead cables. If work necessary, it could affect Daventry North East / Churchfields development.
Daventry North East	Oil pipelines	AA13	Reinforcement / protection of BPA oil pipelines. If work necessary, it could affect Daventry North East / Churchfields development.
Daventry General	A45 corridor measures, including A45 Northampton to Daventry Link Road improvements	AC2	Required to enable growth of the Daventry North East SUE/Churchfields and Daventry Urban Capacity beyond 1250 completions. Duration at 5 years with earliest start 2013. Infrastructure has the potential to affect Daventry Urban Extension.

3.9.2 The key primary infrastructure items that have a direct impact on development are listed in Table 3c. Other key primary infrastructure projects with potential to affect development are listed in Table 3d: these are projects which could delay development if their planned completion dates were not achieved.

3.9.3 It must be noted that there are some primary infrastructure items for which the start date and duration are not known, as identified on the 62,000 IDP Programmes. Accordingly, there may be other key primary infrastructure works that could impact upon the Housing Trajectories but which have not been considered due to inadequate information. In particular improvements to the A45 and MI around Northampton, known as the A45/MI Access Management Strategy, have been identified by the Highways Agency as a requirement to accommodate the growth of the town. Mitigation to address the cumulative impact of development on this part of the Strategic Road Network will require a co-ordinated approach. The Highways Agency has identified that successful implementation of the strategy will be dependent on partnership working to secure developer contributions.

3.10 Explanation of the Programme

3.10.1 The 62,000 Programme shows developments by yearly completion, alongside the primary infrastructure items, some of which are KPIs with a direct or potential impact on development.

3.10.2 The Programme shows the primary infrastructure items identified on the IDP Schedule, with start dates and durations where known. If the start date is known but the duration is not, the duration is shown as one year: while it is recognised that the delivery times for each item will differ, the one-year duration is taken for consistency. Any attempt to put a duration to these items may give the false impression that the duration is known. Where neither the duration nor start date are known, this is noted against the item. Assumptions have also had to be made where information is incomplete, in order for the infrastructure to be programmed.

3.10.3 The IDP Programme (Appendix Three) shows all the housing developments, with each row giving the annual completion rates. The developments shown on the IDP Programme reflect the annual completion rates according to the housing trajectories provided by the WNJPU, with adjustments made for the impact of KPI.

3.10.4 Key primary infrastructure items are listed in Tables 3c and 3d above. In common with other primary infrastructure items, these items appear as red bars in the Programmes. Where KPI impacts, or has the potential to impact, on a development, a connection between the two is shown in red.

3.10.5 Where a primary infrastructure item needs to be in place before a development can exceed a given number of occupations (the trigger point), the primary infrastructure item is shown as being completed at the same time that the trigger point is reached. Where the trigger

point is not specified, or has not yet been calculated, a trigger of 100 homes has been assumed. These primary infrastructure items often relate to utilities where reinforcement is required to enable the existing supply to continue to operate effectively.

- 3.10.6 The primary infrastructure items so linked to development are assumed to have a duration of one year. These primary infrastructure items, and the developments to which they relate, are linked in grey. On the assumption that they will have a year's duration, they are shown as starting one year prior to the date of completion.

3.11 62,000 IDP Programme

Note: all references pre-fixed 'ID' relates to the IDP Programme in Appendix Three.

Northampton

- 3.11.1 The Nunn Mills / Ransome Road spine road, phase 1 (ID 33), is planned to be completed by 2012/13 and needs to be in place before the first occupation on the Avon / Nunn Mills development. According to the WNJPU's housing trajectory, the first occupations were due in 2011/12, but the impact of the phase 1 spine road has delayed this by two years to 2013/14. With a planned end date of 2012/13, and with pre-construction work currently ongoing, the planned completion date of the spine road seems to be realistic, with little opportunity to bring it forward.
- 3.11.2 Improvements to the London Road / Ransome Road junction (ID 35) are required before the Ransome Road development yields its first occupations, planned for 2011/12. However, these improvements are not due to be completed until 2011/12. This would enable the first occupations to be realised in 2012/13, thereby delaying the development by one year.
- 3.11.3 The main sewer running through the town centre (ID 8 & 337) is near full capacity. Whilst not currently restricting redevelopment, it will limit new development that would increase flows in the town centre. As this sewer serves the Northampton West SUE (ID 152 & 168), Northampton King's Heath (ID 92) and Northampton North of Whitehills (ID 114), it could impact on these developments. The scale and type of solution to overcome this limitation will be determined by the Northampton Central Drainage assessment that reports by May 2011. Anglian Water has programmed work to increase capacity of the sewage network serving the north and west of Northampton over the years 2014 to 2016 and 2017 to 2019. With developments starting to be occupied in 2013/14 for Northampton West SUE, and in 2014/15 for both King's Heath and North of Whitehills, this KPI has the potential to affect these developments if the existing system is unable to take further flows by these dates.

- 3.11.4 Phase 2 of the Nunn Mills / Ransome Road spine road (ID 34) is required to be in place by the time that 450 dwellings (ID 29) have been occupied on the Ransome Road development. With the spine road due to be completed in 2014/15, and the 450 occupation threshold being reached in 2020/21, the risk of this infrastructure affecting the development is very low.
- 3.11.5 The North West bypass (ID 105) comprises two sections, with the longer section required to be provided within three years of the first completions on the Northampton King's Heath development. The third year of the development occurs in 2016/17, which allows five years to plan, requisition and build the bypass. Accordingly, this KPI is not currently seen as having a direct impact on the King's Heath (ID93) or North of Whitehills (ID 114) developments. It could, however, cause a potential delay should the bypass not be delivered within the next five years.
- 3.11.6 The Sandy Lane Relief Road (ID 227) will impact on the developments of Northampton North SUE (ID 65) and Northampton West SUE (ID 152 & ID 168), and could have an impact on those of Northampton King's Heath (ID 92), Northampton North of Whitehills (ID 114) and Norwood Farm (ID 219). The planned completion of the Relief Road in 2013 will delay the Northampton North SUE and Northampton West SUE, which should both start in 2011/12, by two years. Norwood Farm is due to start in 2013/14, and therefore is not delayed unless the Relief Road is not completed on time. Any delay to completion of the Relief Road would have corresponding delay on Norwood Farm. The developments of King's Heath and North of Whitehills start in 2014/15, and would only be affected if completion of the Relief Road were delayed by more than a year.
- 3.11.7 Two electrical primary infrastructure items have the potential of affecting development in Northampton West. These are the Reinforcement to Countess Road bulk supply sub-station (ID 148) and the 33/11kV Reinforcement (ID 149). The planning process has not identified these as affecting applications but there is the potential that the existing supply would need reinforcing, depending on demand from elsewhere, to meet the needs for development in Northampton West.
- 3.11.8 Developments throughout Northampton are affected by the limited capacity of the Northampton Waste Water Treatment Works (ID 339) at Great Billing. The WWTW has adequate capacity to 2016, after which extra capacity will have to be added to cope with further development. Work to improve the WWTW is shown to start in 2014/15 with a duration of four years. It may be possible to undertake limited works to the WWTW to enable some development to take place. However, the IDP Programme shows all

developments in Northampton that run through to 2015/16 (other than Northampton North SUE which is already affected by the Sandy Lane Relief Road) as being delayed by two years until work to increase the capacity of the WWTW is completed in 2018/19. The affected developments are:

Development	ID
Avon / Nunn Mills	11
Northampton South	39
N'ton North of Whitehills	114
Northampton West SUE	152
Upton Park	189
Norwood Farm	219
Grange Park	255
Northampton South East	284
Former school sites	324

Development	ID
Ransome Road	21
Northampton King's Heath	93
Princess Marina Hospital	135
Northampton West SUE	169
Upton Lodge	205
Pineham	233
Northampton South East	268
General – medium & small	313

3.11.9 As some of these developments were programmed to run to within a year of the end of the Plan period, the two-year delay resulting from this KPI pushes these developments beyond the Plan period. The developments so affected are Northampton North SUE (ID 65), Northampton King's Heath (ID 92), Northampton West SUE (ID 152 & 168), Upton Lodge (ID 205) and Northampton South East (ID 268 & 284). With the additional two-year delay arising from the Sandy Lane Relief Road (ID 227), the Northampton West SUE development cannot be not completed until 2029/30, four years after the end of the Plan period.

Towcester & Brackley

3.11.10 The Towcester Waste Water Treatment Works (WwTW) (ID 360) has capacity for the next five years but is likely to require enlargement to cope with flows thereafter. Work to the WWTW is due to start in 2014/15 and is to take four years to complete. Accordingly, the Towcester Urban Extension (ID 345) is shown with completions from the start, in 2012/13, to 2015/16, but then with no further completions until the WWTW work is finished in 2018/19. The impact of this delay is to put the development beyond the end of the Plan period by two years, to 2027/28.

3.11.11 With the Brackley Waste Water Treatment Works (ID 371) required to be extended to cope with flows after 2015, completions at the Brackley North development start in 2011/12

(ID 375) but continue only until 2015/16 (ID 379). The development can only restart on completion of the WWTW in 2021/22, after which it will run until 2026/27.

3.11.12 The requirement for the A5 bypass and connections to the A43 (ID 431) is the subject of a study due to report in March 2011. Accordingly, its impact on the development of Towcester is not certain. However, the A5 bypass is identified in the table as having the potential to affect developments in the Town.

Daventry

3.11.13 The Daventry North East development (ID 442 & 448) is permitted to provide up to 1000 of its 3300 homes before the A45 corridor measures, including the Northampton to Daventry Link Road (ID 527), are completed. The earliest completion for the A45 corridor measures is 2017/18, which is two years after the development reaches 1000 completions. There is, therefore, a two-year delay within the development period between 2016/17 and 2017/18. Any delay to the completion of the A45 corridor measures will have a corresponding delay to the remaining 2300 dwellings at Daventry North East.

3.11.14 Two primary infrastructure projects that have the potential to delay the start of the Daventry North East development (ID 442) are the diversion of high voltage electricity supplies (ID 462) and the reinforcement / protection of oil pipelines (ID 463). Both these projects need to be completed in advance of Daventry North East, the first occupations of which are due in 2011/12. Accordingly, there is little time in which to carry out and complete this work without impacting on development. It may, however, be possible to start work on those parts of the site not constrained by the routes of the powerline and pipeline.

3.11.15 The A45 corridor measures, including the Northampton to Daventry Link Road (ID 527), need to be in place before completions exceed 250 dwellings in the Daventry Urban Capacity developments (ID 519). With completions not reaching the 250 threshold until 2020/21, the two year gap between this year and the completion of the A45 corridor measures in 2017/18 puts the risk of delay to the Daventry Urban Capacity sites at a low level.

3.11.16 The Monksmoor development (ID 473) has been given planning permission but requires work to the A5/A45 crossroads (ID 544) to be completed before the first occupations. These works have been programmed for completion by 2013/14, which puts back the first residential occupation on Monksmoor by two years, from 2011/12 to 2013/14.

3.11.17 Non-key primary infrastructure projects shown on the IDP Programme do not delay development. Some, however, become necessary once a development has reached a certain stage, and their start date is, therefore, dependent on the development e.g. it is assumed that the electrical supply work at Collingtree (ID 51) needs to be in place by the time that 100 homes (the assumed trigger point) are occupied. Other primary infrastructure projects are programmed according to information available e.g. ID 6 the Plough Junction Improvements in the St John's area is to start 2012 and to take four years to complete.

3.12 Explanation of the Housing Trajectories

3.12.1 Housing Trajectories have been prepared to determine what effects key primary infrastructure projects will have on the WNJPU housing trajectories, and to identify the potential to bring forward developments to compensate for those developments that have been delayed.

3.12.2 The Housing Trajectories show the impact that key primary infrastructure has on the yearly completion totals of the WNJPU housing trajectory. Yearly completions are taken from the 50,000 IDP Programme and entered onto the Housing Trajectory, with the annual figures totalled at the bottom. The amended totals are compared with the original WNJPU trajectory to give a difference in yearly completions which demonstrates the impact of KPI.

3.13 62A Housing Trajectory

3.13.1 This Trajectory shows the WNJPU's 62,000 housing trajectory once the KPI items have been factored in. The impact of the KPI items is to delay the start or to interrupt the continuity of some developments.

3.13.2 Following discussions with the WNJPU, a further adjustment has been applied to account for the time likely to be taken to get certain developments to full planning permission. This puts the start of some developments back from their original WNJPU housing trajectory start dates (notwithstanding any further changes brought about by KPI). Where this is the case, the year(s) of delay is shown in grey. For example, the first completions at Collingtree (Northampton South) were forecast in the WNJPU housing trajectory for 2011/12. On the basis that the planning process was still to be progressed, the start was put back to 2013/14, allowing a realistic period to gain planning permission.

3.13.3 Likewise, the start of the developments of Northampton West, Towcester Urban Extension, Brackley North and Daventry North East have been put back on the Housing Trajectory to

take account of the time required to secure planning permission. In each of these cases, the delay to the start has pushed completion beyond the end of the Plan period.

3.13.4 Returning to Collingtree, this site is subject to the constraints of Northampton's Wastewater Treatment Works capacity. Consequently, a two year delay, from 2016 to 2018, is shown on the IDP Programme (ID 39). However, as the development is pushed back, the flows that would have contributed to the Wastewater Treatment Works reaching capacity will also be put back. Accordingly, it is assumed that the wastewater treatment works can handle these flows. This development, therefore, does not show the two-year delay that work to the Northampton wastewater treatment works has caused to other developments. This reasoning has also been applied to Northampton West.

3.13.5 The Towcester Urban Extension is affected both by the time required to gain planning permission (a one-year delay to 2012/13) and by completion of the Towcester Waste Water Treatment Works extension (another year's delay to 2017/18). Taking these two delays together, the development is shown as extending beyond the plan period by two years to 2027/28.

3.13.6 The Brackley North development is affected by similar causes of delay. Awaiting planning permission puts back the start from 2011/12 to 2013/14, and work to increase capacity at the Brackley Wastewater Treatment Works halts completions from 2018/19 for four years until 2022/23.

3.13.7 The 'Yearly difference', the difference between the WNJPU housing trajectory figures and those for the 62A Housing Trajectory, shows an annual shortfall of completions from 2011/12 (shortfall 1140 completions) to 2017/18 (shortfall 2779 completions), after which the yearly completions exceed the WNJPU housing trajectory. After 2025/26, the difference in completions becomes positive as the years go beyond the end of the Plan period and the WNJPU housing trajectory.

3.13.8 At the end of the Plan period at 2025/26, the cumulative shortfall is 5487 homes, which is reduced to zero by completions in the following three years to 2028/29.

3.14 62B Housing Trajectory

3.14.1 The 62B Housing Trajectory shows the potential for development to be brought forward to compensate for shortfalls caused key primary infrastructure. The developments that can be brought forward, and the period by which they can be advanced, are derived from the 62,000

IDP Programme. The developments brought forward are those which are not constrained by key primary infrastructure. Where there are no constraints, the earliest date to which developments have been brought forward is 2013/14, which is assessed as a realistic start date allowing for the time to gain planning permission.

3.14.2 The 62B Housing Trajectory shows developments brought forward, wherever possible, to fall within the Plan period, that is by the end of 2025/26. In instances where developments have been put back to allow time for planning permission to be gained, there is little likelihood of this period of delay being reduced. Accordingly, the delayed start to these developments is not changed. Where delays result from KPI, developments are shown as being brought forward on the basis that there are possibilities of reducing the delay. Proposals to reduce the delays so arising are discussed below. With the developments brought forward to the earliest date possible, the total yearly completions resulting from the changes can be determined. These are compared with the WNJPU housing trajectory, and the difference between the two yearly totals is shown. Where developments have been brought forward from years beyond the Plan period, 2025/26, the years are shown infilled in red.

3.14.3 The developments that have been brought forward and their earliest start dates are:

SUE / wider dev't area	Development
Northampton Town Centre	Avon/Nunn Mills brought forward from 2019/20 to 2016/17
Northampton Town Centre	Ransome Road brought forward from 2019/20 to 2016/17
Northampton North	Northampton North SUE brought forward from 2018/19 to 2016/17
Dallington Grange Area	The first two years of Northampton King's Heath brought forward from 2014/15 to 2013/14 and the last ten years brought forward from 2018/19 to 2016/17
Dallington Grange Area	The first two years of Northampton North of Whitehills brought forward from 2014/15 to 2013/14 and the last seven years brought forward from 2018/19 to 2016/17
Northampton West	Princess Marina Hospital brought forward from 2018/19 to 2016/17
Northampton West	Upton Lodge brought forward from 2018/19 to 2016/17
Northampton West	Upton Park brought forward from 2018/19 to 2016/17

Northampton West	Pineham brought forward from 2018/19 to 2016/17
Northampton West	Norwood Farm brought forward from 2018/19 to 2016/17
Northampton South East	Northampton South East – both 2000 homes site and 4250 homes site - brought forward from 2018/19 to 2016/17
Northampton South East	Wootton Fields brought forward from 2018/19 to 2016/17
Northampton South East	Grange Park brought forward from 2018/19 to 2016/17
Northampton General	Urban Capacity sites brought forward from 2017/18 to 2016/17
Northampton General	Former School Sites brought forward from 2018/19 to 2016/17
Northampton General	Medium & Small Commitments brought forward from 2018/19 to 2016/17
Brackley North	The last five years of Brackley North completions brought forward from 2022/23 to 2021/22
South Northamptonshire General	Urban Capacity brought forward from 2020/21 to 2013/14
Daventry District General	Urban Capacity sites – the first three years brought forward from 2017/18 to 2013/14 and the last six years brought forward from 2020/21 to 2018/19.

3.14.4 A number of developments in Northampton have been brought forward over the same period, from 2018/19 to 2016/17. These are affected by the works required to increase capacity at the Northampton Waste Water Treatment Works (WWTW). The developments impacted by this work are included in the list above and are: Avon / Nunn Mills, Ransome Road, Northampton North SUE, Northampton King's Heath, Northampton North of Whitehills, Princess Marina Hospital, Upton Lodge, Upton Park, Pineham, Norwood Farm, Northampton South East, Wootton Fields, Grange Park and Northampton General – Former School, Sites and Medium & Small Commitments. Bringing forward these developments by two years can only be achieved by starting the WWTW works earlier, reducing the construction period or reducing the scope of the works, such that it has a shorter construction programme. This last possibility is only a short-term measure, as a reduced scope may not achieve the increased capacity needed to cope with flows for the whole Plan period. The work to the WWTW is planned for four years, 2014 to 2018, so

endeavouring to achieve completion of the works by 2016/17 to allow developments to be brought forward is challenging. However, as it has an impact on so many developments, efforts to complete the WWTW works earlier than the planned date of 2017/18 would bring widespread benefits throughout Northampton.

- 3.14.5 A further development affected by the expansion of the Northampton Waste Water Treatment Works (WWTW) is Northampton General – Urban Capacity Sites. The first completions here are planned for 2017/18. On the basis that the WWTW work can be completed at the earlier date of 2016/17, this development can be brought forward by one year.
- 3.14.6 The start of both Northampton King's Heath and Northampton North of Whitehills has been brought forward by one year to 2013/14, when the key primary infrastructure of Sandy Lane Relief Road is forecast to be completed. This affects the first two years of the developments only. The remaining years of both developments are affected by works to the Northampton Waste Water Works, as described in 3.14.4 above.
- 3.14.7 The years 2021/22 to 2027/28 of the Brackley North development have been brought forward by one year, such that the first completions occur in 2021/22. It has been advanced so as to bring the last year of the development within the Plan period, but in doing so, it conflicts with the period of delay resulting from the works to the Brackley Waste Water Treatment Works. The delay period arising from the works will be four years, 2018 to 2022, and bringing forward the development encroaches upon this delay period by one year. As described above, when considering work to the Northampton Waste Water Treatment Works, there are possible ways to reduce the impact of the works, such as starting the WWTW works earlier, reducing the construction period or reducing the scope of the works, such that it has a shorter construction programme.
- 3.14.8 The Urban Capacity Sites in South Northamptonshire have no constraints and have been brought forward from 2020/21 by seven years to 2013/14, the earliest realistic starting date.
- 3.14.9 The Daventry District - Urban Capacity sites are constrained by the completion of the A45 corridor measures, including the Northampton to Daventry Link Road. However, this constraint only affects the sites when bringing them forward. Consequently, the first three years are brought forward by four years from 2017/18 to 2013/14, the earliest time allowing for time to secure planning permission. The remaining six years can only be brought forward by two years from 2020/21 to 2018/19, the planned date for completion of the A45 corridor measures.

3.14.10 The 'Yearly difference' that identifies the difference between the WNJPU housing trajectory and the 62B Housing Trajectory shows shortfalls from 2011/12 to 2019/20, apart from a surplus of 199 completions in 2014/15. These shortfalls range from 149 to 1215. In 2020/21 and subsequent years, there is a surplus which runs three years beyond the Plan period to 2028/29. Even by bringing developments forward, the WNJPU housing trajectory figures cannot be achieved, and there are still 2690 completions that cannot be accommodated within the Plan period.

3.15 Summary

3.15.1 The numbers of completions required to fulfil the 62,000 WNJPU housing trajectory has necessitated yearly completions of over 200 dwellings in some developments. Therefore, when a development is delayed, the resulting shortfall in a year can be 200+ completions. A further consequence of accommodating the 62,000 housing trajectory is that many developments need to start early in the Plan period to achieve the total number. By starting early in the Plan period, these developments are more likely to be affected by key primary infrastructure than if they started later.

3.15.2 The 62A Housing Trajectory shows significant shortfalls to 2017/18, and a cumulative shortfall at the end of the Plan period of 5487. The WNJPU housing trajectory total is not achieved until three years after the end of the Plan period. In bringing forward developments, as shown in the 62B Housing Trajectory, there are still shortfalls in every year except one until 2019/20, with a cumulative shortfall in 2015/26, the end of the Plan period, of 2690 completions. The developments on the 62B Housing Trajectory have, of course, been brought forward on the basis that constraints causing their delayed start or a break in their duration can be overcome. This Housing Trajectory, therefore, presents the best outcomes. Accordingly, these developments are at risk of not being able to be brought forward by the period shown, so making the WNJPU housing trajectory even less achievable.

3.16 Housing Trajectories Summary

- 3.16.1 The impact of KPI on the 50,000 and the 62,000 WNJPU housing trajectories is significantly different. For the 50A Housing Trajectory, the starts of only the three developments of Avon / Nunn Mills, Ransome Road and Monksmoor are delayed, and only two are delayed during development - Brackley North and Brackley East. As a result, the shortfalls occurring over the years 2011/12 to 2019/20 are not significant, being 126 completions or less for seven of the nine years of shortfall, and only one development extends beyond the end of the Plan period - Brackley North. In contrast, the 62A Housing Trajectory shows shortfalls of 1140 completions or more for four of the seven years of shortfall, and twelve developments extend beyond the end of the Plan period. From these two, it is clear that the 50,000 housing trajectory is most likely to be achieved of the two trajectories assessed.
- 3.16.2 The 50B and 62B Housing Trajectories show developments that are brought forward to compensate for shortfalls resulting from delays arising from KPI. Whilst not being able to compensate for shortfalls in the early years of 2011/12 and 2012/13, the 50B Trajectory provides a surplus in the following years to 2019/20. It also brings the one development that extends beyond 2025/26 back within the Plan period. As a consequence, the 50,000 WNJPU housing trajectory is achievable, and with the contingency of bringing developments forward, could still be achievable should future delays occur.
- 3.16.3 The 62B Housing Trajectory shows fewer opportunities to bring development forward, with the result that the shortfalls evident in the 62A Housing Trajectory still occur, although they are reduced in size. Furthermore, even with developments brought forward, there are still 2690 completions beyond the end of the Plan period.

4 Costs and Funding

4.1 Introduction

- 4.1.1 This chapter provides information on the typical funding mechanism for each of the various infrastructure categories, and assesses the extent to which this mechanism will apply to the items listed in the IDP Schedule. Infrastructure items are assessed in the same categories and order as they appear in section 4.2 above.
- 4.1.2 Having established the mechanism for funding each category of infrastructure, an assessment has been made of the potential for any funding gaps. Where applicable, alternative sources of funding are identified, and an assessment made of how likely these might be to access.
- 4.1.3 The majority of infrastructure items will be funded by developers, by way of legal agreements attached to the various planning permissions (the term 'legal agreements' covers S106, tariff and CIL agreements). This is particularly true of the secondary and tertiary items, which are generally those required to enable occupation, rather than construction of dwellings. Items for which the developer would not normally be expected to pay, or at least would not make enough of a contribution to enable delivery, include hospitals, improvements to the national power grid, and emergency services.
- 4.1.4 Following this analysis, information is provided on the costing exercise undertaken in preparing the Schedule, and on the assumptions made.

4.2 Funding Mechanisms and Potential Gaps

Education

- 4.2.1 Northamptonshire County Council has a legal obligation to meet demand for school spaces arising from new development. Funding for these spaces, whether provided in new buildings or through extensions to existing schools, is provided through a combination of developer contributions and NCC's own funds. As is common practice across the UK, a per dwelling contribution is levied on developers to provide for all aspects of education.
- 4.2.2 As the need for school places arises only when dwellings are occupied, the per dwelling contribution is a reliable and efficient way of providing educational facilities. There is, therefore, very limited potential for funding gaps in any of the schools identified on the IDP Schedule.

Healthcare

- 4.2.3 Health infrastructure is provided and funded in a number of ways, according to the scale and type of facility needed. Health centres and surgeries are currently provided by Primary Care Trusts, though from 2013, this responsibility will pass directly to GPs (see 2.4.7 above). In common with most planning authorities across the UK, WNDC requests a per dwelling contribution towards primary healthcare facilities which covers the cost of new or extended buildings.
- 4.2.4 It remains to be seen what impact the change from PCT to GP accountability will have on the use of developer contributions or the delivery of new facilities. While the change is significant, it ought not, in theory at least, to impact much upon the cost of providing primary healthcare. It is advised, however, that the proposed mechanism is examined more closely in any future revision to the IDP.
- 4.2.5 Hospitals and specialist clinics (secondary healthcare) are provided by NHS Trusts, which are generally based around a single hospital or a cluster of smaller hospitals. Funding for these facilities is provided nationally, either directly from the NHS or through the Private Finance Initiative (the latter is used both for new hospital developments and extensions / alterations to existing hospitals).
- 4.2.6 Northamptonshire NHS has confirmed that no upgrade to Northampton General Hospital is currently planned, and that no upgrade is considered necessary as a result of the growth of west Northamptonshire. Should this position change, however, then there is a potential funding gap here, which is beyond the means of developers to influence. No information is available on how large any funding gap could be, but it is likely that a PFI bid (or whatever may replace this in future) would be needed in order to raise the funds needed.

Highways

- 4.2.7 The Highways Agency (HA) administers five roads within West Northamptonshire: the A5, the M1, the M45, the A45 east of the M1 and the A43 south of the M1. Due to the strategic nature of these roads, the HA has taken the view that contributions towards improvements to its network should be shared between all developers whose developments have an appreciable impact on traffic flows, rather than simply by those closest to the sections of road to be improved. This applies both to junction improvements and to mainline carriageway improvements. NB - the HA only has responsibility for the mainline carriageway and sliproads on the M1 and A45; the junctions themselves are the responsibility of NCC.

- 4.2.8 The HA is currently in the process of concluding its A45 / M1 Access Management Strategy (AMS). The AMS will guide future investment along the A45 corridor between the M1 and A14, setting levels of change and investment for each junction and for the mainline carriageway. Individual proposals will then be worked up in response to the findings of the AMS. The AMS has potential to influence all SUEs in and around Northampton.
- 4.2.9 The A5 Towcester bypass is currently subject to a study being undertaken by the HA, the results of which are due to be published in spring 2011. This study will determine the extent and nature of road improvements required to be funded by development, and the likely investment needed by the HA. The completion of the Towcester South Urban Extension depends upon this road being secured and delivered.
- 4.2.10 The HA has confirmed it has no funding available to implement the AMS, which is currently expected to cost around £11m. This creates a considerable funding gap. To get the AMS underway, the HA has applied for £1m of RGF funding. The remaining £10m will need to be provided by developers. All committed sites and JCS allocations will be considered as potential sources of funding if their impact on the HA's network falls above a flow-related threshold (to be determined by the HA).
- 4.2.11 Northamptonshire County Council administers the non-HA roads within West Northamptonshire. Rather than seek a contribution from all developers in the area, NCC's approach is to link road improvement projects to specific developments and to ask the developers of these sites to pay in full for the improvements.
- 4.2.12 NCC's three most significant proposals within West Northamptonshire are all linked to planned development: the Sandy Lane Relief Road is linked to Norwood Farm, the North West Bypass to developments in the Dallington Grange area, and the A45 Weedon Bypass to the expansion of Daventry. If any of these developments failed to come forward then a funding gap would be created. The most obvious place to look for alternative funding, if this happened, would be other developments, though no work has yet been done to identify which sites could contribute.
- 4.2.13 It is acknowledged by both the HA and NCC that highways around West Northamptonshire are under stress, and that improvements are needed to manage traffic more effectively. Changes enabled by the growth of the area, via developer contributions, will help towards these improvements, but central government funding will also be needed (such as the HA's RGF bid for the AMS), and there remains a risk that highway improvements will be delayed if this funding is not forthcoming.

Sustainable Transport

- 4.2.14 NCC has extensive draft proposals for the creation of quality bus corridors around Northampton. In some cases, these will involve physical works to create bus priority measures; in others, they involve new or diverted bus routes.
- 4.2.15 New and diverted bus routes will be funded by bus operators, through new fares generated on these routes. As such, investment in these routes will typically have a long payback period. NCC also intends for there to be a contribution from developers via S106 agreements, which could be provided via WNDP's Planning Obligations Strategy. There is little potential here for a funding gap, provided the bus operator is willing to engage with NCC, as the new routes will only be needed if development comes forward.
- 4.2.16 Bus priority measures, such as bus lanes and bus signals, will be funded through development contributions and through NCC's own funds. There is a potential funding gap here, as demand for the measures will not come wholly from new development. Should development fail to come forward, NCC would be forced to look to government funding schemes, which would be unlikely to provide as much money as could be gained from developers.
- 4.2.17 NCC also wishes to see improvements to walkways and cycleways to mitigate the impact of new development, and has indicated that this could be funded through developer contributions. However, the scope of these improvements, and the level of contribution needed, have still to be determined.
- 4.2.18 It should be borne in mind that sufficient investment in public transport could negate the need for some of the road and junction improvements proposed around West Northamptonshire. The cost of providing this public transport infrastructure will need to be compared, at a later date, to that of providing the equivalent road improvements to determine the level of spend that could be saved.

Water

- 4.2.19 Water supply and drainage infrastructure will be provided by Anglian Water. Infrastructure will be delivered in one of two ways:
- 1) Connections from developments to sewers and water supply pipes will be requisitioned by the developer: that is to say, the developer will pay Anglian Water to provide the necessary pipes and connections.

- 2) Improvements to trunk sewers, main water supply pipes and wastewater treatment will be provided in accordance with Anglian Water's own investment plan, which takes into account committed development, and future growth, where known.
- 4.2.20 In respect of 1), the requisition process is triggered by development, and new infrastructure is provided only for the development it serves. If the development were not to take place, there would be no need to provide the connections. There is thus no risk of a funding gap in providing this infrastructure.
- 4.2.21 With respect to 2), Anglian Water's current five-year plan (AMP5) has just begun, and plans for the next period, to begin in 2015, are yet to be developed. There is, therefore, a potential funding gap for the provision of water-related infrastructure beyond 2015, which could have a direct impact on the further expansion of West Northamptonshire. The best way to ascertain the likelihood of such a gap, and to mitigate its impact if it does appear, is through co-operation with Anglian Water.
- 4.2.22 In terms of specific improvements within West Northamptonshire, funding is in place for the upgrade to Whilton WwTW, which serves Daventry, and work is programmed to begin in 2013. The Great Billing WwTW, which serves Northampton, does not need upgrading at the present time, but will do so during the next AMP period. It will be important to ensure funding for this upgrade is included in AMP6. An extension to Towcester WwTW is unlikely to be needed before AMP7, due to begin in 2020, and no works to upgrade Brackley WwTW have been identified which would delay or prevent development.
- 4.2.23 In terms of strategic flood defences, Northampton has recently benefitted from the completion of the Upton flood Attenuation Area, and the Environment Agency has confirmed that no strategic flood defences are proposed within West Northamptonshire for the foreseeable future.

Power

- 4.2.24 Electricity supply infrastructure is supplied by Central Networks, which is part of Eon. As with water infrastructure, connections to the grid are requisitioned by developers, who pay Central Networks to provide the cables and secondary substations needed to serve the development. Because the requisition process is triggered by development, and the infrastructure serves only the new development, there is no risk of a funding gap in providing these.

- 4.2.25 Gas supply infrastructure is requisitioned the same way, with developers paying National Grid to provide the low pressure pipes needed to serve the development. Again, this means there is no risk of a funding gap in providing this infrastructure.
- 4.2.26 Where primary substations (for electricity), or high pressure regulators (for gas) are required, the first developer to trigger such a need pays the full cost of the facility. If further developments come along which draw on the same facility, the developers who paid for the substation or regulator to be installed may claim back a proportion of what they paid from the new developer. Either way, the infrastructure is provided in response to the development. It is conceivable that a small development may not be able or willing to pay the full cost of these works. In this case, the developer would need to come to an arrangement with other developers in the area, to see whether an agreement could be reached to split or swap costs.
- 4.2.27 Reinforcement of the existing electricity network will be needed if the current housing trajectory is to be delivered. In Northampton, a new 132kV electricity supply is likely to be needed at some point in the IDP period, and possibly a new 132kV substation. Both of these will serve the whole town. Direct input from Central Networks will be needed in order to establish the exact cost of these items, and to understand how it intends to pay for them. One way of doing this would be to treat the reinforcement in the same way as connections to the local network i.e. seek a contribution from developers as part of the requisition process.
- 4.2.28 In Daventry, the industry experts consulted in the course of preparing the IDP have suggested that a new high / medium pressure gas main may be required during the IDP period. The need for this item, and its timing in relation to levels of growth, will need to be verified by National Grid at a later date. Again, funding for this item is unclear, and it may be that a developer contribution is needed.

Sport and Leisure

- 4.2.29 A contribution towards sport and leisure provision is sought from all developments through WNDP's Planning Obligations Strategy. These contributions can be used either to provide new facilities or to upgrade or extend existing facilities, depending on the level of demand and on what already exists in the local area. In reaching a decision, the West Northamptonshire Sports Facilities Strategy forms an important source of guidance.

4.2.30 The West Northamptonshire Sports Facilities Strategy makes a number of recommendations for new or improved sports facilities around the three districts, but does not tie these to specific SUEs or developments. It advocates a partnership approach in providing sports facilities, whereby provision and funding is shared between private clubs, developers, local authorities, healthcare providers, Sport England and the national governing bodies of individual sports. It also advocates the sharing of space with community buildings, shops and offices, schools and libraries.

4.2.31 The Strategy reports that facilities in Northampton are largely adequate, but that better community access is needed, specifically by encouraging shared use of school facilities. In Daventry District, the West Northamptonshire Sports Facilities Strategy identifies a shortfall in swimming pool and sports hall provision, but notes that this is largely in rural areas, away from the SUEs. Facilities in South Northamptonshire are stated as meeting demand, with the exception of astroturf pitches, which are a good example of a facility which could be shared with schools.

4.2.32 Sport and leisure facilities serve more than just the communities within which they are located. This means that developer contributions from a new SUE will, in part, be funding new or improved facilities for a wider audience than merely its own residents. A lack of funding from developers could, therefore, lead to stagnation in the level of service provided. Funding from Sport England, as from other quangoes, is likely to be restricted for at least the next few years, so the best option for meeting any funding shortfall may be for the councils to form a partnership with private clubs and operators.

Telecommunications

4.2.33 Telecommunications operators follow a different pattern to other providers in that they pay developers to provide their developments with infrastructure, rather than seek contributions from them. BT Openreach, which provides all domestic infrastructure, guarantees to provide phone and cable lines wherever this proves possible, in response to development on the ground. Funding for the provision of telecommunications infrastructure is not, therefore, likely to cause any problems.

Green Infrastructure

4.2.34 A contribution towards green infrastructure provision is sought from all developments through WNDP's Planning Obligations Strategy. At the same time, many developers will be required to provide green infrastructure within their own developments. This frees up their

- contributions to be used on larger scale, more strategic green infrastructure, which may be located away from the development site.
- 4.2.35 Long term plans have been drawn up by a number of greenspace providers to create large areas of linked open space across the county, the prime example being the River Nene regional park, which will link together a number of parks and open areas along the river valley, with Becket's Park as its hub. Smaller proposals exist at Towcester Water Meadows, Daventry Country Park and Borough Hill (near Daventry). A combination of developer contributions and public money (from the HCA and local authorities) will be used to deliver these.
- 4.2.36 Funding is known to be a problem for longer term green infrastructure proposals, as it is with cultural and leisure investment generally. While major items, such as Harpole Country Park, proposed as part of larger planning applications, are likely to be funded, indications are that some of the longer term ambitions, such as the intention to create links to and from Salcey Forest, may be delayed for the foreseeable future.
- 4.2.37 There is, therefore, a risk that some of these wider area green initiatives may not be funded. This is on contrast to green space and playspace within and adjoining developments, which is provided directly by developers.

Community Facilities

- 4.2.38 A contribution towards community facilities is sought from all developments through WNDP's Planning Obligations Strategy. Where applications have been submitted, community facilities are generally included in proposals for local centres, often in shared buildings.
- 4.2.39 Where additional community funding is needed on top of any developer contributions, there is a clear risk that facilities may not be provided. With local authorities having to make spending cuts, community facilities are likely to face a funding shortfall over the next few years. Best use should be made of 'value delivery', such as sharing premises. Sharing premises is an extremely cost effective way of providing community facilities, as the buildings will generally be provided by organisations with a larger and more reliable source of funding, such as healthcare or emergency services.

Emergency Services

- 4.2.40 Facilities are provided directly by the emergency services, and are generally funded by the service in question. However, they may draw on contributions from developers, particularly where relocation of buildings is necessary due to redevelopment.
- 4.2.41 Northamptonshire Police is presently reviewing its assets, following a restructuring of the force, and will be able to make funding information available during 2011. In terms of current proposals, the force is shortly to begin construction of a major new holding facility at Brackmills, and has plans for a number of 'Safer Community Team' facilities. Developer contributions are not being sought for these facilities, as they are not linked directly to development. At the time of writing, Northamptonshire Police was unsure how many of these facilities could be delivered, due to the impact of budget cuts. A funding gap may, therefore, emerge which could prove difficult to mitigate.
- 4.2.42 Northamptonshire Fire and Rescue is not proposing any new built infrastructure, but is instead focusing its investment on vehicles and equipment. Population growth will be taken into account when planning budgets and priorities, but this will need to be considered in the light of overall budget cuts. No IDP infrastructure items will be affected by the availability, or lack, of funding.

4.3 Cost Generation

- 4.3.1 Costs have been generated on one of the following bases:
- Estimated by E C Harris from the item description given on the IDP Schedule; with information being limited to a headline description of the primary infrastructure, the cost is, and can only be, indicative. The estimate has been prepared using cost information derived from EC Harris databases and published information;
 - Provided by WNDC / WNJPU or HA;
 - Provided by utilities, e.g. Scottish Power, based on assumed scope of work required for the related development;
 - Provided by WSP, utilities consultants, based on assumed scope of work required for the related development.
- 4.3.2 Indicative costs provided by E C Harris include for professional fees and a contingency (unless otherwise shown), which varies according to the perceived uncertainty surrounding

the scope, specification and timing of the work. The level of uncertainty has been taken from the 2008 study which considered the risk attached to projects. Where a new project has been identified, the level of uncertainty associated with a similar scheme has been applied.

- 4.3.3 Where a cost has been provided by the WNDC/JPU or WSP that cost has been used without any adjustment for professional fees or contingency as it is assumed that the cost given include for these items.
- 4.3.4 In the few instances where a cost has been carried forward from the 2008 Report, an adjustment has been applied to update the cost. The update has been calculated in accordance with the Building Cost Information Service of the RICS All-in Tender Price Index, to the 3rd quarter of 2010.
- 4.3.5 The level of accuracy of the costs is commensurate with the information available at the time of assessment. As the information is, in some cases, limited to a headline title of the project with no project scope defined, the costs have only been assessed at a high level and are only very approximate until more information becomes available.
- 4.3.6 The type of infrastructure project also varies, from localised road improvements to reinforcement of services covering a much wider area. Accordingly, the robustness of the costs will reflect this variation, with the uncertainty over the scope of works for a road improvement project being less than that for the services reinforcement.
- 4.3.7 Land costs are excluded unless otherwise stated.

4.4 Summary

- 4.4.1 The majority of items in the IDP Schedule will be funded through developer contributions. In some cases, these contributions will be supplemented by the provider's own funds, or by bids for external funding, from sources such as the Regional Growth Fund (RGF).
- 4.4.2 In many cases, items on the Schedule will only be needed if development goes ahead. Failure to begin or complete the development therefore poses no risk to provision within the wider community, even if the developer is providing all the funding. As a general rule, this applies to the following types of infrastructure item:
- primary schools
 - secondary schools

- GP and dental surgeries
- Water, gas and electricity connections into properties
- electrical substations
- gas regulators
- telecommunications
- playgrounds and recreation grounds
- new or extended bus routes

4.4.3 A further group of items are those which are developer funded but which are used by the wider community. Failure to begin or complete a development will, therefore result in a lack of funding for these items, regardless of need. Many of these items are only partly funded by developers, and therefore alternative funding is a possibility. However, with property values below their peak, and with cuts being made to central and local government budgets, pressure will fall increasingly on the infrastructure providers to make good any shortfall, and it cannot be guaranteed that funding will be available from this source. As a general rule, the following types of infrastructure item fall into this category:

- highways
- health centres
- country parks
- footpaths and cycleways
- bus priority measures
- wastewater treatment works
- gas and electrical reinforcement
- strategic flood defences
- sport and leisure centres
- community facilities

4.4.4 A greater risk to funding arises where the source of funding comes wholly from outside the local area, and where replacement funds could not be found locally. This tends to apply to infrastructure planned or conceived at the national scale, such as hospitals and emergency services, or items of national strategic importance, such as motorway improvements or long

distance pipelines. In these cases, the role of local intermediaries such as WNDC is limited, and funding gaps may prove hard to address.

- 4.3.5 Analysis of the IDP suggests that funding is in place for the majority of items shown in the Schedule, and that many of these items are only needed to service new development. However, there remain a number of number of 'big ticket' items, such as the A45 Northampton to Daventry Link Road, and the upgrade of Great Billing Wastewater Treatment Works, for which funding is, as yet, unconfirmed, and which would have a major impact on the ability to deliver growth across West Northamptonshire. Efforts should be focused on ensuring the relevant providers and funding bodies give early and adequate thought to when and how these items are to be delivered.

5 Conclusions

5.1 Résumé

- 5.1.1 The Infrastructure Delivery Plan Schedule (Appendix Two) has identified the infrastructure projects needed to support the planned growth in the three west Northamptonshire authorities of Northampton, Daventry and South Northamptonshire up to 2026. The IDP Schedule has categorised each project as primary, secondary or tertiary, based upon its relationship to the completion and occupation of the development.
- 5.1.2 The primary infrastructure projects, those that must be delivered to render the developments usable, have been inserted into the two IDP Programmes (Appendix Three) together with the yearly completions from the Pre-Submission JCS trajectory (50,000 dwellings) and the Emergent JCS trajectory (62,000 dwellings). Into these two Programmes have been factored the impact of key primary infrastructure items - those that have the greatest potential to prevent or hold up housing development to 2026.
- 5.1.3 Using these two IDP Programmes, four Housing Trajectories (Appendix Four) have been produced showing the impact of key primary infrastructure on the housing developments. 50A and 62A show the unmitigated impact; 50B and 62B, show the impact when unconstrained developments are brought forward to compensate for those delayed by key primary infrastructure.
- 5.1.4 Using Trajectories 50B and 62B, the WNJPU housing target most likely to be achieved can be identified.
- 5.1.5 Having identified the WNJPU housing target most likely to be achieved, the estimated costs and available funding of the primary infrastructure projects have been considered.

5.2 Factors affecting the Assessment

- 5.2.1 As a general note, there are several factors that can influence the rate and number of housing completions delivered, as has been demonstrated in Chapter Three. These are:
- Capacities of individual sites for development – increasing or decreasing the total number of dwellings per development

- Number of homes delivered in any year – increasing or decreasing the number of completions per year
- Start and completion dates for developments – changes would affect the number of completions per year
- Start and completion dates for items of key primary infrastructure – changes would affect the start dates and / or continuity of relevant developments dependent on the scale and type of item provided
- Changes to the list of key primary infrastructure items – should projects be redefined, as a result of future changes (e.g. reinforcement to electrical network), as key primary infrastructure, or those already identified as such cease to be, the start dates of developments will change
- Other infrastructure requirements not identified by providers in this IDP and therefore not considered as key primary infrastructure in future
- Delays in gaining planning permission – Chapter Three refers to the start of developments in the 62A: Housing Trajectory being put back to allow for a realistic timescale to secure planning permission. However, this does not take away the risk of planning delays on any of the developments
- As discussed in Chapter Four, the provision of infrastructure can only proceed if funding is available, and failure to provide the necessary infrastructure would impact on the related housing development.

5.3 Assessment

- 5.3.1 It is immediately clear from our assessment of the two trajectories that the 50,000 trajectory is not only more achievable than the 62,000, but that it allows all development proposed in the Pre-Submission JCS to be achieved by 2026, once individual developments have been brought forward to compensate for those delayed by KPI.
- 5.3.2 The 50,000 trajectory can be delivered without prejudice to the timetable of the JCS, and with only moderate changes to the timings and durations of development. The reason for this is simple: development is of a such a scale that the few delays that are caused by KPI can be easily overcome without relying on unachievable yearly completions, or by making unrealistic assumptions on the length of time taken to gain planning permission. In other words, there is enough slack within the trajectory to allow for the management of change.

- 5.3.3 By contrast, the 62,000 trajectory cannot be delivered without extending the plan period beyond 2026. With more development required to be delivered in the same timeframe, yearly completions are higher and trigger points for utility upgrades and network reinforcement are reached sooner. This substantially limits scope for bringing forward developments to replace those delayed by KPI, without making changes based upon unrealistic assumptions.
- 5.3.4 It must be borne in mind that the trajectories shown in Appendix Four provide a 'best case' scenario, in that they assume KPI will be delivered to programme and that no further delaying factors exist. In reality, some programme slippage will occur, and unforeseen events will cause delays to some of the developments proposed in the Joint Core Strategy. This is particularly true where development is dependant upon KPI for which funding has not been secured.
- 5.3.5 Different types of infrastructure are funded and delivered in different ways. Our assessment shows there are three main categories:
- a) items which are funded by developers and delivered in response to development
 - b) items which are funded by developers but which are delivered independently of the development
 - c) items which are not funded by developers and which are delivered independently of the development
- 5.3.6 Items in category a) pose little risk to the delivery of growth, as the developer and LPA have a high degree of control over them. Into this category fall schools, surgeries, connections to utility networks, telecommunications and local highways.
- 5.3.7 Category b) items pose a higher risk as their delivery is not within the control of the developer or LPA, even though the developer is paying for them. Often, the risk is more that the infrastructure will not be provided rather than development will be delayed. Items falling into this category include public transport improvements, health centres, sports and leisure provision and green infrastructure.
- 5.3.8 Items in category c) have the greatest potential to delay or prevent development as they are neither funded nor controlled by the LPA or developer. Furthermore, these items tend to be the more major constraints on development, and are often funded at a regional or

national level. They include gas and electricity grid reinforcement, trunk road and motorway improvements, hospitals and wastewater treatment.

5.3.9 Within West Northamptonshire, the main risks to the timely delivery of growth arising from key primary infrastructure are as follows:

- electrical reinforcement within Northampton - this is likely to be required at some point over the next fifteen years, but the scope and cost have yet to be established
- upgrade to Great Billing Wastewater Treatment Works - the current capacity will be taken up within the next ten years, and an upgrade will be needed to allow development to continue in Northampton after that. The work is not currently included within Anglian Water's investment (AMP5) programme.
- improvements to the A45 corridor west of the M1 - the A45 is currently a constraint on the growth of Daventry, and until funding is secured, development will continue to be delayed.
- application of the Highways Agency's access management strategy - this strategy covers the M1 and A45 where they abut Northampton, and will see capacity improvements at a number of junctions. Until funding is in place, and the scope of the changes is known, the growth of the town will continue to be constrained.

Appendix One: Maps

The first four maps show the preferred locations of growth from the 2009 Emergent Joint Core Strategy.

6.1 Northampton

6.2 Daventry

6.3 Towcester

6.4 Brackley

The remaining four maps show the illustrative distribution of sites from the draft 2010 Pre-Submission Joint Core Strategy.

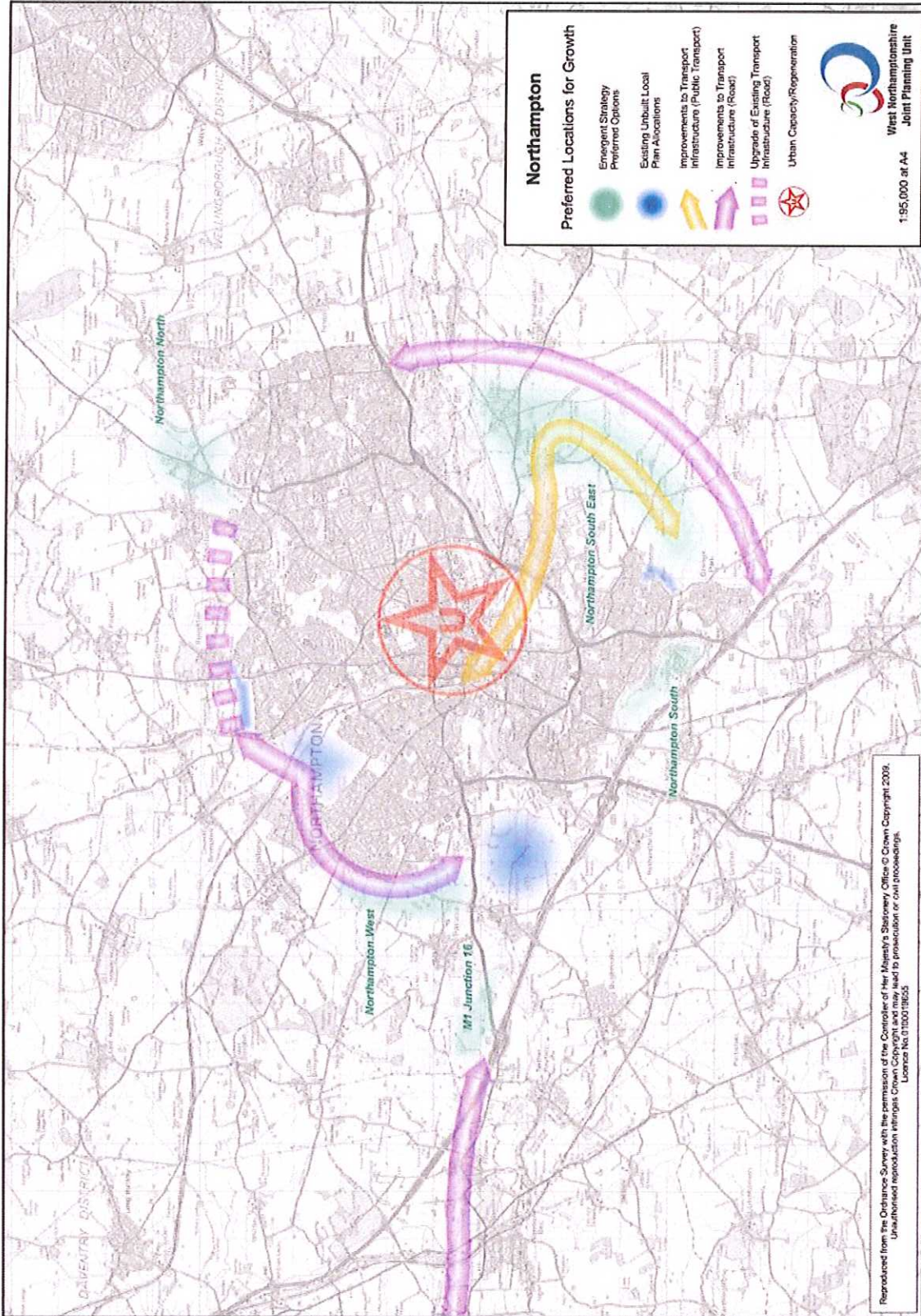
6.5 Northampton

6.6 Daventry

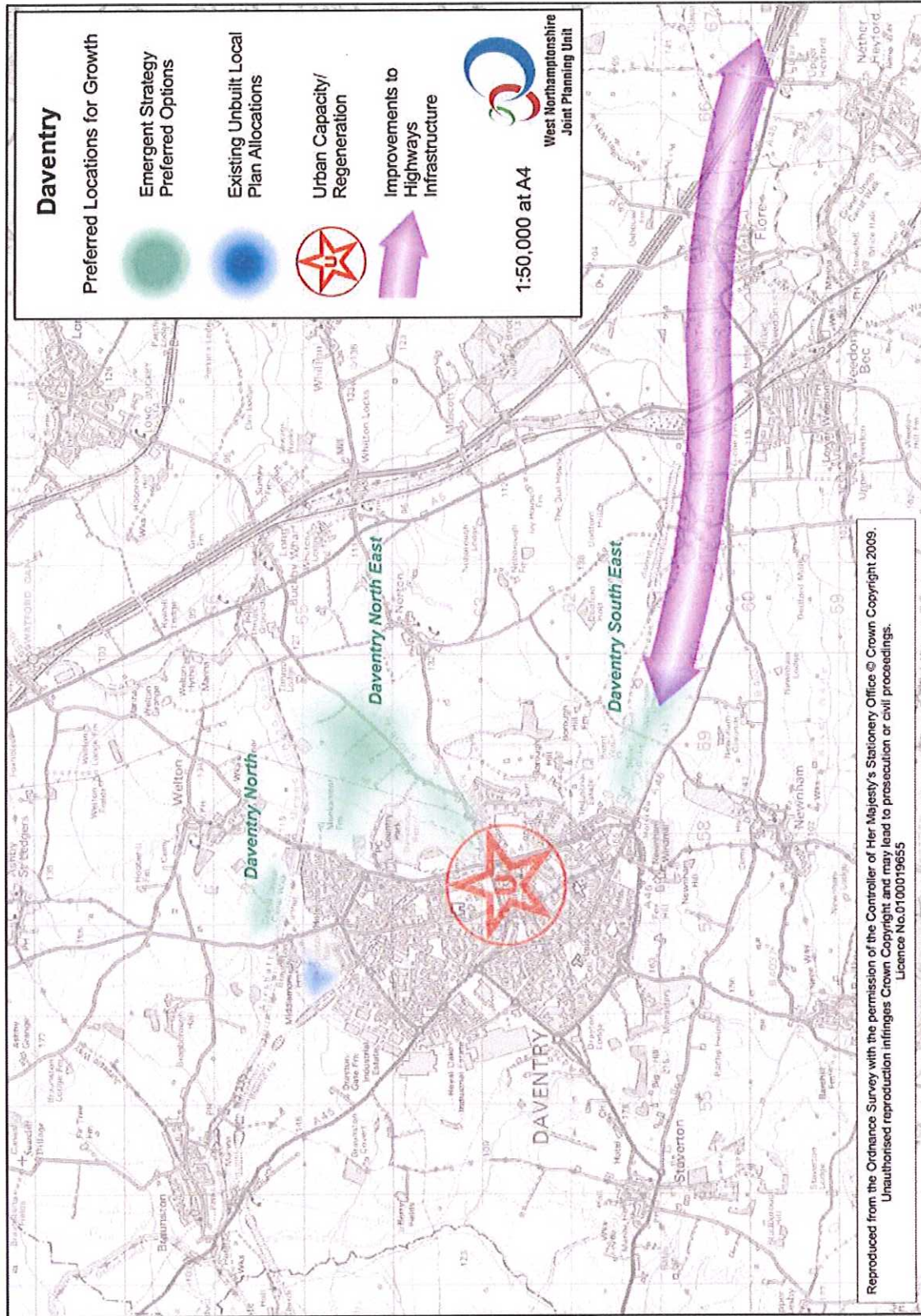
6.7 Towcester

6.8 Brackley

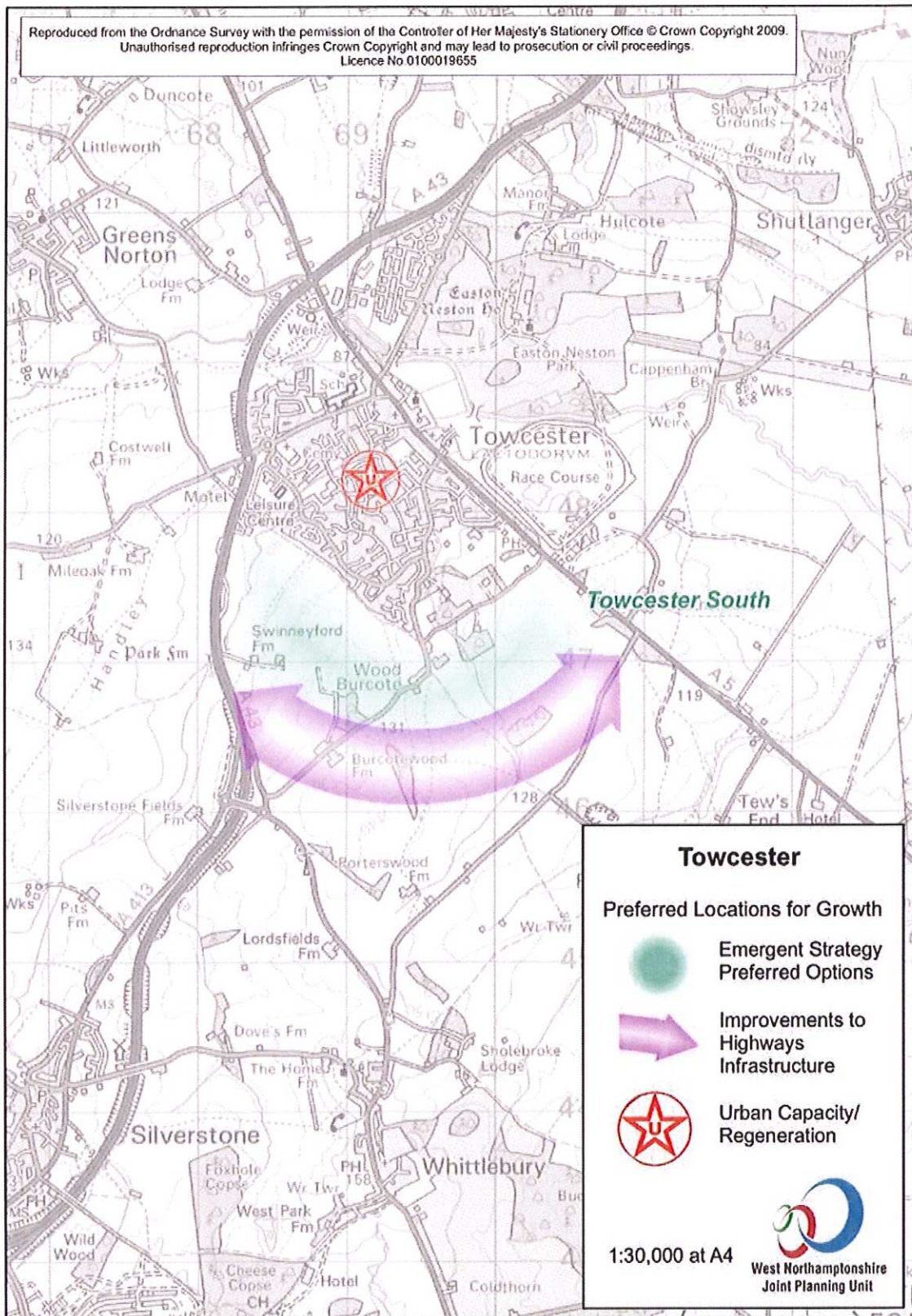
Map 6.1 Northampton - Preferred Locations for Growth



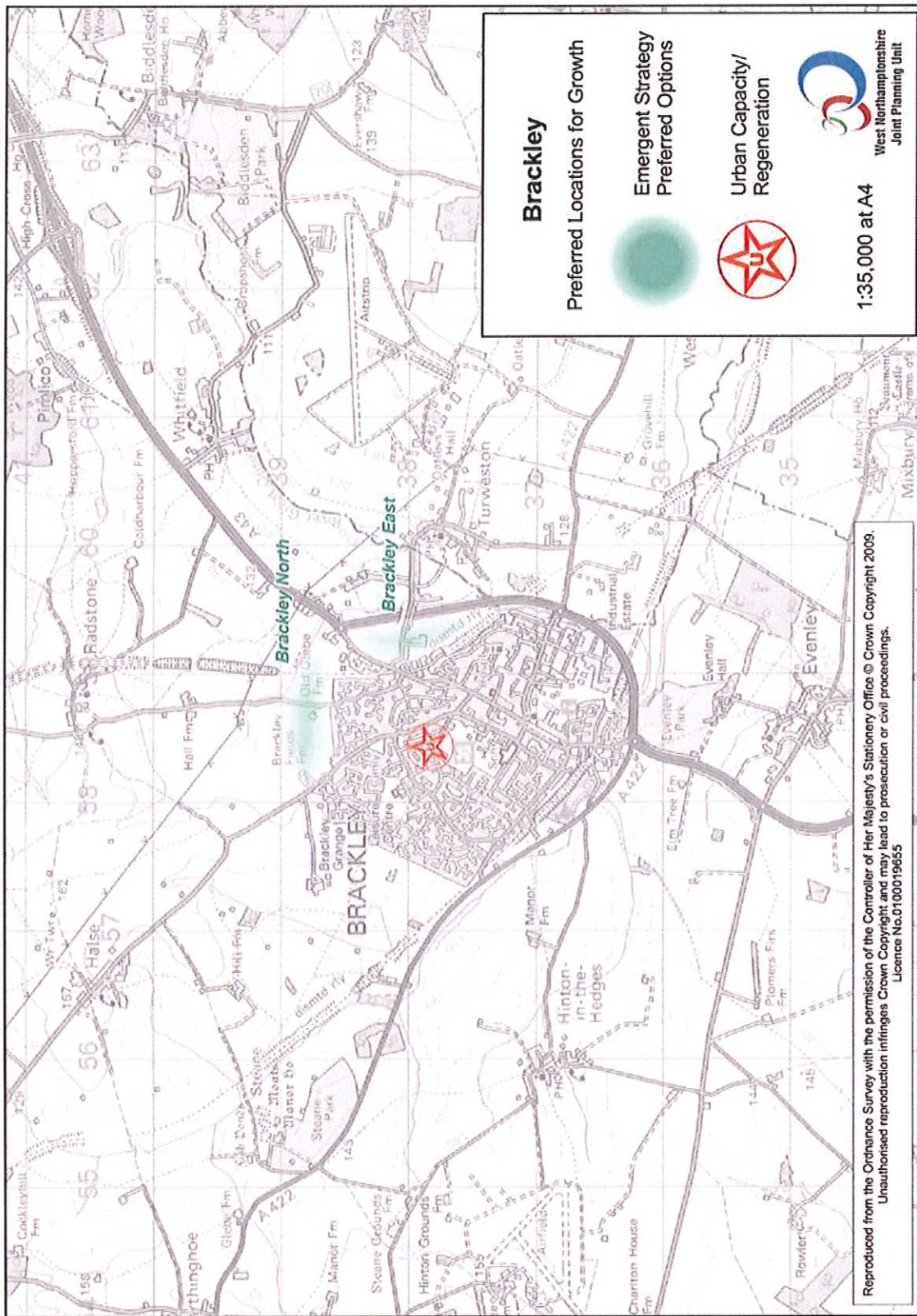
Map 6.2 Daventry - Preferred Locations of Growth

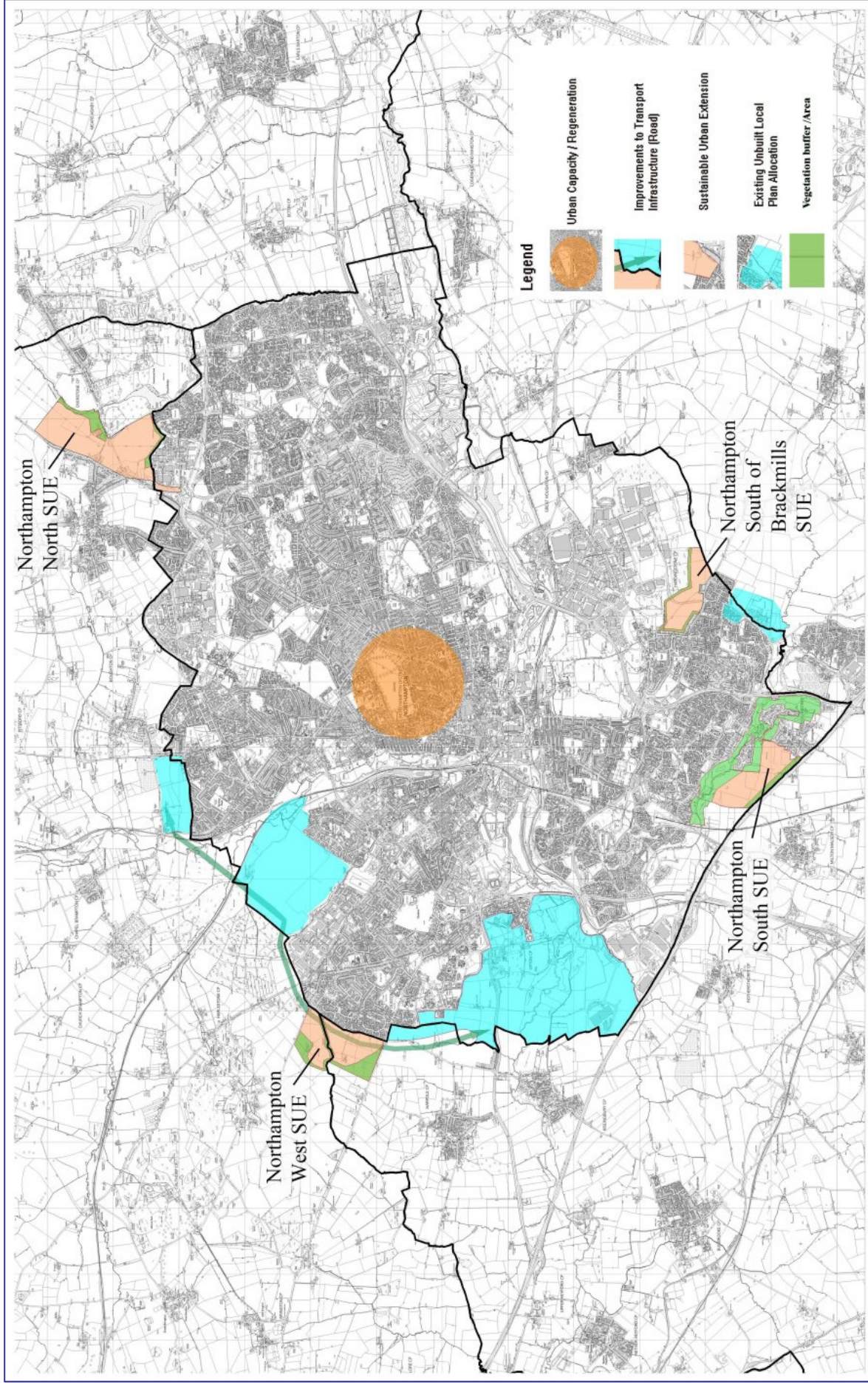


Map 6.3 Towcester - Preferred Locations for Growth



Map 6.4 Brackley - Preferred Locations for Growth



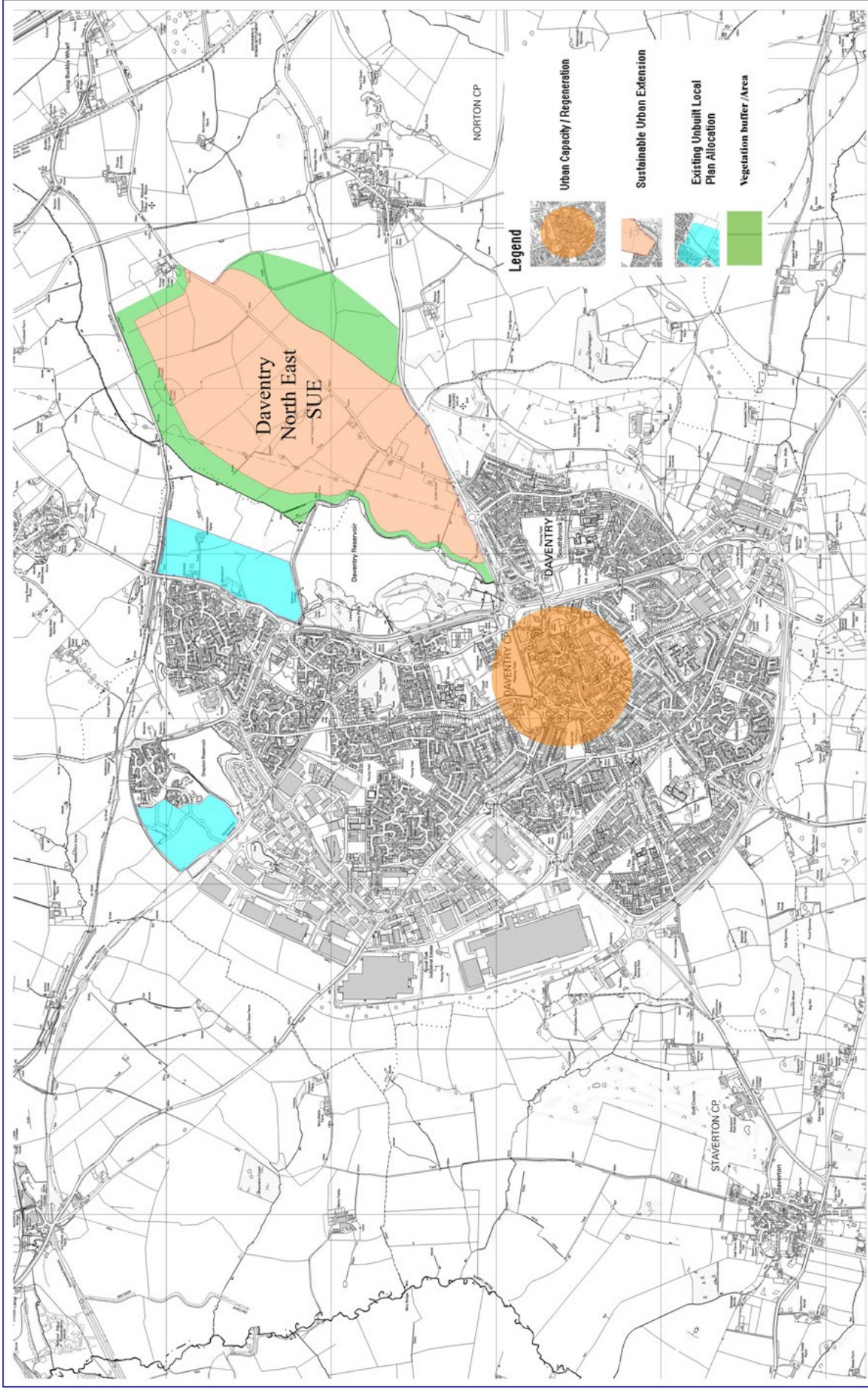


Northampton Illustrative Distribution

Name: C.Williams
 Date: 08th October 2010
 Scale: 1:50000 @ A3
 Dept: JPU
 Project: Illustrative Distribution



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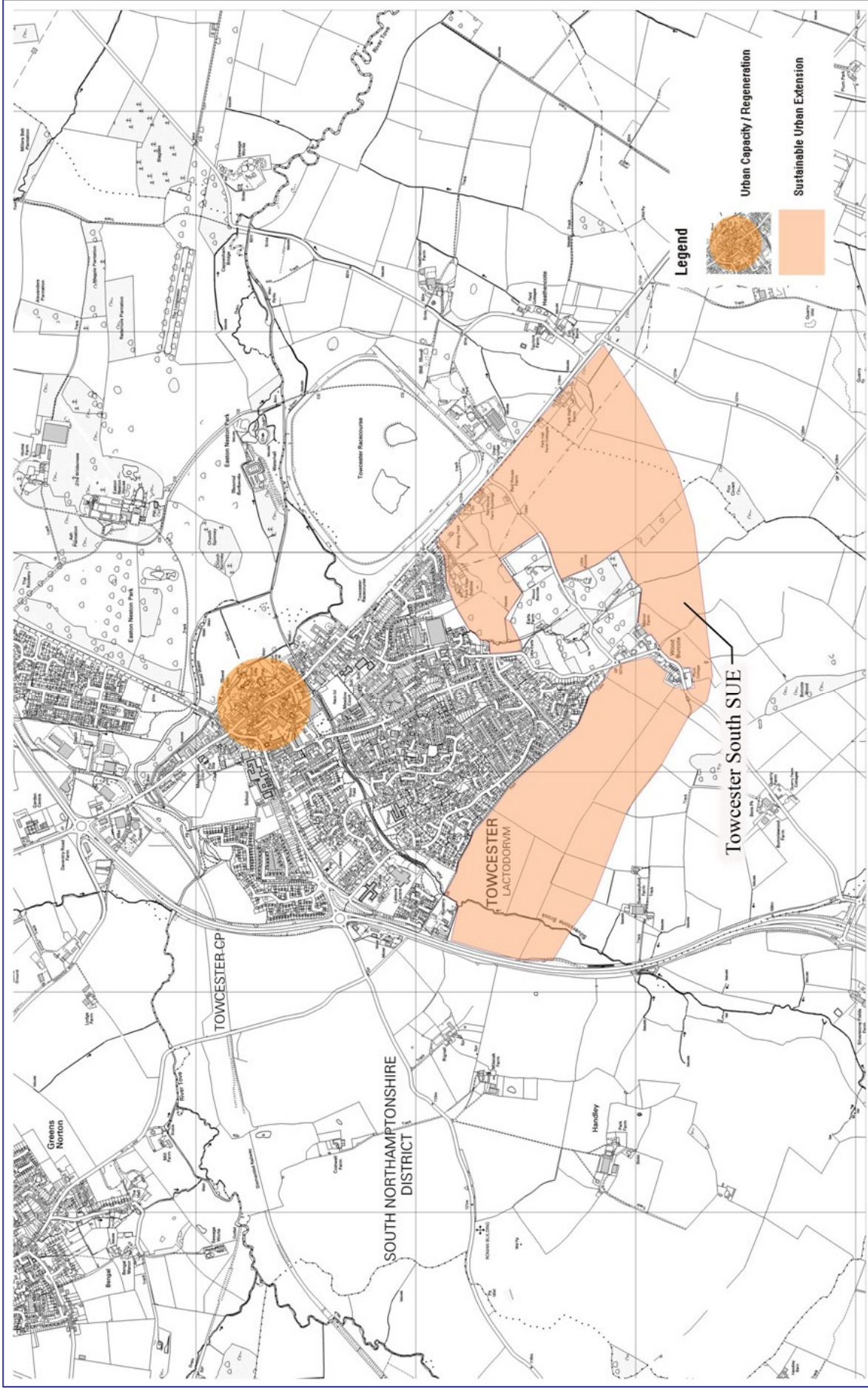


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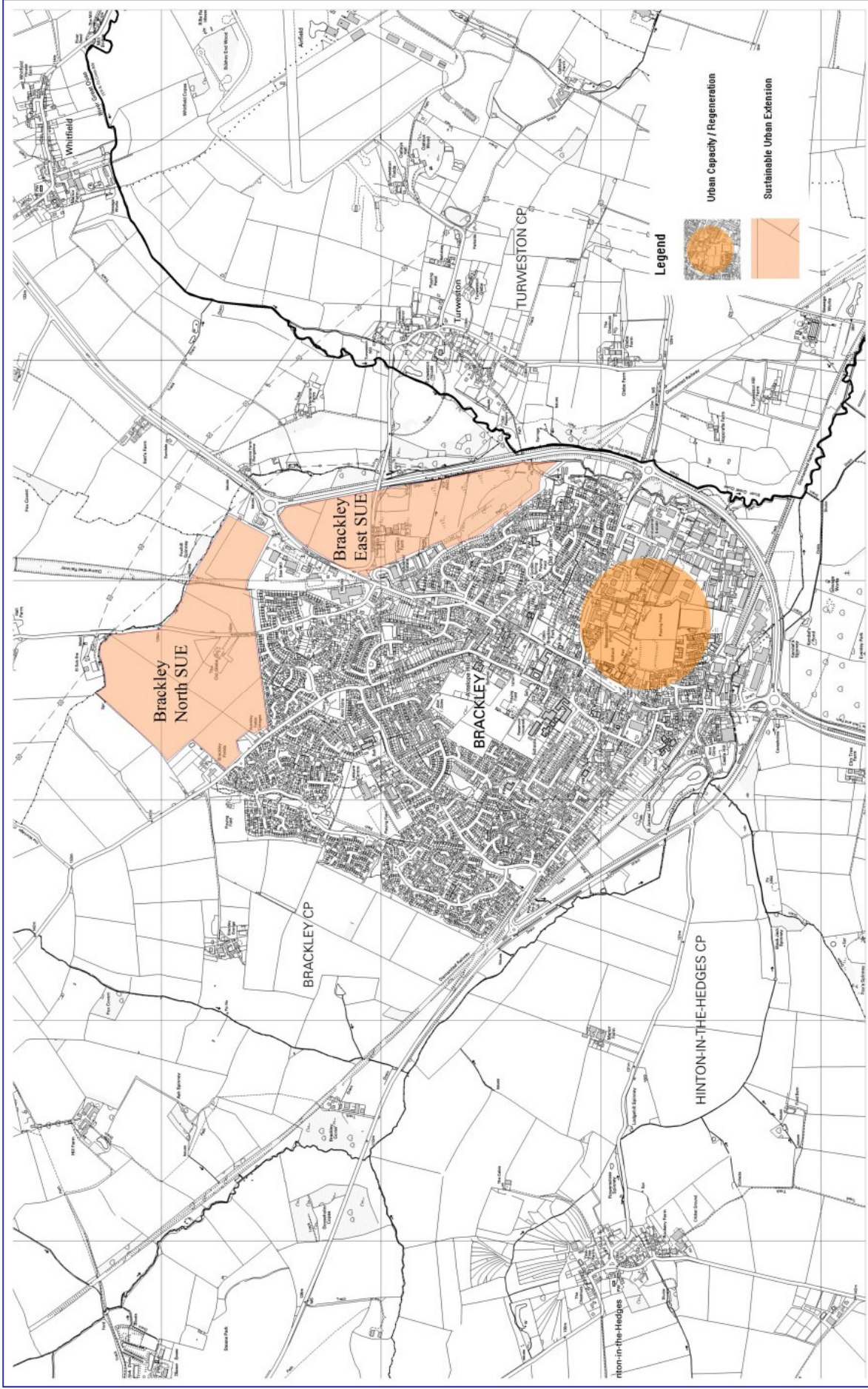
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Towcester Illustrative Distribution

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Appendix Two: IDP Schedule

The Schedule records the following information on infrastructure required to deliver development set out in the JCS:

Reference numbers

Column B provides a unique alphanumeric reference for each infrastructure item. The letter denotes the development; the number, the item within that development.

SUEs and Developments

Each infrastructure item is identified according to its location. The orange rows contain the names of sustainable urban extensions or wider development areas, with individual developments shown in the dark green rows.

To take an example, at the top of the Schedule is an orange row showing the wider growth area of Northampton town centre. Beneath this is a dark green row for the Grosvenor Centre. This is then followed by one row for each infrastructure item connected to that development (only one row in this case). Beneath this project comes the next development in the town centre, with its own list of projects, and so forth, until the list for the town centre is complete and the next orange row appears.

For each item of infrastructure, the names of the wider area and development to which the item relates appear in columns C and D. This means that the Schedule can be sorted by any column without an item losing its spatial context. The complete list of SUEs / wider areas is as follows. The names are consistent with the Pre-Submission Joint Core Strategy:

- Northampton Town Centre
- Northampton South
- Northampton North
- Dallington Grange Area
- Northampton West
- Northampton South East
- Northampton General
- Towcester Town Centre and General
- Towcester South
- Silverstone
- Brackley Town Centre and General
- Brackley North

- Brackley East
- South Northamptonshire General
- Daventry Town Centre
- Daventry North East
- Daventry North (Monksmoor)
- Daventry District General
- DIRFT
- Weedon Depot

Source of Information

The infrastructure items in the Schedule came from a broad range of sources. Column F lists the source for each item. Columns E and G contain names and descriptions for each item, giving as much information as the consultant team has been able to gather.

Infrastructure Categories

Infrastructure items are categorised as Primary, Secondary and Tertiary. The definitions of primary, secondary and tertiary infrastructure, which appear in column H, are as follows:

- a) Primary items are those which must be delivered to render the buildings usable. They tend to be basic physical items such as roads and sewers, and will generally be provided on-site. By definition, these items need to be delivered before the development is occupied.
- b) Secondary items are those which are needed to meet the everyday needs of residents, once the development is occupied. Some will need to be provided before the first building is occupied, others will be triggered by a certain number of completions. They can be provided on- or off-site, depending on what provision is available elsewhere. Good examples include education, healthcare and playspace.
- c) Tertiary items are those which help turn a development into a community. They contribute strongly to the residents' quality of life and to the creation of sustainable communities. Examples include libraries and country parks. Often, tertiary items will be provided off-site, sometimes serving more than one community.

These definitions were provided by the Joint Planning Unit, in consultation with WNDC and the consultant team. Their use is consistent with previous documents produced by the WNJPU.

The infrastructure items were also categorised according to the type of infrastructure involved. Column I shows whether an item is considered to comprise Physical, Green or Social & Community infrastructure. The definitions of these terms are below:

- a) Physical Infrastructure (P) is the provision of utilities, transport services, waste and drainage. These are the elements necessary to ensure that homes and workplaces are connected to the wider environment and have sufficient facilities to ensure that essential services can be delivered.
- b) Green Infrastructure (G) relates to the strategically planned and managed network of natural lands and other open spaces that conserve ecosystems and provide a range of environmental and quality of life benefits to local communities.
- c) Social and Community Infrastructure (S) provides the essential support for communities; it is wide-ranging in its scope, covering for example, education, healthcare provision, libraries, recreation and community halls.

These definitions were supplied by the WNJPU, and are taken from the latest (October 2010) draft of the emerging Joint Core Strategy. The type of infrastructure is defined further in column J.

Funding and Providers

The name of the organisation responsible for providing each item of infrastructure is given in column K. Typically, this will be one of the infrastructure providers contacted as part of the evidence gathering exercise, or developers via Section 106 or Tariff contributions.

The expected, or most likely, source of funding is given in column L. As may be seen in the Schedule, the majority of items are expected to be funded through development, either by S106 agreement or by direct provision. Where development is not expected to fund an item, it is assumed that the organisation providing the infrastructure will pay, unless there is evidence to the contrary. Where there is evidence of an alternative funding source e.g. some form of Government grant, this has been recorded.

Column M records whether there is potential for a funding gap in relation to that particular item. Where a viable source of funding has already been identified, or the category of infrastructure in question would normally be requisitioned by the developer when the development gets underway, the answer is 'no'. An answer of 'yes' is given where funding has either not been identified, or is not within the control of the provider or LPA. In the majority of cases, the consultant team has not had access to the detail of individual organisations' spending plans, so an assumption has been made based upon information received and experience elsewhere.

Timing and Delivery

For each item, a start date and duration has been provided. This information was requested from all the providers contacted. Not all were able to supply it, but the consultant team was able to fill the gaps using information supplied by WNDC and the WNJPU, and using its own professional judgement. In many cases, the provision of infrastructure is linked directly to the timing of

development. The durations shown are for the whole life cycle of the project, including design, planning and construction. The data provided has been essential in calculating the impact of essential primary infrastructure on the timing of certain developments. The information appears in columns N and O.

Cost

Costs were supplied from a range of sources. In some cases, the infrastructure providers supplied costs themselves. Other providers, however, were unwilling to share financial information. Where this was the case, costs were obtained from other sources, in particular from WNDC's Planning Obligations Strategy and from information gathered by the WNJPU from developers and infrastructure providers.

Where no cost was provided from any source, EC Harris generated costs using the Building Cost Information Service of the RICS All-in Tender Price Index, to the 3rd quarter of 2010. Fees were calculated from construction costs. Information showing the source of the cost for each infrastructure item appears in columns P and Q.

The level of accuracy of the costs is commensurate to the level of information available at the time of assessment. Where limited information only is available, the costs can only be approximated until more information becomes available. Where more detail is known for a project and a cost has been built up, a level of variation of +/-20% to the rates used has been assumed.

Appendix Nine contains project datasheets for all primary infrastructure items, showing costs, funding split and delivery mechanisms.

Notes

a) Utilities costs were obtained from a number of sources. Costs were input into the Schedule in the following order of precedence: 1) actual costs supplied by the provider; 2) estimates supplied by WSP; 3) estimates generated on the basis of Scottish Power's standard formula.

b) The Highways Agency is currently undertaking a study into how best to fund its various proposals for the M1 and A45, with a report expected in spring 2011. It is likely that a total cost will be compiled, and that a part of this will be allotted to each development on the basis of floorspace and dwelling numbers.

General Comments

General comments appear in column R. These provide any additional information needed to explain the data shown in the preceding columns.

B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
Reference	SUE / Wider Area	Development	Infrastructure Project	Infrastructure Project Source	Description	Infrastructure Status	Infrastructure Type	Infrastructure Category	Responsibility for Provision	Source of Funding	Potential Funding Gap?	Start Date	Duration	Cost	Source of Cost	Comments
Northampton Town Centre																
Any infrastructure requirements in Northampton Town Centre																
A	Northampton Town Centre	Grosvenor Centre			Long term project to redevelop and expand shopping centre. To include 400,000 sq feet of retail, plus a hotel, residential and new bus interchange.											
A1	Northampton Town Centre	Grosvenor Centre	New bus station interchange	WNDC / WNJPU	Demolition of existing bus station and replacement with new twenty-bay facility on another site. Temporary works car park may be needed.	Secondary	Physical	public transport	Developer	Developer / bus company (possibly through TIF or RGF)	No	2012	2 years	£14m	WNJPU	Information and cost estimate provided by NCC, WNDC and WNJPU officers. Demolition will cost in the order of £4m, with the remaining £10m to be spent on building the new facility. Funding will be via developer contributions and a possible TIF or RGF application.
A2	Northampton Town Centre	Grosvenor Centre	Associated highway works	NCC	Works to enable the redevelopment of the Grosvenor Centre, including the closing of Greyfriars to traffic.	Primary	Physical	road works	Developer	Developer / LTP	No	2012	2 years	NK	-	Outline information only available at this stage. The closure of Greyfriars, and associated changes to car park access, will lead to significant traffic impacts which will need to be addressed through a scheme to be worked up by NCC.
Northampton Town Centre - Castle Station Area																
B1	Northampton Town Centre	Castle Station Area	New station and transport interchange with associated multi-storey car park	WNDC	New station and multi storey car park including associated modifications to highway junctions and public realm	Primary	Physical	public transport	WNDC / Network Rail	NK	Yes	2012	4 years	£44m	WNDC	Cost provided by WNDC includes trunk sewer diversion.
Northampton Town Centre - Northampton Waterside																
C1	Northampton Town Centre	Northampton Waterside	Waterside programme phase 1b: St Peters Way	WNDC	Demolition of gasholders and remediation of site.	Primary	Physical	Enabling works	National Grid	Provider / developer	No	post 2014	2 years	£11.54m	EC Harris	Information carried forward from 2008 IDP. 2010 cost estimated by ECH. Site will be subject to detailed ground investigation, which may affect final cost and timescale.
C2	Northampton Town Centre	Northampton Waterside	Greenways and cycle routes	08 IDP	Greenways and cycle routes to be provided on north side of River Nene as part of Sustrans route	Tertiary	Social	footway / cycleway	NCC	NCC	Yes	NK	NK	NK	-	Confirmed as a priority by officers from the River Nene Regional Park, but with doubts expressed as to likelihood of funding in the short term.
C3	Northampton Town Centre	Northampton Waterside	Beckets Park	08 IDP	General park improvements to include café / restaurant facility	Tertiary	Green	open space	NBC	NBC	No	2011	2 years	NK	-	Preparatory works have begun, but the main upgrade is still to take place.
Northampton Town Centre - St John's Area																
D1	Northampton Town Centre	St John's Area	Telecoms	British Telecom	Improvements needed to broadband and telecoms network to make area attractive to creative industries	Secondary	Physical	utilities	Open Reach	Provider	No	2011	NK	NK	-	OpenReach have confirmed they are willing to pay developers to provide telecoms and internet access, so there is no cost to be borne by the developer.
D2	Northampton Town Centre	St John's Area	Plough Junction Improvements	WNJPU	To improve circulation around existing gyratory and to facilitate access into new development sites.	Primary	Physical	road works	NCC	NCC	Yes	before 2016	4years	£5.00m	NCC	Raised as a potential showstopper by NCC officers at the LPA workshop, but latterly downgraded following further advice from NCC. High degree of confidence in cost.
D3	Northampton Town Centre	St John's Area	Further highway and junction improvements	NCC	Improvements needed to provide access to various development sites in the St John's area	Primary	Physical	road works	NCC	Developers	Yes	NK	NK	NK	-	In addition to the Plough Hotel scheme, there are likely to be further improvements needed to provide access to, or to mitigate the impact of, development. These will be defined through the masterplanning process.
Northampton Town Centre - Other / General																
E1	Northampton Town Centre	Other	Castle Primary School	NCC	0.5 form of entry extension to Castle Primary School	Secondary	Social	education	NCC	NCC	No	Summer 2011	1 year	£2.125m	NCC	Information supplied by NCC. Start date and duration confirmed in December 2010
E2	Northampton Town Centre	Other	Public Realm	WNDC	Infrastructure to be incorporated as part of redevelopment of sites across the town centre	Tertiary	Social	public realm	Developer	Developer	No	Complete by 2017	7 years	NK	-	Comprises a series of individual projects linked to specific developments in the town centre, so delivery will depend upon these developments coming forward.
E3	Northampton Town Centre	Other	St James Library	WNJPU	Opportunity for refurbishment / relocation if funds available	Tertiary	Social	community facilities	NCC	NCC / Developer	Yes	NK	NK	£0.355m	WNJPU	Relocation to Franklin's Gardens has been suggested but this is still to be confirmed.
E4	Northampton Town Centre	Other	Police 'One Stop Shop'	Northamptonshire Police	A shared, public sector, front desk service serving the whole of Northampton town centre.	Secondary	Social	emergency services	NCC/Police Authority	Police	No	-	-	NK	Police	Existing One Stop Shop in Guildhall to remain. Police are committed to providing the best standard of customer service in partnership with the community.
E5	Northampton Town Centre	Town Centre General	Wastewater and surface water infrastructure	WCS (draft)	The draft WCS shows there may be a requirement for a strategic surface water and wastewater solution. The scale and type of solution will be determined by the Northampton Central Area drainage assessment, to be completed by May 2011	Primary	Physical	Utilities	Developer / Anglian Water / EA	Developer / Anglian Water / EA	Yes	Not before 2016	NK	£8.77m	ECH	There is limited capacity in the combined sewer network, and limited capacity in the river network for additional runoff from new impermeable areas. If developers are unable to manage the rate and volume of runoff from their site through SUDS, major new surface water infrastructure will be required. Cost generated by ECH based on similar examples elsewhere. Still waiting for Anglian Water to confirm the scope.
E6	Northampton Town Centre	Town Centre General	Sustainable drainage infrastructure	WCS (draft)	Wherever possible, sustainable urban drainage should be provided for new development in the town centre, to mitigate existing surface water drainage capacity issues.	Primary	Physical	Utilities	Developer	Developer	No	Linked to development	To be completed pre-occupation	£1.07m	ECH	SUDS should ensure the runoff rate from sites is no higher than existing, and should provide betterment where possible to reduce overall flood risk. Providing SUDS will extend the amount of development that can be delivered before large-scale investment in the town centre main sewer and Bedford Road pumping station is needed.
E7	Northampton Town Centre	Town Centre General	Highway / walking / cycling improvements	NCC	Further highway, walking and cycling improvements to address wider development in the town centre and to meet the objectives of the Area Action Plan	Primary	Physical	footway / cycleway	NCC	Developers / NCC	Yes	NK	NK	NK	-	To meet the development aspirations of the town centre, additional highway, walking and cycling improvements will be needed. These may include public realm improvements and bus priority measures. They will need to be defined through the planning or masterplanning processes.
Northampton Town Centre - Avon, Nunn Mills & Ransome Road																
The reclamation and redevelopment of former industrial site and landfill site close to Northampton Town Centre to create a mixed use development of circa 200,000sq ft of office accommodation, up to 1750 residential units (950 for Avon / Nunn Mills, 800 for Ransome Road), a primary school, hotel and associated retail provision																
F1	Northampton Town Centre	Avon / Nunn Mills	New primary school	NCC	1 form of entry Primary School	Secondary	Social	education	NCC	Developer/NCC	No	Linked to development	1 year	£4.05m	NCC	Although only 1fe is required to cater for growth identified in the EJCS, NCC would like to keep the option to provide a 2fe school to accommodate growth elsewhere in the town centre. The cost relates only to a 1fe school.
F2	Northampton Town Centre	Avon / Nunn Mills	Nunn Mills Substation	WNJPU	Upgrade needed to primary substation to enable Nunn Mills development	Primary	Physical	utilities	Central Networks	Provider	No	before 2016	NK	£1.62m	Scottish Power	WNDC may have to acquire additional land. No full scope therefore costs could be higher.
F3	Northampton Town Centre	Avon / Nunn Mills	Footpath enhancements	08 IDP	Provision of paths through Carlsberg / Avon and out to east	Tertiary	Social	footway / cycleway	NBC	NCC/Sustrans	Yes	before 2016	4years	£0.39m	EC Harris	
F4	Northampton Town Centre	Ransome Road	Nunn Mills / Ransome Road spine road	WNJPU	New access road between Nunn Mills and Ransome Road sites. To include new rail and river bridges, resurfacing of Ransome Rd and new junction with Bedford Rd. Work to be undertaken in two phases.	Primary	Physical	road works	WNDC	WNDC / developer	Yes	phase 1 - early 2011, phase 2 - early 2013	each phase 2 years	£17.64m	EC Harris	WNDC preparing planning application and CPO. Information provided in October 2010.
F5	Northampton Town Centre	Ransome Road	London Road / Ransome Road junction improvements	WNJPU	Improvements needed to accommodate flows generated by first stage of Ransome Road development, for 450 homes	Primary	Physical	road works	NCC	WNDC / GAF	No	January 2011	1 year	£2.3m	WNDC	Information provided by WNDC in October 2010.
F6	Northampton Town Centre	Ransome Road	Community Centres	WNDC	2 x new community centres to include space for emergency services and healthcare	Tertiary	Social	community facilities	NBC	Developer	No	To follow development	Contribution only	£0.768m	WNDC	from WNDC Planning Obligations Strategy @ £439 per dwelling.
F7	Northampton Town Centre	Ransome Road	Equipped and non equipped Play Area	WNDC	Contribution towards playspace to serve the development	Secondary	Social	community facilities	Developer	Developer	No	Linked to development	Contribution only	£2.179m	WNDC	from WNDC Planning Obligations Strategy @ £1097 for equipped and £148 per non-equipped per dwelling
F8	Northampton Town Centre	Ransome Road	Employment Training	WNDC	Contribution towards training places for local people when development takes place	Tertiary	Social	community facilities	Developer	Developer	No	Linked to development	Contribution only	£0.170m	WNDC	From WNDC Planning Obligations Strategy @ £97 per dwelling / £1 per sqm commercial floorspace
F9	Northampton Town Centre	Ransome Road	Public Realm	WNDC	Contribution towards high quality public realm within and around the development	Tertiary	Social	public realm	Developer	Developer	No	Linked to development	Contribution only	£0.840m	WNDC	from WNDC Planning Obligations Strategy @ £480 per dwelling
F10	Northampton Town Centre	Ransome Road	Sports pitches	WNDC	Contribution towards sports pitches to serve the development and the school	Tertiary	Green	open space	Developer	Developer	No	Linked to school development	Contribution only	£1.325m	WNDC	from WNDC Planning Obligations Strategy @ £757 per dwelling. Pitches may also have to serve the proposed primary school, as it may not be possible to provide a playing field on site.
F11	Northampton Town Centre	Avon / Nunn Mills	Leisure provision	WNDC	Contribution towards sports hall and swimming pool to serve the development	Tertiary	Social	community facilities	NBC	Developer	No	To follow development	Contribution only	£1.286m	WNDC	from WNDC Planning Obligations Strategy @ £735 per dwelling
F12	Northampton Town Centre	Avon / Nunn Mills	Health Centre	WNDC	Contribution towards health centre to serve development (based upon 4GPs and dental practice)	Secondary	Social	healthcare	PCT	NHS/S106	No	Linked to development	Contribution only	£1.824m	WNDC	from WNDC Planning Obligations Strategy @ £1042 per dwelling
F13	Northampton Town Centre	Avon / Nunn Mills & Ransome Road	Electrical supply	Scottish Power	Connections to 11kV grid and secondary substations only	Primary	Physical	utilities	Central Networks	Developer	No	Linked to development	In line with dev1	£2.24m	Scottish Power	Cost shown is the typical cost of connecting this number of properties to the 11kV electricity network.
F14	Northampton Town Centre	Avon / Nunn Mills & Ransome Road	Gas supply	Scottish Power	Connections to low pressure regulator only	Primary	Physical	utilities	National Grid	Developer	No	Linked to development	In line with dev1	£1.78m	Scottish Power	Cost shown is the typical cost of connecting this many properties to the medium pressure gas network.
Northampton South																
Infrastructure requirements to facilitate growth in Northampton South for 2000 homes.																
Area identified in an earlier version of the EJCS to potentially accommodate 5400 homes and 3040 jobs to 2026 (based on the then trajectory of 62,000 dwellings)																

Reference	SUE / Wider Area	Development	Infrastructure Project	Infrastructure Project Source	Description	Infrastructure Status	Infrastructure Type	Infrastructure Category	Responsibility / for Provision	Source of Funding	Potential Funding Gap?	Start Date	Duration	Cost	Source of Cost	Comments
G	Northampton South	Collingtree			Mixed use scheme to include 1,000 homes											
G1	Northampton South	Collingtree	Bus routes	NCC	New bus route connecting SUE to town centre, or diversion of existing service 4.	Secondary	Social	public transport	NCC	S106 / bus operator	No	2017	9 years	£1.4m	NCC	Derived from the Northampton Bus Development Plan (pre-submission update) 2010
G2	Northampton South	Collingtree	Primary education	NCC	1x 2 form of entry Primary School	Secondary	Social	education	NCC	S106	No	Linked to development	NK	£6.45m	NCC	Need confirmed by NCC officers following inclusion of this development in October 2010. Sufficient secondary school places are available to serve the development.
G3	Northampton South	Collingtree	Health and community services	WNJPU	Community centre and surgery to be provided in a new local centre.	Tertiary	Social	healthcare	NCC / PCT / Developer	S106	No	To follow development	1 year	£1.481m	WNDC	Confirmed in EJCS. Cost taken from WNDC Planning Obligations Strategy @ £439 per dwelling for community facilities and £1042 per dwelling for healthcare.
G4	Northampton South	Collingtree	Park and Ride Facility	WNDC	Park and Ride facility to be provided near M1 junction 15	Secondary	Physical	public transport	NCC	Developer/NCC	Yes	To follow development	NK	£5.5m (est.)	WNDC	Site not yet chosen, so costs cannot be determined. Cannot be sited on the A508 unless south of the motorway.
G5	Northampton South	Collingtree	Employment Training	WNDC	Contribution towards training places for local people when development takes place	Tertiary	Social	community facilities	Developer	Developer	No	Linked to development	Contribution only	£0.09m	WNDC	From WNDC Planning Obligations Strategy @ £97 per dwelling / £1 per sqm commercial floorspace
G6	Northampton South	Collingtree	Sports pitches	WNDC	Contribution towards sports pitches to serve the development	Tertiary	Green	open space	Developer	Developer	No	Linked to development	Contribution only	£0.757m	WNDC	from WNDC Planning Obligations Strategy @ £757 per dwelling
G7	Northampton South	Collingtree	Green Infrastructure	WNDC	Contribution towards green infrastructure to serve the development	Secondary	Green	open space	Developer	Developer	No	Linked to development	Contribution only	£0.250m	WNDC	from WNDC Planning Obligations Strategy @ £250 per dwelling
G8	Northampton South	Collingtree	Equipped and non equipped Play Area	WNDC	Contribution towards playspace to serve the development	Secondary	Social	community facilities	Developer	Developer	No	Linked to development	Contribution only	£1.245m	WNDC	from WNDC Planning Obligations Strategy @ £1097 for equipped and £148 per non-equipped per dwelling
G9	Northampton South	Collingtree	Leisure provision	WNDC	Contribution towards sports hall and swimming pool to serve the development	Tertiary	Social	community facilities	NBC	Developer	No	To follow development	Contribution only	£0.735m	WNDC	from WNDC Planning Obligations Strategy @ £735 per dwelling
G10	Northampton South	Collingtree	Public realm	WNDC	Contribution towards high quality public realm within and around the development	Tertiary	Green	open space	Developer	Developer	No	Linked to development	Contribution only	£0.480m	WNDC	from WNDC Planning Obligations Strategy @ £480 per dwelling
G11	Northampton South	Collingtree	Electrical supply	WSP	The housing development is likely to draw circa 2 MW and require between 4 to 6 distribution substations.	Primary	Physical	utilities	Central Networks	Developer	No	Linked to development	In line with dev't	£1.09m	WSP	Cost shown is the typical cost of connecting this number of properties to the 11kV network. It is likely that the local 11 kV network will require 'upstream' reinforcement to cater for the new load (see below)
G12	Northampton South	Collingtree	Electrical Network Reinforcement	WSP	New primary substation and reinforcement of 11kV grid	Primary	Physical	utilities	Central Networks	Developer	Yes	Linked to development	18 months	£1.49m	Scottish Power	Central Networks will need to be asked to undertake a network analysis based upon a 2MW load to determine if off-site reinforcement is required and provide a C3 cost estimate as necessary. Typically they will take 6 - 8 weeks to respond. Cost assumes one new primary substation.
G13	Northampton South	Collingtree	Gas supply	WSP	The housing development is likely to have an annual gas consumption of 19,000 MWh with a peak instantaneous demand of circa 1,395 m³/h.	Primary	Physical	utilities	National Grid	Developer	No	Linked to development	In line with dev't	£0.74m	WSP	Cost shown is the typical cost of connecting this many properties to the medium pressure gas network. The local low pressure gas network serving this area is very unlikely to have sufficient spare capacity to serve the development
G14	Northampton South	Collingtree	Gas Network Reinforcement	WSP	New medium or intermediate pressure gas main via a gas regulator.	Primary	Physical	utilities	National Grid	Developer	Yes	Linked to development	TBC	£1.00m	ECH	National Grid will need to be asked to carry out a network analysis based upon the stated consumption to determine the system pressure and connection point in their system, and to generate a budget cost for the required plant and works. NG typically respond within 2 to 3 months
G15	Northampton South	Collingtree	Highway / walking / cycling improvements	NCC	Further highway, walking and cycling improvements to mitigate the impacts of the development and to provide connectivity	Primary	Physical	footway / cycleway	NCC	Developers / NCC	No	2016	NK	NK	-	To be identified through planning application and transport assessment.
G16	Northampton South	Collingtree	Towcester Road bus priority improvements	NCC	Bus priority measures at Mereway / Towcester Road roundabout to shorten journey times and to improve reliability of buses serving the SUE	Secondary	Physical	public transport	NCC	Developers / NCC	Yes	NK	< 1 year	£0.12m	NCC	Taken from Northampton Bus Priority Strategy Report November 2010
H	Northampton South	South of Brackmills			Mixed use scheme to include 1,000 homes											
H1	Northampton South	South of Brackmills	Bus routes	NCC	Diversion of existing service 15 to provide bus service linking development to the town centre	Secondary	Social	public transport	NCC	S106/bus operator	No	2019	7 years	£1m	NCC	Derived from the Northampton Bus Development Plan (pre-submission update) 2010
H2	Northampton South	South of Brackmills	Wootton Library	WNJPU	Opportunity for refurbishment / relocation if funds available	Tertiary	Social	community facilities	NCC	NCC / Developer	Yes	NK	NK	£0.237m	WNJPU	Possible expansion if funds permit, but funding considered unlikely at this juncture.
H3	Northampton South	South of Brackmills	Primary education	NCC	1x 2 form of entry Primary School	Secondary	Social	education	NCC	S106	No	Linked to development	TBC	£6.45m	NCC	Need confirmed by NCC officers following inclusion of this development in October 2010. New school would also provide primary places for Northampton South East (Development Q). Sufficient secondary school places are available at Roadside School.
H4	Northampton South	South of Brackmills	Health and community services	WNJPU	Community centre and surgery to be provided in a new local centre.	Tertiary	Social	healthcare	NCC / PCT / Developer	S106	No	To follow development	1 year	£1.481m	WNDC	Confirmed in EJCS. Cost taken from WNDC Planning Obligations Strategy @ £439 per dwelling for community facilities and £1042 per dwelling for healthcare.
H5	Northampton South	South of Brackmills	Employment Training	WNDC	Contribution towards training places for local people when development takes place	Tertiary	Social	community facilities	Developer	Developer	No	Linked to development	Contribution only	£0.097m	WNDC	From WNDC Planning Obligations Strategy @ £97 per dwelling / £1 per sqm commercial floorspace
H6	Northampton South	South of Brackmills	Sports pitches	WNDC	Contribution towards sports pitches to serve the development	Tertiary	Green	open space	Developer	Developer	No	Linked to development	Contribution only	£0.757m	WNDC	from WNDC Planning Obligations Strategy @ £757 per dwelling
H7	Northampton South	South of Brackmills	Green Infrastructure	WNDC	Contribution towards green infrastructure to serve the development	Secondary	Green	open space	Developer	Developer	No	Linked to development	Contribution only	£0.250m	WNDC	from WNDC Planning Obligations Strategy @ £250 per dwelling
H8	Northampton South	South of Brackmills	Equipped and non equipped Play Area	WNDC	Contribution towards playspace to serve the development	Secondary	Social	community facilities	Developer	Developer	No	Linked to development	Contribution only	£1.245m	WNDC	from WNDC Planning Obligations Strategy @ £1097 for equipped and £148 per non-equipped per dwelling
H9	Northampton South	South of Brackmills	Leisure provision	WNDC	Contribution towards sports hall and swimming pool to serve the development	Tertiary	Social	community facilities	NBC	Developer	No	To follow development	Contribution only	£0.735m	WNDC	from WNDC Planning Obligations Strategy @ £735 per dwelling
H10	Northampton South	South of Brackmills	Public realm	WNDC	Contribution towards high quality public realm within and around the development	Tertiary	Green	open space	Developer	Developer	No	Linked to development	Contribution only	£0.480m	WNDC	from WNDC Planning Obligations Strategy @ £480 per dwelling
H11	Northampton South	South of Brackmills	Electrical supply	WSP	The housing development is likely to draw circa 2 MW and require between 4 to 6 distribution substations.	Primary	Physical	utilities	Central Networks	Developer	No	Linked to development	TBC	£1.09m	WSP	Cost shown is the typical cost of connecting this number of properties to the 11kV network. It is likely that the local 11 kV network will require 'upstream' reinforcement to cater for the new load (see below)
H12	Northampton South	South of Brackmills	Electrical Network Reinforcement	WSP	New primary substation and reinforcement only needed if not provided at Collingtree	Primary	Physical	utilities	Central Networks	Developer	Yes	Substation provided at Collingtree	18 months	£1.49m	ECH	Central Networks will need to be asked to undertake a network analysis based upon a 2MW load to determine if off-site reinforcement is required and provide a C3 cost estimate as necessary. Typically they will take 6 - 8 weeks to respond. The development will be served by the primary substation at Collingtree. If Collingtree does not come forward, the substation will need to be provided south of Brackmills.
H13	Northampton South	South of Brackmills	Gas supply	WSP	The housing development is likely to have an annual gas consumption of 19,000 MWh with a peak instantaneous demand of circa 1,395 m³/h.	Primary	Physical	utilities	National Grid	Developer	No	Linked to development	TBC	£0.74m	WSP	Cost shown is the typical cost of connecting this many properties to the medium pressure gas network. The local low pressure gas network serving this area is very unlikely to have sufficient spare capacity to serve the development
H14	Northampton South	South of Brackmills	Gas Network Reinforcement	WSP	Possible new medium or intermediate pressure gas main via a gas regulator.	Primary	Physical	utilities	National Grid	Developer	Yes	Linked to development	TBC	£1.00m	ECH	National Grid will need to be asked to carry out a network analysis based upon the stated consumption to determine the system pressure and connection point in their system, and to generate a budget cost for the required plant and works. NG typically respond within 2 to 3 months
H15	Northampton South	South of Brackmills	Highway / walking / cycling improvements	NCC	Further highway, walking and cycling improvements to mitigate the impacts of the development and to provide connectivity	Primary	Physical	footway / cycleway	NCC	Developers	No	2018	NK	NK	-	To be identified through planning application and transport assessment.
H16	Northampton South	South of Brackmills	London Road bus priority improvements	NCC	Bus priority measures at London Road / Queen Eleanor Island to shorten journey times and to improve reliability of buses serving the SUE	Secondary	Physical	public transport	NCC	Developers / NCC	Yes	NK	NK	£2.7m	NCC	Taken from Northampton Bus Priority Strategy Report November 2010
GH	Northampton South	Northampton South General														
GH1	Northampton South	Northampton South General	Wastewater network	WCS (draft)	New sewer needed, linked to Pineham and Grange Park.	Primary	Physical	Utilities	Anglian Water / developer	Developer	No	Linked to development	18 months	£5.93m	ECH	There is no local connection from the natural collection point of this area into the drainage network. Therefore a new sewer connection will need to be requisitioned by the developer. This could be set out as a condition on the planning permission. Anglian Water will provide the infrastructure as soon as the developer makes the requisition.
GH2	Northampton South	Northampton South General	Flood attenuation measures	WCS (draft)	Sustainable urban drainage systems (SUDS) to be included in new developments	Primary	Physical	flood attenuation	Developer	Developer	No	Linked to development	1 year	£2.26m	ECH	There is insufficient floodplain area to make flood storage effective. Therefore, any runoff greater than greenfield will need to be attenuated on site through SUDS. Requirement for SUDS to be determined through masterplanning and EA approval of FRA

Reference	SUE / Wider Area	Development	Infrastructure Project	Infrastructure Project Source	Description	Infrastructure Status	Infrastructure Type	Infrastructure Category	Responsibility for Provision	Source of Funding	Potential Funding Gap?	Start Date	Duration	Cost	Source of Cost	Comments
GH3	Northampton South	Northampton South General	Water supply infrastructure	WCS (draft)	Approximately 2.23km of 280mm OD main from the 450mm DI main in Newport Pagnell Road to the north east boundary of the site boundary, via Wooldale Road.	Primary	Physical	Utilities	Anglian Water / developer	Developer	Yes	Linked to development	2 years	£0.71m	ECH	There may be special engineering difficulties associated with this site. Due to the size and nature of the works, they will require ecology and archaeology surveys to be completed and the selected technique for road and railway crossings will need to be checked and signed off by the appropriate bodies. Depending upon the timing of development, there may be capacity to supply the first phases of this development from the existing network. Figures based on 62,000 trajectory and will need to be updated when new figures available from Anglian Water.
Northampton North					Infrastructure requirements to facilitate growth in Northampton North, identified in the EJCS to accommodate 2000 homes and 7 hectares of employment land (technology realm) to 2026.											
I	Northampton North	Northampton North SUE			Growth area to north of town to provide 2000 homes and 7 hectares of employment land (technology realm) to 2026											
I1	Northampton North	Northampton North SUE	Round Spinney Interchange	DDC	Improvements to roundabout to optimise traffic flow	Primary	Physical	road works	NCC	S106	No	by 2016	NK	£10m	WNJPU	Earmarked as possible S106 from Northampton North SUE. Will need to be checked for possible service diversions, which could add to the cost.
I2	Northampton North	Northampton North SUE	Primary schools	NCC	2 x 2 form of entry primary schools	Secondary	Social	education	NCC	Developer/NCC	No	Linked to development		£13m	NCC	Confirmed in EJCS. Information supplied by NCC.
I3	Northampton North	Northampton North SUE	Kettering Road bus priority improvements	NCC	Bus priority measures at Kettering Road to shorten journey times and to improve reliability of buses serving the SUE	Secondary	Physical	public transport	NCC	Developers / NCC	Yes	NK	NK	£1.5m	NCC	Taken from Northampton Bus Priority Strategy Report November 2010
I4	Northampton North	Northampton North SUE	Bus service	NCC	New bus service connecting SUE to town centre	Secondary	Social	public transport	Bus company	S106 / bus operator	No	2018	8 years	£2m	NCC	Taken from Northampton Bus Priority Strategy Report November 2010. To be provided on completion of the 200th dwelling. Until then, area will be covered by routes 38 and 39.
I5	Northampton North	Northampton North SUE	Leisure and community services	WNJPU	To be provided in two local centres, totalling one hectare overall. To include a new library.	Secondary	Social	community facilities	NCC / Developer	S106	No	Linked to development		£1.59m	WNDC	Confirmed in EJCS
I6	Northampton North	Northampton North SUE	Landscape mitigation for Moulton and Overstone	08 IDP	Landscape buffering to maintain visual barrier between settlements. Small scale highway works to reduce attraction of traffic to Moulton and Overstone.	Secondary	Green	Landscape	Developer	Developer	No	Linked to development				Shown in current proposals for development but not costed as a separate item of infrastructure
I7	Northampton North	Northampton North SUE	Health centre / dental practice	NHS	3 GP Health Centre needed to service 2000 dwellings	Secondary	Social	healthcare	PCT	Developer	No	To follow development	Contribution only	£2.325m	WNDC	From WNDC Planning Obligations Strategy, confirmed in EJCS. Includes dentist
I8	Northampton North	Northampton North SUE	A43 Moulton bypass	NCC	Bypass of Moulton plus development of spine road to serve housing development	Primary	Physical	road works	NCC	Developer	No	Linked to development	NK	£5.38m	EC Harris	Confirmed in EJCS. Linked to works at Round Spinney Interchange, although costed separately. Will need to be checked for possible service diversions, which could add to the cost.
I9	Northampton North	Northampton North SUE	Employment Training	WNDC	Contribution towards training places for local people when development takes place	Tertiary	Social	community facilities	Developer	Developer	No	Linked to development	Contribution only	£0.242m	WNDC	From WNDC Planning obligations strategy £97 per dwelling. Commercial floorspace is not yet known so has not been included in total.
I10	Northampton North	Northampton North SUE	Wastewater infrastructure	WCS (draft)	New sewer connecting SUE to existing network.	Primary	Physical	Utilities	Anglian Water / developer	Developer	No	Linked to development	18 months	£1.48m	ECH	AW modelling has identified that there are no strategic constraints to delivering this development. The sewer will be provided by AW via its standard requisition process, whereby the developer pays AW to undertake the works. It is expected that any additional infrastructure required can be delivered through the requisition process without impacting the viability of this site. Infrastructure will be provided independently of other major development areas or proposals.
I11	Northampton North	Northampton North SUE	Flood storage/attenuation	WCS (draft)	Potential improvements to Overstone Park Lake for use as runoff attenuation to be investigated by developers.	Primary	Physical	flood attenuation	Developer	Developer	No	Linked to development	1 year	£2.26m	ECH	If Overstone Park Lake is not suitable, surface water attenuation must be provided on site by developers.
I12	Northampton North	Northampton North SUE	Water Supply infrastructure	WCS (draft)	5km of 450mm ID main will need to be laid from Hannington WR to the development, alongside the A43.	Primary	Physical	Utilities	Anglian Water / developer	Developer	No	Linked to development	18 months	£1.82m	ECH	This scheme will go ahead once a requisition or firm commitment has been received from the developer. Figures based on 62,000 trajectory and will need to be updated when new figures available from Anglian Water. Approximately 200 dwellings can be supplied from the existing network.
I13	Northampton North	Northampton North SUE	Sports pitches	WNDC	Contribution towards sports pitches to serve the development	Tertiary	Green	open space	Developer	Developer	No	Linked to development	Contribution only	£1.892m	WNDC	from WNDC Planning Obligations Strategy @ £757 per dwelling
I14	Northampton North	Northampton North SUE	Green Infrastructure	WNDC	Contribution towards green infrastructure to serve the development	Secondary	Green	open space	Developer	Developer	No	Linked to development	Contribution only	£0.625m	WNDC	from WNDC Planning Obligations Strategy @ £250 per dwelling
I15	Northampton North	Northampton North SUE	Equipped and non equipped Play Area	WNDC	Contribution towards play space to serve the development	Secondary	Social	community facilities	Developer	Developer	No	Linked to development	Contribution only	£3.113m	WNDC	from WNDC Planning Obligations Strategy @ £1097 for equipped and £148 per non-equipped per dwelling
I16	Northampton North	Northampton North SUE	Public realm	WNDC	Contribution towards high quality public realm within and around the development	Tertiary	Green	open space	Developer	Developer	No	Linked to development	Contribution only	£1.200m	WNDC	from WNDC Planning Obligations Strategy @ £480 per dwelling
I17	Northampton North	Northampton North SUE	Electrical supply	WSP	The housing development is likely to draw circa 5 MW and require between 12 to 16 distribution substations.	Primary	Physical	utilities	Central Networks	Developer	No	Linked to development	In line with dev't	£2.73m	WSP	Cost shown is the typical cost of connecting this number of properties to the 11kV network. The local 11 kV network will require 'upstream' reinforcement to cater for the new load
I18	Northampton North	Northampton North SUE	Electrical Network Reinforcement	WSP	Reinforcement of the local 11 kV network plus one 33/11 kV Grid Substation.	Primary	Physical	utilities	Central Networks	Developer	Yes	Linked to development	18 months	£5.75m	WSP	Central Networks will need to be asked to undertake a network analysis based upon a 5MW load and to provide a C3 cost estimate for the works. Typically they will take 6 - 8 weeks to respond. The cost of a 33/11kV grid substation plus reinforcement is circa £5 million.
I19	Northampton North	Northampton North SUE	Gas supply	WSP	Connections to medium pressure gas network	Primary	Physical	utilities	National Grid	Developer	No	Linked to development	In line with dev't	£0.21m	ECH	The housing development is likely to have an annual gas consumption of 47,500 MWh with a peak instantaneous demand of circa 3,488 m ³ /h. Cost shown is the typical cost of connecting this many properties to the medium pressure gas network. The local low pressure gas network serving this area is very unlikely to have sufficient spare capacity to serve the development national grid will need to be asked to carry out a network analysis based upon the stated consumption to determine the system pressure and connection point in their system, and to generate a budget cost for the required plant and works. NG typically respond within 2 to 3 months.
I20	Northampton North	Northampton North SUE	Gas Network Reinforcement	WSP	One medium pressure or intermediate pressure gas main via a gas regulator.	Primary	Physical	utilities	National Grid	Developer	Yes	Linked to development	TBC	£1.00m	ECH	
I21	Northampton North	Northampton North SUE	Highway / walking / cycling improvements	NCC	Further highway, walking and cycling improvements to mitigate the impacts of the development and to provide connectivity	Primary	Physical	footway / cycleway	NCC	Developers	No	2016	NK	NK	-	To be identified through planning application and transport assessment.
Dallington Grange Area					Infrastructure required to support development of Dallington Grange to include 4,500 homes											
J	Dallington Grange Area	Northampton King's Heath			Development comprising up to 3,500 dwellings to immediate north west of King's Heath estate, and 10ha employment				Parsimmon / David Wilson Homes							3500 homes
J1	Dallington Grange Area	Northampton King's Heath	North West Bypass	NCC	New road running from A 428 Harlestone Road to A5199 Welford Road.	Primary	Physical	road works	NCC	S106 and other sources	No	0 - 3 yrs of first completions at Dallington Grange	3 years	£17.5m	WNJPU	Comprises two sections. The longer western section will be delivered by Dallington Grange as a necessary access to their development; the shorter eastern section will not. Required for Dallington Grange but not for Northampton North SUE. For the purposes of the IDP, the two sections are shown as a single scheme. Other sites that will contribute towards it are Buckden Fields and Dallington Grange
J2	Dallington Grange Area	Northampton King's Heath	Harlestone Road Junction improvements	NCC	Improvements to Harlestone Road / Mill Lane junction	Primary	Physical	road works	NCC	S106	Yes	Linked to development	In line with dev't	£3.75m	WNJPU	Cost provided by WNJPU based upon NCC estimate
J3	Dallington Grange Area	Northampton King's Heath	Community Centre	WNDC	within multi use building	Tertiary	Social	community facilities	NCC	S106	No	Linked to development	Contribution only	£1.59m	WNDC	From WNDC Planning Obligations Strategy
J4	Dallington Grange Area	Northampton King's Heath	Sports Hall	WNDC	likely to be shared facility with the school	Tertiary	Social	community facilities	NCC	S106	No	NK	Contribution only	£2.765m	WNDC	From WNDC Planning Obligations Strategy - 4 court sports hall
J5	Dallington Grange Area	Northampton King's Heath	Library	WNDC	Library within the multi use building	Tertiary	Social	community facilities	NCC	NCC	No	Linked to development		£0.768m	WNJPU	Cost supplied by NCC
J6	Dallington Grange Area	Northampton King's Heath	Healthcare and emergency services	WNDC	Facility to be provided within multi-use building	Secondary	Social	healthcare	Developer	S106	No	To follow development		NK		gp services 6gps (1500 per gp) somewhere on site
J7	Dallington Grange Area	Northampton King's Heath	Equipped and non equipped Play Area	WNDC	Contribution towards play space to serve the development	Secondary	Social	community facilities	Developer	S106	No	Linked to development	Contribution only	£4.36m	WNDC	from WNDC Planning Obligations Strategy £1097 for equipped and £148 per non-equipped per dwelling
J8	Dallington Grange Area	Northampton King's Heath	Playing pitches	WNDC	Contribution towards sports pitches to serve the development	Secondary	Green	open space	Developer	S106	No	Linked to development	Contribution only	£2.65m	WNDC	from WNDC Planning Obligations Strategy £757 per dwelling
J9	Dallington Grange Area	Northampton King's Heath	District Park	WNDC	located within Dallington Grange but will also serve a wider area of north Northampton	Secondary	Green	open space	Developer	S106	No	Linked to development		£1.1m	WNDC	
J10	Dallington Grange Area	Northampton King's Heath	Employment Training	WNDC	Contribution towards training places for local people when development takes place	Tertiary	Social	community services	NCC	S106	No	Linked to development	Contribution only	£0.34m	WNDC	From WNDC Planning obligations strategy £97 per dwelling. Commercial floorspace is not yet known so has not been included in total.
J11	Dallington Grange Area	Northampton King's Heath	Green Infrastructure	WNDC	Contribution towards green infrastructure to serve the development	Secondary	Green	open space	Developer	S106	No	Linked to development	Contribution only	£0.875m	WNDC	From WNDC Planning obligations strategy £250 per dwelling

Reference	SUE / Wider Area	Development	Infrastructure Project	Infrastructure Project Source	Description	Infrastructure Status	Infrastructure Type	Infrastructure Category	Responsibility / for Provision	Source of Funding	Potential Funding Gap?	Start Date	Duration	Cost	Source of Cost	Comments
J12	Dallington Grange Area	Northampton King's Heath	Public Realm	WNDC	Waterside public space / river corridor enhancements	Tertiary	Social	public realm	Developer	S106	No	Linked to development	Contribution only	£1.68m	WNDC	From WNDC Planning Obligations Strategy £480 per dwelling
J13	Dallington Grange Area	Northampton King's Heath	Community Gardens/Allotments	WNDC	To be provided in accordance with NBC policy	Tertiary	Social	community facilities	Developer	S106	No	To follow development		NK		
J14	Dallington Grange Area	Northampton King's Heath	Dallington to Kings Heath road improvements	WNDC	Provision of vehicular link through to Kings Heath to improve bus service	Primary	Physical	public transport	NBC/NCC	TBC	No	2015	NK	£3.57m	EC Harris	New funding mechanism may need to be agreed - cost from CIF bid. Linked to regeneration of King's Heath.
J15	Dallington Grange Area	Northampton King's Heath	Primary schools	NCC	2 x 2 form of entry Primary Schools	Secondary	Social	education	NCC	Developer/NCC	No	Linked to development		£13m	NCC	3500 units is expected to yield 4.7fe. One of the school sites will need to be large enough to allow development up to 3fe if needed. Information supplied by NCC.
J16	Dallington Grange Area	Northampton King's Heath	Bus service	NCC	Existing bus service to King's Heath extended to provide link from Dallington Grange to town centre	Secondary	Physical	public transport	NCC	S106 / bus operator	No	2017	12 years	£4.3m	NCC	Taken from Northampton Bus Priority Strategy Report November 2010
J17	Dallington Grange Area	Northampton King's Heath	Kingsthorpe Library	WNJPU	Opportunity for refurbishment / relocation if funds available	Tertiary	Social	community facilities	NCC	NCC	Yes	NK	NK	£0.281m	WNJPU	Objective is to achieve a more prominent location, to serve both Dallington Grange and Buckton Fields. Cost supplied by NCC.
J18	Dallington Grange Area	Northampton King's Heath	Police - Safer Community Team Facility	Northamptonshire Police	To meet the start up capital costs for the Safer communities Team	Tertiary	Social	emergency services	Developer	Police	No	In line with development	In line with dev't	Maximum of £500,000	Police	Planning Authority aware of requirements. These costs are provided by the Police authority and considered to be higher than will actually be the case
J19	Dallington Grange Area	Northampton King's Heath	Wastewater network capacity	WCS (draft)	New wastewater infrastructure required. Anglian Water have agreed a local short term solution to providing capacity for this development with the developer.	Primary	Physical	Utilities	AWS/developer	Developer	Yes	Linked to development	18 months	£0.35m	ECH	Connection to an appropriate point in the network will need to be agreed by site developers with Anglian Water through the requisition process, and will need to ensure that connections are not upstream of local or minor combined sewer overflows. The long term strategy will be modelled and confirmed by AW during AMP5 (by 2015). Based on initial modelling results from the Northampton DAP, the long term strategy may require both infrastructure improvements and demand management (surface water removal and infiltration reduction).
J20	Dallington Grange Area	Northampton King's Heath	Electrical supply	WSP	The housing development is likely to draw circa 7 MW and require circa 20 distribution substations.	Primary	Physical	utilities	Central Networks	Developer	No	Linked to development	In line with dev't	£3.82m	WSP	Cost shown is the typical cost of connecting this number of properties to the 11kV network. The local 11 kV network will require reinforcement to cater for the new load (see below)
J21	Dallington Grange Area	Northampton King's Heath	Electrical Network Reinforcement	WSP	One new 33/11 kV Primary Substation plus reinforcement in the local 11kV grid. Substation will also cover Buckton Fields	Primary	Physical	utilities	Central Networks	Developer	Yes	Linked to development	18 months	£1.49m	Scottish Power	Central Networks to be requested to undertake a network analysis based upon a 9 MW load - the combined load of this development and the Buckton Fields development - and provide a C3 cost estimate for the works. Typically they will take 6 - 8 weeks to respond. Cost assumes one primary substation.
J22	Dallington Grange Area	Northampton King's Heath	Gas supply	WSP	The housing development is likely to have an annual gas consumption of 66,500 MWh with a peak instantaneous demand of circa 4,883 m³/h.	Primary	Physical	utilities	National Grid	Developer	No	Linked to development	In line with dev't	£2.61m	WSP	Cost shown is the typical cost of connecting this many properties to the medium pressure gas network. The local low pressure gas network serving this area is very unlikely to have sufficient spare capacity to serve the development
J23	Dallington Grange Area	Northampton King's Heath	Gas Network Reinforcement	WSP	One new a medium pressure or intermediate pressure gas main via a gas regulator, to supply both Dallington Grange and Buckton Fields.	Primary	Physical	utilities	National Grid	Developer	Yes	Linked to development	TBC	£1.00m	ECH	National Grid to be requested to carry out a network analysis based upon the combined consumption of this development and Buckton Fields to determine the system pressure and connection point in their system, and to generate a budget.
J24	Dallington Grange Area	Northampton King's Heath	Highway / walking / cycling improvements	NCC	Further highway, walking and cycling improvements to mitigate the impacts of the development and to provide connectivity	Primary	Physical	footway / cycleway	NCC	Developers	No	2016	NK	NK	-	To be identified through planning application and transport assessment.
K	Dallington Grange Area	Northampton North of Whitehills			Site allocated for 1,000 homes between A5199 and A508, to immediate north of built up area											Buckton Fields has been earmarked for a contribution towards the orbital route around the north west of Northampton (described in J1 and O2)
K1	Dallington Grange Area	Northampton North of Whitehills	Bus service	DDC / NCC	Extension of existing Acre Lane bus service (4A) to link development to town centre.	Secondary	Social	public transport	NCC	S106 / bus operator	No	2014	9 years	£1.6m	NCC	Taken from Northampton Bus Development Plan (pre-submission update) November 2010
K2	Dallington Grange Area	Northampton North of Whitehills	Primary school	WNJPU	1 x 11 form of entry Primary school once development reaches 500 homes	Secondary	Physical	education	NCC	Developer / NCC	No	Linked to development		£4.05m	WNJPU	Once the development reaches 500 homes the school will be required as there is no further capacity in the area. 1000 units is expected to yield 1.3fe, so land should be made available for a 2fe school if required. Secondary provision will be by means of a contribution to facilities elsewhere.
K3	Dallington Grange Area	Northampton North of Whitehills	Community facilities	WNDC	Community building to be provided in new local centre	Tertiary	Social	community facilities	DDC	Developer	No	To follow development	Contribution only	£0.439m	WNDC	from WNDC Planning Obligations Strategy @ £439 per dwelling.
K4	Dallington Grange Area	Northampton North of Whitehills	Park and Ride Facility	WNDC	Park and Ride facility to be provided on A508	Secondary	Physical	public transport	NCC	Developer/NCC	Yes	TBC	TBC	£5.5m (est.)	NCC	Estimated cost based upon similar facility on Weedon Road (O10)
K5	Dallington Grange Area	Northampton North of Whitehills	Employment Training	WNDC	Contribution towards training places for local people when development takes place	Tertiary	Social	community facilities	Developer	Developer	No	Linked to development	Contribution only	£0.097m	WNDC	From WNDC Planning Obligations Strategy @ £97 per dwelling / £1 per sqm commercial floorspace
K6	Dallington Grange Area	Northampton North of Whitehills	Sports pitches	WNDC	Contribution towards sports pitches to serve the development	Tertiary	Green	open space	Developer	Developer	No	Linked to development	Contribution only	£0.757m	WNDC	from WNDC Planning Obligations Strategy @ £757 per dwelling
K7	Dallington Grange Area	Northampton North of Whitehills	Green Infrastructure	WNDC	Contribution towards green infrastructure to serve the development	Secondary	Green	open space	Developer	Developer	No	Linked to development	Contribution only	£0.250m	WNDC	from WNDC Planning Obligations Strategy @ £250 per dwelling
K8	Dallington Grange Area	Northampton North of Whitehills	Equipped and non equipped Play Area	WNDC	Contribution towards playspace to serve the development	Secondary	Social	community facilities	Developer	Developer	No	Linked to development	Contribution only	£1.245m	WNDC	from WNDC Planning Obligations Strategy @ £1097 for equipped and £148 per non-equipped per dwelling
K9	Dallington Grange Area	Northampton North of Whitehills	Leisure provision	WNDC	Contribution towards sports hall and swimming pool to serve the development	Tertiary	Social	community facilities	DDC	Developer	No	To follow development	Contribution only	£0.735m	WNDC	from WNDC Planning Obligations Strategy @ £735 per dwelling
K10	Dallington Grange Area	Northampton North of Whitehills	Public realm	WNDC	Contribution towards high quality public realm within and around the development	Tertiary	Green	open space	Developer	Developer	No	Linked to development	Contribution only	£0.480m	WNDC	from WNDC Planning Obligations Strategy @ £480 per dwelling
K11	Dallington Grange Area	Northampton North of Whitehills	Health Centre	WNDC	Contribution towards health centre to serve development (based upon 4GPs and dental practice)	Secondary	Social	healthcare	Developer	NHS / S106	No	Linked to development	Contribution only	£1.042m	WNDC	from WNDC Planning Obligations Strategy @ £1042 per dwelling
K12	Dallington Grange Area	Northampton North of Whitehills	Electrical supply	WSP	The housing development is likely to draw circa 2 MW and require between 4 to 6 distribution substations.	Primary	Physical	utilities	Central Networks	Developer	No	Linked to development	In line with dev't	£3.82m	WSP	Cost shown is the typical cost of connecting this number of properties to the 11kV network. The local 11 kV network will require reinforcement to cater for the new load (see below)
K13	Dallington Grange Area	Northampton North of Whitehills	Electrical Network Reinforcement	WSP	Some local reinforcement may be needed. Substation to be provided at Dallington Grange	Primary	Physical	utilities	Central Networks	Developer	Yes	Linked to development	18 months	£1.49m	ECH	Central Networks to be requested to undertake a network analysis based upon a 9 MW load - the combined load of this development and the Dallington Grange development - and provide a C3 cost estimate for the works. Typically they will take 6 - 8 weeks to respond. Primary substation provided at Dallington Grange.
K14	Dallington Grange Area	Northampton North of Whitehills	Gas supply	WSP	The housing development is likely to have an annual gas consumption of 19,000 MWh with a peak instantaneous demand of circa 1,395 m³/h.	Primary	Physical	utilities	National Grid	Developer	No	Linked to development	In line with dev't	£2.61m	WSP	Cost shown is the typical cost of connecting this many properties to the medium pressure gas network. The local low pressure gas network serving this area is very unlikely to have sufficient spare capacity to serve the development
K15	Dallington Grange Area	Northampton North of Whitehills	Gas Network Reinforcement	WSP	Some local reinforcement may be needed. Gas regulator to be provided at Dallington Grange.	Primary	Physical	utilities	National Grid	Developer	Yes	Linked to development	TBC	£1.00m	ECH	National Grid to be requested to carry out a network analysis based upon the combined consumption of this development and Dallington Grange to determine the system pressure and connection point in their system, and to generate a budget.
K16	Dallington Grange Area	Northampton North of Whitehills	Highway / walking / cycling improvements	NCC	Further highway, walking and cycling improvements to mitigate the impacts of the development and to provide connectivity	Primary	Physical	footway / cycleway	NCC	Developers	No	2013	NK	NK	-	To be identified through planning application and transport assessment.
K17	Dallington Grange Area	Northampton North of Whitehills	Barrack Road / Kingsthorpe Road bus priority improvements	NCC	Bus priority measures on Barrack Road and Kingsthorpe Road to shorten journey times and to improve reliability of buses serving the SUE	Secondary	Physical	public transport	NCC	Developers / NCC	Yes	NK	NK	£3.8m	NCC	Taken from Northampton Bus Priority Strategy Report November 2010 plus known estimates for Cock Hotel scheme
Northampton West					General infrastructure required to facilitate 6,463 dwellings in the South West District, as per the 50,000 target in the current EUCS. Includes Princess Marina, British Timken and St Crispin.											
L	Northampton West	Northampton West General			General infrastructure for the Northampton West Area not included within specific development sites.											The Northampton West SUE has been earmarked for a contribution towards the orbital route around the north west of Northampton (described in J1 and O2)
L1	Northampton West	Northampton West General	Electrical supply	Central Networks	Reinforcement to Countess Rd Bulk Supply Sub station	Primary	Physical	utilities	Central Networks	Provider	Yes	before 2016	NK	£1.40m	Central Networks	Costs are estimated and works may be more significant than currently thought. Serves whole of South West District and no one project will bear full costs. Should not be regarded as part of developer contributions. Assumes cables will be mounted on existing pylons.
L2	Northampton West	Northampton West General	Health Centre	NHS	Facility to be provided at Sixfields, to serve whole of South West District	Secondary	Social	healthcare	PCT	NHS/S106	Yes	before 2016	4-5years	£12.65m	NHS	Land already purchased
L3	Northampton West	Northampton West General	St Crispin - Green spaces in and around residential development	NBC	Land transfer and remedial improvements works	Secondary	Green	open space	NBC/Taylor Young	S106 and Developer	No	before 2012	1 year	NK	-	from James Ogle NBC

Reference	SUE / Wider Area	Development	Infrastructure Project	Infrastructure Project Source	Description	Infrastructure Status	Infrastructure Type	Infrastructure Category	Responsibility for Provision	Source of Funding	Potential Funding Gap?	Start Date	Duration	Cost	Source of Cost	Comments
L4	Northampton West	Northampton West General	Northampton West 132/11kV reinforcement	Central Networks	Replace transformers with higher rated units or install 132/11kV substation	Primary	Physical	utilities	Central Networks	Central Networks	Yes	beyond 2016	18 months	£31.2m	EC Harris	Cost provided by Central Networks for 2008 IDP and updated for 2010 by ECH in line with industry standards. Should be considered an estimate until scale and scope of works have been confirmed by the provider.
L5	Northampton West	Northampton West General	Wastewater network	WCS (draft)	New wastewater drainage to serve Northampton West SUE and Upton lodge.	Primary	Physical	Utilities	Anglian Water / developer	Developer	No	Linked to development	18 months	£59.63	ECH	There is no local connection from the natural collection point of this area into the drainage network. Therefore, a new sewer connection would need to be requisitioned by the developer. The natural drainage of this area would allow for connection to the Wootton Branch trunk sewer. However, the location of the site means that the development could also potentially be drained by the Bedford Rd Pumping Station catchment. This will need to be confirmed by detailed modelling following site allocation and adoption of the Joint Core Strategy. Cost will need to be confirmed with Anglian Water once their spending plans are known.
L6	Northampton West	Northampton West general	Water Supply infrastructure	WCS (draft)	Harpole WT pumps to be upgraded and 1.5km of 350mm ID reinforcement main to be laid from Harpole WT to the development.	Primary	Physical	Utilities	Anglian Water / developer	Developer	No	Linked to development	18 months	£0.70m	ECH	This scheme will go ahead once a requisition or firm commitment has been received from the developer. There may be capacity to supply the first phases of this development from the existing network. For later phases, it may be necessary to install a new treated water storage tank and a new water booster at Pitsford. Figures based on 62,000 trajectory and will need to be updated when new figures available from Anglian Water.
L7	Northampton West	Northampton West general	Weedon Road bus priority improvements	NCC	Bus priority measures on Weedon Road to shorten journey times and to improve reliability of buses serving the SUE	Secondary	Physical	public transport	NCC	Developers / NCC	Yes	NK	NK	£10.7m	NCC	Taken from Northampton Bus Priority Strategy Report November 2010
M	Northampton West	Northampton West SUE			Infrastructure to enable the development of the 1,500 home Northampton West SUE.											The Northampton West SUE has been earmarked for a contribution towards the orbital route around the north west of Northampton (described in J1 and O2)
M1	Northampton West	Northampton West SUE	Community facilities	WNDC	Community building to be provided in new local centre	Tertiary	Social	community facilities	DDC	Developer	No	To follow development	Contribution only	£0.658m	WNDC	from WNDC Planning Obligations Strategy @ £439 per dwelling. Confirmed in EJCS.
M2	Northampton West	Northampton West SUE	Sports pitches	WNDC	Contribution towards sports pitches to serve the development	Tertiary	Green	open space	Developer	Developer	No	Linked to development	Contribution only	£1.136m	WNDC	from WNDC Planning Obligations Strategy @ £757 per dwelling
M3	Northampton West	Northampton West SUE	Green Infrastructure	WNDC	Contribution towards green infrastructure to serve the development	Secondary	Green	open space	Developer	Developer	No	Linked to development	Contribution only	£0.375m	WNDC	from WNDC Planning Obligations Strategy @ £250 per dwelling
M4	Northampton West	Northampton West SUE	Employment Training	WNDC	Contribution towards training places for local people when development takes place	Tertiary	Social	community facilities	Developer	Developer	No	Linked to development	Contribution only	£0.145m	WNDC	From WNDC Planning Obligations Strategy @ £97 per dwelling / £1 per sqm commercial floorspace
M5	Northampton West	Northampton West SUE	Equipped and non equipped Play Area	WNDC	Contribution towards playspace to serve the development	Secondary	Social	community facilities	Developer	Developer	No	Linked to development	Contribution only	£1.868m	WNDC	from WNDC Planning Obligations Strategy @ £1097 for equipped and £148 per non-equipped per dwelling
M6	Northampton West	Northampton West SUE	Leisure provision	WNDC	Contribution towards sports hall and swimming pool to serve the development	Tertiary	Social	community facilities	DDC	Developer	No	To follow development	Contribution only	£1.102m	WNDC	from WNDC Planning Obligations Strategy @ £735 per dwelling
M7	Northampton West	Northampton West SUE	Public realm	WNDC	Contribution towards high quality public realm within and around the development	Tertiary	Green	open space	Developer	Developer	No	Linked to development	Contribution only	£0.720m	WNDC	from WNDC Planning Obligations Strategy @ £480 per dwelling
M8	Northampton West	Northampton West SUE	Health Centre	WNDC	Contribution towards health centre to serve development (based upon 4GPs and dental practice)	Secondary	Social	healthcare	PCT	Developer	No	Linked to development	Contribution only	£1.563m	WNDC	from WNDC Planning Obligations Strategy @ £1042 per dwelling
M9	Northampton West	Northampton West SUE	Primary schools	NCC	New 2fe primary school	Secondary	Social	education	NCC	NCC / Developer	No	Linked to development	-	£6.45m	NCC	Primary school only required on site. Secondary provision will be by means of a contribution to facilities elsewhere
M10	Northampton West	Northampton West SUE	Electrical supply	WSP	The housing development is likely to draw circa 3 MW and require between 4 to 6 distribution substations.	Primary	Physical	utilities	Central Networks	Developer	No	Linked to development	In line with dev't	£1.63m	WSP	Cost shown is the typical cost of connecting this number of properties to the 11kV network. The local 11 kV network will require reinforcement to cater for the new load (see below)
M11	Northampton West	Northampton West SUE	Electrical Network Reinforcement	WSP	One new 33/11kV substation to be provided. Major reinforcement of grid covered by provision of new 132kV substation under Northampton West General	Primary	Physical	utilities	Central Networks	Developer	Yes	Linked to development	18 months	£5.75m	WSP	Central Networks to be requested to undertake a network analysis based upon a 3 MW load and provide a C3 cost estimate for the works. Typically they will take 6 - 8 weeks to respond. The cost of a 33/11kV grid substation and reinforcement is circa £5 million.
M12	Northampton West	Northampton West SUE	Gas supply	WSP	The housing development is likely to have an annual gas consumption of 28,500 MWh with a peak instantaneous demand of circa 2,093 m ³ /h.	Primary	Physical	utilities	National Grid	Developer	No	Linked to development	In line with dev't	£1.12m	WSP	Cost shown is the typical cost of connecting this many properties to the medium pressure gas network. The local low pressure gas network serving this area is very unlikely to have sufficient spare capacity to serve the development
M13	Northampton West	Northampton West SUE	Gas Network Reinforcement	WSP	It is conceivable that the local low pressure gas system might have the spare capacity to serve the development but it is more likely that a new low pressure gas supply to the development will be required taken off a medium pressure gas main via a gas regulator.	Primary	Physical	utilities	National Grid	Developer	Yes	Linked to development	TBC	£1.00m	ECH	National Grid to be requested to carry out a network analysis based upon the stated consumption to determine the system pressure and connection point in their system, and to generate a budget cost for the required plant and works. NG typically respond within 2 to 3 months
M14	Northampton West	Northampton West SUE	Bus route	NCC	New bus route or extension of existing bus service connecting SUE to town centre	Secondary	Physical	public transport	NCC	S106 / bus operator	No	2017	9 years	£1.8m	NCC	Derived from the Northampton Bus Development Plan (pre-submission update) 2010
M15	Northampton West	Northampton West SUE	Highway / walking / cycling improvements	NCC	Further highway, walking and cycling improvements to mitigate the impacts of the development and to provide connectivity	Primary	Physical	footway / cycleway	NCC	Developers	No	2016	NK	NK	-	To be identified through planning application and transport assessment.
N	Northampton West	Upton Park			Development to comprise 1000 homes and associated facilities				HCA			2012	10 years			Some secondary and tertiary items will be provided jointly between Upton Park and Upton Lodge, so do not appear here
N1	Northampton West	Upton Park	Sports pitches	NBC	Pitches and sports facilities to south of Upton Phase One	Secondary	Social	community facilities	Developer	Developer	No	To follow development	Contribution only	£0.74m	WNDC	from WNDC Planning Obligations Strategy @ £757 per dwelling. Will presumably enhance or augment the facilities already provided.
N2	Northampton West	Upton Park	library	WNJPU	As part of local centre next to school	Secondary	Social	community facilities	NCC	S106	No	Linked to development	TBC	£0.796m	WNJPU	Cost supplied by NCC
N3	Northampton West	Upton Park	Open space	planning application	River Nene Country Park	Secondary	Green	open space	Land Restoration Trust	Developer	Yes	before 2016	2years	£1.68m	WNJPU	To be provided by developer of Norwood Farm
N4	Northampton West	Upton Park	Primary schools	NCC	1x 2 form of entry Primary School	Secondary	Social	education	NCC	Developer/NCC	No	Linked to development	NK	£6.45m	NCC	Secondary school places for this development will be provided at a new school in Dallington and at existing schools in Duston and Bugrooke. Information provided by NCC.
N5	Northampton West	Upton Park	Electrical supply	WSP	The development is likely to draw circa 1.7 MW and require circa 4 distribution substations.	Primary	Physical	utilities	Central Networks	Developer	No	Linked to development	In line with dev't	£0.93m	WSP	Cost shown is the typical cost of connecting this number of properties to the 11kV network. The local 11 kV network will require reinforcement to cater for the new load (see below)
N6	Northampton West	Upton Park	Electrical Network Reinforcement	WSP	One new 33/11kV substation to be provided. Major reinforcement of grid covered by provision of new 132kV substation under Northampton West General	Primary	Physical	utilities	Central Networks	Developer	Yes	Linked to development	18 months	1.49m	Scottish Power	Central Networks to confirm that their network upgrade includes the requirements of the Upton Park development. Note that the network reinforcement works are probably best carried out as enabling works for the whole Northampton West growth area.
N7	Northampton West	Upton Park	Gas supply	WSP	The development is likely to have an annual gas consumption of 16,226 MWh with a peak instantaneous demand of circa 1,192 m ³ /h.	Primary	Physical	utilities	National Grid	Developer	No	Linked to development	In line with dev't	£0.63m	WSP	Cost shown is the typical cost of connecting this many properties to the medium pressure gas network. The local low pressure gas network serving this area will not have sufficient spare capacity to serve the development
N8	Northampton West	Upton Park	Gas Network Reinforcement	WSP	It should be assumed that the new low pressure gas supplies to the development will be taken off one or more medium pressure or intermediate pressure gas mains via a gas regulator. The new gas main(s) will need to serve the entire Northampton West area	Primary	Physical	utilities	National Grid	Developer	Yes	Linked to development	TBC	£1.00m	ECH	National Grid to be requested to carry out a network analysis based upon the combined consumption of all the Northampton West developments and produce a strategic plan to cater for the overall development.
N9	Northampton West	Upton Park	Employment Training	WNDC	Contribution towards training places for local people when development takes place	Tertiary	Social	community services	Developer	S106	No	-	-	£0.082m	WNDC	From WNDC Planning Obligations Strategy £97 per dwelling / £1 per sqm commercial floorspace
N10	Northampton West	Upton Park	Bus route	NCC	New bus route connecting SUE to town centre	Secondary	Physical	public transport	NCC	S106 / bus operator	No	NK	NK	NK	-	Assumed by NCC to have been agreed already
N11	Northampton West	Upton Park	Highway / walking / cycling improvements	NCC	Further highway, walking and cycling improvements to mitigate the impacts of the development and to provide connectivity	Primary	Physical	footway / cycleway	NCC	Developers	No	NK	NK	NK	-	Assumed by NCC to have been agreed already
O	Northampton West	Upton Lodge / Norwood Farm			Up to 2,368 dwellings, to include employment land, community and education facilities, park & ride site and country park to east of Harpole				HCA / Redrow			2012	7 years			1588 homes Upton Lodge / 780 homes Norwood Farm
O1	Northampton West	Norwood Farm	Harpole Country Park	Halcrow	New 37 hectare country park to serve residents of Upton Lodge and to form a buffer between the new community and Harpole	Tertiary	Green	open space	Developer	Developer	No	2012	2 years	NK		To be subject to further feasibility work, to include costing, so no estimate available at this juncture.
O2	Northampton West	Norwood Farm	Sandy Lane Relief Road	Halcrow	New single carriageway road alongside Norwood Farm development - southern section already built by HCA.	Primary	Physical	road works	Developer	Developer	No	2012	1 year	£5.42m	WNJPU	Cost supplied by NCC
O3	Northampton West	Upton Lodge	Community Centre	planning application	Provided in local centre and will also serve Norwood Farm	Tertiary	Social	community facilities	Developer	Developer	No	Linked to development	Contribution only	£1.59m	WNDC	Cost from WNDC Planning Obligations Strategy. Each centre 530sqm at £3000 per sqm
O4	Northampton West	Upton Lodge	Primary schools	NCC	1x 2 form of entry Primary School	Secondary	Social	education	NCC	Developer/NCC	No	Linked to development		£6.45m	NCC	Secondary school places for this development will be provided at a new school in Dallington and at an existing school in Duston. Information provided by NCC.

Reference	SUE / Wider Area	Development	Infrastructure Project	Infrastructure Project Source	Description	Infrastructure Status	Infrastructure Type	Infrastructure Category	Responsibility / for Provision	Source of Funding	Potential Funding Gap?	Start Date	Duration	Cost	Source of Cost	Comments
O5	Northampton West	Upton Lodge	Sports Hall	planning application	Will most likely be provided as part of school	Tertiary	Social	community facilities	NCC	Developer/NCC	No	Linked to development	Contribution only	£0.77	WDC	from WDC Planning Obligations Strategy 4 court sports hall
O6	Northampton West	Upton Lodge	Equipped and non equipped Play Area	planning application	To be provided throughout Upton Lodge / Norwood Farm development	Secondary	Social	community facilities	Developer	S106	No	Linked to development	Contribution only	£2.765m	WDC	from WDC Planning Obligations Strategy £1097 for equipped and £148 per non-equipped per dwelling
O7	Northampton West	Upton Lodge	Playing pitches	planning application	At southern end of Harpole country park	Secondary	Green	open space	Developer	Developer/S106	No	2012	Contribution only	£1.2m	WDC	from WDC Planning Obligations Strategy £220,000 per park to cater for 682 dwellings
O8	Northampton West	Upton Lodge	Green Infrastructure	planning application	Retention of footpaths, hedgerows and bridleways throughout Upton Lodge and Norwood Farm developments	Secondary	Green	open space	Developer	Developer	No	Linked to development				Retention of existing features may rule out need for funding. Indicative cost was in here of £0.397m
O9	Northampton West	Upton Lodge	Health Centre/Dentist	NHS	Surgery could be provided as part of local centre	Secondary	Social	healthcare	PCT	S106	No	Linked to development	Contribution only	£1.65m	WDC	from WDC Planning Obligations Strategy - used £775 per dwelling for GP and £267 for dentist as development not large enough for 4 GP centre
O10	Northampton West	Upton Lodge	Park and Ride	planning application	On site provision of park and ride facility	Secondary	Physical	public transport	Developer	NCC/Developer	No	2012	1 year	£5.5m	NCC	Cost supplied by NCC
O11	Northampton West	Upton Lodge / Norwood Farm	Bus route	NCC	New bus route connecting SUE to town centre	Secondary	Physical	public transport	NCC	S106 / bus operator	No	NK	NK	NK	-	Assumed by NCC to have been agreed already
O12	Northampton West	Upton Lodge / Norwood Farm	Electrical supply	WSP	The housing development is likely to draw circa 3.2 MW and require between 4 to 6 distribution substations.	Primary	Physical	utilities	Central Networks	Developer	No	Linked to development	In line with dev't	£2.58m	WSP	Cost shown is the typical cost of connecting this number of properties to the 11kV network. The local 11 kV network will require reinforcement to cater for the new load (see below)
O13	Northampton West	Upton Lodge / Norwood Farm	Electrical Network Reinforcement	WSP	One new 33/11kV substation to be provided. Major reinforcement of grid covered by provision of new 132kV substation under Northampton West General	Primary	Physical	utilities	Central Networks	Developer	Yes	Linked to development	18 months	£1.49m	Scottish Power	Central Networks to confirm that their network upgrade includes the requirements of the Upton Lodge development. Note that the network reinforcement works are probably best carried out as enabling works for the whole Northampton West growth area.
O14	Northampton West	Upton Lodge / Norwood Farm	Gas supply	WSP	The housing development is likely to have an annual gas consumption of 30,172 MWh with a peak instantaneous demand of circa 2,216 m ³ /h.	Primary	Physical	utilities	National Grid	Developer	No	Linked to development	In line with dev't	£1.76m	WSP	Cost shown is the typical cost of connecting this many properties to the medium pressure gas network. The local low pressure gas network serving this area will not have sufficient spare capacity to serve the development
O15	Northampton West	Upton Lodge / Norwood Farm	Gas Network Reinforcement	WSP	It should be assumed that the new low pressure gas supplies to the development will be taken off one or more medium pressure or intermediate pressure gas mains via a gas regulator. The new gas main(s) will need to serve the entire Northampton West area	Primary	Physical	utilities	National Grid	Developer	Yes	Linked to development	TBC	£1.00m	ECH	National Grid to be requested to carry out a network analysis based upon the combined consumption of all the Northampton West developments and produce a strategic plan to cater for the overall development.
O16	Northampton West	Upton Lodge / Norwood Farm	Employment Training	WDC	Contribution towards training places for local people when development takes place	Tertiary	Social	community services	Developer	S106	No	-	Contribution only	£0.256m	WDC	From WDC Planning Obligations Strategy £97 per dwelling / £1 per sqm commercial floorspace
O17	Northampton West	Upton Lodge / Norwood Farm	Highway / walking / cycling improvements	NCC	Further highway, walking and cycling improvements to mitigate the impacts of the development and to provide connectivity	Primary	Physical	footway / cycleway	NCC	Developers	No	NK	NK	NK	-	Assumed by NCC to have been agreed already
P	Northampton West	Pineham			Employment land, designed to integrate with Swan Valley. Also includes Pineham village: a 646-unit residential development plus small local centre				Pro Logis		Y	2012	9 years			646 homes
P1	Northampton West	Pineham	Leisure provision	WDC	Contribution towards sports hall and swimming pool to serve the development	Tertiary	Social	community facilities	NBC	Developer	No	To follow development	Contribution only	£0.475m	WDC	from WDC Planning Obligations Strategy @ £735 per dwelling
P2	Northampton West	Pineham	Equipped and non equipped Play Area	WDC	provision of playspace to serve the development	Secondary	Social	community facilities	Developer	Developer	No	Linked to development	Contribution only	£0.804m	WDC	from WDC Planning Obligations Strategy @ £1097 for equipped and £148 per non-equipped per dwelling
P3	Northampton West	Pineham	Primary schools	NCC	1x 2 form of entry Primary School	Secondary	Social	education	NCC	Developer/NCC	No	Linked to development		£6.45m	NCC	1 fe to serve Pineham and 1fe to serve existing site and other sites likely to come forward. Secondary school places for this development will be provided at an existing school in Bugbrooke. Information provided by NCC.
P4	Northampton West	Pineham	Community Resource Centre	WDC	provision of a community building or other community facilities to serve the development	Tertiary	Social	community facilities	NBC	Developer	No	To follow development	Contribution only	£0.284m	WDC	from WDC Planning Obligations Strategy @ £439 per dwelling.
P5	Northampton West	Pineham	Sports pitches	WDC	provision of sports pitches to serve the development	Tertiary	Green	open space	Developer	Developer	No	Linked to development	Contribution only	£0.489m	WDC	from WDC Planning Obligations Strategy @ £757 per dwelling
P6	Northampton West	Pineham	Canal Bridge	08 IDP	Contribution towards new canal bridge in River Nene Country Park	Tertiary	Social	footway / cycleway	TBC	Developer	No	Dependant on delivery of RNCP	NK	NK	-	Canal bridge currently proposed for eastern end of country park, linking Pineham to Upton
P7	Northampton West	Pineham	Bridleway Upgrade	08 IDP	Contribution towards upgrades of bridleways in and around River Nene Country Park	Tertiary	Social	footway / cycleway	TBC	Developer	No	Dependant on delivery of RNCP	NK	NK	-	Current proposal is to use the existing flood banks and bunds in the country park as routes for diverted bridleways and footpaths. Funding is needed for new surfaces and signing.
P8	Northampton West	Pineham	Green Infrastructure	WDC	Contribution towards green infrastructure to serve the development	Secondary	Green	open space	Developer	Developer	No	Linked to development	Contribution only	0.162m	WDC	from WDC Planning Obligations Strategy @ £250 per dwelling
P9	Northampton West	Pineham	Public realm	WDC	Contribution towards high quality public realm within and around the development	Tertiary	Green	open space	Developer	Developer	No	Linked to development	Contribution only	£0.310m	WDC	from WDC Planning Obligations Strategy @ £480 per dwelling
P10	Northampton West	Pineham	Electrical supply	WSP	The housing development is likely to draw circa 1.3 MW and require circa 3 distribution substations.	Primary	Physical	utilities	Central Networks	Developer	No	Linked to development	In line with dev't	£0.70m	WSP	Cost shown is the typical cost of connecting this number of properties to the 11kV network. The local 11 kV network will require reinforcement to cater for the new load (see below)
P11	Northampton West	Pineham	Electrical Network Reinforcement	WSP	One new 33/11kV substation to be provided. Major reinforcement of grid covered by provision of new 132kV substation under Northampton West General	Primary	Physical	utilities	Central Networks	Developer	Yes	Linked to development	18 months	£1.49m	Scottish Power	Central Networks to confirm that their network upgrade includes the requirements of the Pineham development. Note that the network reinforcement works are probably best carried out as enabling works for the whole Northampton West growth area.
P12	Northampton West	Pineham	Gas supply	WSP	The housing development is likely to have an annual gas consumption of 12,274 MWh with a peak instantaneous demand of circa 902 m ³ /h.	Primary	Physical	utilities	National Grid	Developer	No	Linked to development	In line with dev't	£0.48m	WSP	Cost shown is the typical cost of connecting this many properties to the medium pressure gas network. The local low pressure gas network serving this area will not have sufficient spare capacity to serve the development
P13	Northampton West	Pineham	Gas Network Reinforcement	WSP	It should be assumed that the new low pressure gas supplies to the development will be taken off one or more medium pressure or intermediate pressure gas mains via a gas regulator. The new gas main(s) will need to serve the entire Northampton West area	Primary	Physical	utilities	National Grid	Developer	Yes	Linked to development	TBC	£1.00m	ECH	National Grid to be requested to carry out a network analysis based upon the combined consumption of all the Northampton West developments and produce a strategic plan to cater for the overall development.
P14	Northampton West	Pineham	Employment Training	WDC	Contribution towards training places for local people when development takes place	Tertiary	Social	community services	Developer	S106	No	-	Contribution only	£0.063m	WDC	From WDC Planning Obligations Strategy £97 per dwelling / £1 per sqm commercial floorspace
P15	Northampton West	Pineham	Bus route	NCC	New bus route connecting SUE to town centre	Secondary	Physical	public transport	NCC	S106 / bus operator	No	NK	NK	NK	-	Assumed by NCC to have been agreed already
P16	Northampton West	Pineham	Highway / walking / cycling improvements	NCC	Further highway, walking and cycling improvements to mitigate the impacts of the development and to provide connectivity	Primary	Physical	footway / cycleway	NCC	Developers	No	NK	NK	NK	-	Assumed by NCC to have been agreed already
Northampton South East					Infrastructure requirements to facilitate growth in Northampton South East for 750 dwellings											Northampton SE was identified in an earlier version of the EJCS as being suitable for 7000 homes and 11,000 jobs to 2026, but only the infrastructure needed to deliver 750 homes has been included here
Q	Northampton South East	Wootton Fields and Grange Park			Development of up to 750 homes (300 for Wootton Fields and 450 for Grange Park (Saxon Ave))							2011	5/6 years			750 homes
Q1	Northampton South East	Wootton Fields & Grange Park	Primary school	NCC	Contribution required towards primary school south of Brackmills (H3)	Secondary	Social	education	NCC	Developer/NCC	No	Linked to development	TBC	See H3	NCC	Information provided by NCC
Q2	Northampton South East	Wootton Fields & Grange Park	Health Centre	WDC	Contribution towards health centre to serve development (based upon 4GPs and dental practice)	Secondary	Social	healthcare	PCT	NHS	Yes	Linked to development	Contribution only	£0.782m	WDC	from WDC Planning Obligations Strategy @ £1042 per dwelling
Q3	Northampton South East	Wootton Fields & Grange Park	Community facilities	WDC	Contribution towards a community building or other community facilities to serve the development	Tertiary	Social	community facilities	NBC/SNC	Developer	No	To follow development	Contribution only	£0.329m	WDC	from WDC Planning Obligations Strategy @ £439 per dwelling. Supported by EJCS.
Q4	Northampton South East	Wootton Fields & Grange Park	Employment Training	WDC	Contribution towards training places for local people when development takes place	Tertiary	Social	community facilities	Developer	Developer	No	Linked to development	Contribution only	£0.073m	WDC	From WDC Planning Obligations Strategy @ £97 per dwelling / £1 per sqm commercial floorspace
Q5	Northampton South East	Wootton Fields & Grange Park	Wastewater and surface water infrastructure	WCS (draft)	Requirement for new sewer to connect Northampton South East SUE direct to Sewage Treatment Works	Primary	Physical	utilities	Anglian Water / developer	Developer	No	Linked to development	18 months	£0.97m	ECH	Anglian Water are currently reviewing the requirement for this infrastructure in light of significant changes to proposal, and the estimate may change. In light of the lower housing number for this SUE, it may be possible to connect this development to the Wootton sewer main, rather than lay a new sewer to the STW.
Q6	Northampton South East	Wootton Fields & Grange Park	Sports pitches	WDC	Contribution towards sports pitches to serve the development	Tertiary	Green	open space	Developer	Developer	No	Linked to development	Contribution only	£0.568m	WDC	from WDC Planning Obligations Strategy @ £757 per dwelling
Q7	Northampton South East	Wootton Fields & Grange Park	Green Infrastructure	WDC	Contribution towards green infrastructure to serve the development	Secondary	Green	open space	Developer	Developer	No	Linked to development	Contribution only	£0.188m	WDC	from WDC Planning Obligations Strategy @ £250 per dwelling
Q8	Northampton South East	Wootton Fields & Grange Park	Equipped and non equipped Play Area	WDC	Contribution towards playspace to serve the development	Secondary	Social	community facilities	Developer	Developer	No	Linked to development	Contribution only	£0.934m	WDC	from WDC Planning Obligations Strategy @ £1097 for equipped and £148 per non-equipped per dwelling

Reference	SUE / Wider Area	Development	Infrastructure Project	Infrastructure Project Source	Description	Infrastructure Status	Infrastructure Type	Infrastructure Category	Responsibility / for Provision	Source of Funding	Potential Funding Gap?	Start Date	Duration	Cost	Source of Cost	Comments
Q9	Northampton South East	Wootton Fields & Grange Park	Leisure provision	WNDC	Contribution towards sports hall and swimming pool to serve the development	Tertiary	Social	community facilities	NBC	Developer	No	To follow development	Contribution only	£0.551m	WNDC	from WNDC Planning Obligations Strategy @ £735 per dwelling
Q10	Northampton South East	Wootton Fields & Grange Park	Public realm	WNDC	Contribution towards high quality public realm within and around the development	Tertiary	Green	open space	Developer	Developer	No	Linked to development	Contribution only	£0.360m	WNDC	from WNDC Planning Obligations Strategy @ £480 per dwelling
Q11	Northampton South East	Wootton Fields	Electrical supply	WSP	The housing development is likely to draw circa 0.6 MW and require 1 or 2 distribution substations.	Primary	Physical	utilities	Central Networks	Developer	No	Linked to development	In line with dev't	£0.81m	WSP	Cost shown is the typical cost of connecting this number of properties to the 11kV network.
Q12	Northampton South East	Grange Park	Gas supply	WSP	The local electrical network is likely to have the spare capacity but may require minor local reinforcement to cater for the new load.	Primary	Physical	utilities	Central Networks	Developer	No	Linked to development	TBC	£0.48m	ECH	The development is likely to have an annual gas consumption of 5,700 MWh with a peak instantaneous demand of circa 419 m ³ /h.
Q13	Northampton South East	Grange Park	Electrical supply	WSP	The housing development is likely to draw circa 0.9 MW and require 1 or 2 distribution substations.	Primary	Physical	utilities	National Grid	Developer	No	Linked to development	In line with dev't	£0.56m	WSP	Cost shown is the typical cost of connecting this number of properties to the 11kV network.
Q14	Northampton South East	Wootton Fields	Gas supply	WSP	The local gas network is likely to have the spare capacity but may require minor local reinforcement to cater for the new load.	Primary	Physical	utilities	National Grid	Developer	No	Linked to development	TBC	£0.42m	ECH	The development is likely to have an annual gas consumption of 8,550 MWh with a peak instantaneous demand of circa 628 m ³ /h.
Q15	Northampton South East	Wootton Fields & Grange Park	Bus route	NCC	Diversion of existing bus route 15 to serve development	Secondary	Physical	public transport	NCC	S106 / bus operator	No	NK	NK	NK	-	Assumed by NCC to have been agreed already
Q16	Northampton South East	Wootton Fields & Grange Park	Highway / walking / cycling improvements	NCC	Further highway, walking and cycling improvements to mitigate the impacts of the development and to provide connectivity	Primary	Physical	footway / cycleway	NCC	Developers	No	NK	NK	NK	-	Assumed by NCC to have been agreed already
Northampton General					Any infrastructure outside the growth areas identified in A to P above, or applicable to more than growth area, which is required to deliver the growth outlined in the JCS											
R	Northampton General	Northampton General			Includes the development of up to 5756 dwellings within Northampton (1500 on urban capacity sites, 2754 as medium and small commitments and 1502 on former school sites) which are outside areas A to P above							2010 - 2022				5756 homes
R1	Northampton General	Northampton General	A45 / M1 Access Management Strategy	HA	Technology scheme to improve flow of traffic along the M1 and A45 in response to the cumulative growth of Northampton	Primary	Physical	road works	HA	Developers (through WNDC tariff) plus £1m RGF bid	Yes	Work ongoing on study	NK	£11m	Aecom	Current scope confirmed by the HA but early stages at the moment so liable to change. All committed sites and JCS allocations will be considered as potential sources of funding if their impact on the HA network falls above a flow-related threshold.
R2	Northampton General	Northampton General	Queen Eleanor Roundabout Widening	NCC	Widening of carriageway to ease congestion at junction.	Primary	Physical	road works	NCC	NCC	Yes	NK	NK	£0.51	ECH	Although the main line of the A45 is the responsibility of the HA, the junction belongs to NCC. The HA is keen to point out that works to these junctions should not compromise the safe and efficient operation of the A45 itself. Will need to be checked for possible service diversions, which could add to the cost. This is to be done in such a way as to complement the HA's Access Management Strategy.
R3	Northampton General	Northampton General	Bus services	NCC	Increased frequencies for other bus services across the town, to meet the overall target for modal shift necessary to mitigate the impact of the housing trajectory	Secondary	Physical	public transport	NCC	S106 / bus operator	No	2011	NK	NK	-	Further details in Northampton Bus Development Plan March 2010
R4	Northampton General	Northampton General	Inter Urban services	NCC	Improve services, connections ticketing and information	Secondary	Physical	public transport	NCC	NCC / Operator	No	2010 - 2015	5 years	£0.22	NCC	From Inter Urban Bus Development Plan March 2010. Cost shown is a yearly countywide cost.
R5	Northampton General	Northampton General	Inter Urban services	NCC	Improve information, services and shelters	Secondary	Physical	public transport	NCC	NCC / Operator	Yes	2015 - 2021	6 years	£0.93	NCC	From Inter Urban Bus Development Plan March 2010. Cost shown is a yearly countywide cost.
R6	Northampton General	Northampton General	Cycling routes and crossings	NCC	On- and off- new and existing carriageway cycling provision, crossings and traffic calming	Secondary	Physical	public transport	NCC	Developer / Sustrans / LTP	No	2012	20 years	£13.89m	NCC	From Northampton Cycling Development Plan 31 March 2010
R7	Northampton General	Northampton General	Central Library	WNJPU	Opportunity for refurbishment / relocation if funds available	Tertiary	Social	community facilities	NCC	NCC / Developer	Yes	NK	NK	NK		NCC major project. Either complete refurb or relocate to alternative town centre site. Needed for economic vitality of town centre. Shared building possible (museum?). Left in this section as town wide
R8	Northampton General	Northampton General	Hunsbury Library	WNJPU	Opportunity for refurbishment / relocation if funds available	Tertiary	Social	community facilities	NCC	NCC / Developer	Yes	NK	NK	£0.237m	WNJPU	Aim for increased visibility and to possibly co-locate with archaeology facility. Could be partially growth related if growth to south of town.
R9	Northampton General	Northampton General	Weston Favell Library	WNJPU	Opportunity for refurbishment / relocation if funds available	Tertiary	Social	community facilities	NCC	NCC / Developer	Yes	NK	NK	£0.222m	WNJPU	More about improving visibility in current location or if regeneration of the area takes place.
R10	Northampton General	Northampton General	Education service	NCC	2 x special needs units	Secondary	Social	education	NCC	NCC	Yes	NK	NK	£2m	NCC	Need confirmed by NCC in December 2010
R11	Northampton General	Northampton General	HOV priority on A45 and Bus Rapid Transit to Wellingborough	WNJPU	HOV priority on A45 and Bus Rapid Transit to Wellingborough	Primary	Physical	road works	HA/NCC	CIF	Yes	NK		£5.3m	WNJPU	CIF bid successful and scheme is now under construction
R12	Northampton General	Northampton General	High voltage electrical reinforcement	Scottish Power	Reinforcement of electrical infrastructure is likely to be needed when all developments across Northampton are taken into account. This will include reinforcement to the Nene Valley Way bulk supply sub station, plus a possible new 132kV substation to serve areas outside the South West District.	Primary	Physical	utilities	Central Networks	Central Networks	Yes	beyond 2016	4 - 5 years	£6.60m	Scottish Power	Cost based upon typical upgrade for a town of this size, taking into account all the development proposed in the JCS.
R13	Northampton General	Northampton General	Weston Favell Occupational Health Centre	NHS	Potential to club together assets to provide a 'total place' style building on site	Secondary	Social	healthcare	PCT	NHS	Yes	beyond 2012		NK		
R14	Northampton General	Northampton General	Waste Water Network	WCS (draft)	Longer term infrastructure improvements and demand management to serve all SUEs	Primary	Physical	utilities	Anglian Water	Provider	Yes	2017	2 years	4.72m	ECH	The West Northamptonshire WCS (Draft July 2010) concludes that there is capacity within the major trunk network to serve the Core Strategy. The long term strategy is likely to require both infrastructure improvements and demand management (surface water removal and infiltration reduction)
R15	Northampton General	Northampton General	Water Supply infrastructure	WCS (draft)	Longer term infrastructure requisition for all Northampton growth, with the exception of Northampton South East.	Primary	Physical	utilities	Anglian Water	Provider	Yes	2015	TBC	£0.88m	ECH	The West Northamptonshire WCS (Draft July 2010) concludes that there is enough capacity to supply Northampton South East until the end of the Plan period. All other options will require additional infrastructure to be requisitioned. Anglian Water Services have identified that all preferred options tested can be delivered through minor water supply infrastructure schemes delivered through the regulated requisition process. Therefore water supply infrastructure in Northampton is not considered a constraint to growth
R16	Northampton General	Northampton General	Wastewater Treatment Works	WCS (draft)	Demand management measures or additional infrastructure required to service development beyond the five year housing supply, possibly including an extension to Great Billing WwTW.	Primary	Physical	Utilities	AWS	AWS	Yes	2014	4 years	£18.00m	Draft WCS	Subject to the planned capital maintenance improvements being delivered, the WwTW has capacity for the five-year housing land supply for all SUEs in Northampton (based upon 62,000 homes). Beyond this, a new consent will be required, and additional infrastructure will need to be funded and delivered through the AWS business planning process, but the environmental capacity assessment and infrastructure feasibility assessment have not identified any constraints to providing this infrastructure. Until these longer term water supply issues are addressed, the Environment Agency is likely to object to planning applications on the grounds of inadequate wastewater capacity.
R17	Northampton General	Urban Capacity Sites	Electrical supply	WSP	The overall load is likely to be circa 3 MW spread over a number of different Urban sites.	Primary	Physical	utilities	Central Networks	Developer	No	Linked to development	In line with dev't	£1.63m	WSP	Cost shown is the typical cost of connecting this number of properties to the 11kV network. The local 11 kV network will require reinforcement to cater for the new load.
R18	Northampton General	Urban Capacity Sites	Gas supply	WSP	The overall annual gas consumption will be circa 28,500 MWh with a peak instantaneous demand of circa 2,093 m ³ /h.	Primary	Physical	utilities	National Grid	Developer	No	Linked to development	In line with dev't	£1.12m	WSP	Cost shown is the typical cost of connecting this many properties to the medium pressure gas network. The local low pressure gas network serving this area is likely to have sufficient spare capacity to serve the development and may not need reinforcing
R19	Northampton General	Medium/Small Commitments	Electrical supply	WSP	The overall electrical load is likely to be circa 5.5 MW spread over a number of different sites.	Primary	Physical	utilities	Central Networks	Developer	No	Linked to development	In line with dev't	£3.00m	WSP	Cost shown is the typical cost of connecting this number of properties to the 11kV network. The local 11 kV network will require reinforcement to cater for the new load.
R20	Northampton General	Medium/Small Commitments	Gas supply	WSP	The overall annual gas consumption will be circa 52,326 MWh with a peak instantaneous demand of circa 3,842 m ³ /h.	Primary	Physical	utilities	National Grid	Developer	No	Linked to development	In line with dev't	£2.05m	WSP	Cost shown is the typical cost of connecting this many properties to the medium pressure gas network. The local low pressure gas network serving this area is likely to have sufficient spare capacity to serve the development and may not need reinforcing
R21	Northampton General	Northampton General	132 kV High voltage electricity cable	Central Networks	new 132KV cable from Grendon to Nunn Mills	Primary	Physical	utilities	Central Networks	Provider	Yes	before 2016	NK	£31.19m	Central Networks	Not likely to be borne by one project. No full scope so costs could be significantly more. Assumed o/h cables can be housed on existing pylons.
R22	Northampton General	Northampton General	Talavera Way Dualling	DDC / NCC	Widening of Talavera Way within existing highway earthworks and structures to optimise capacity approaching Round Spinney Interchange	Primary	Physical	road works	NCC	NCC / Developer	No	Not yet identified	NK	£16.5m Cost TBC in NMMS	WNJPU	Included in NMMS 'Do Minimum' scenario but not required to deliver Northampton North SUE (as confirmed by NCC). Funding not yet identified.
R23	Northampton General	Northampton General	Improved bus route to employment areas	NCC	Improved or additional bus services to employment areas other than the town centre to improve access to jobs and to meet the target for modal shift	Secondary	Social	public transport	NCC	S106 / bus operator	No	NK	NK	NK	-	
R24	Northampton General	Northampton General	Bedford Road bus priority improvements	NCC	Bus priority measures on Bedford Road to shorten journey times and to improve reliability of buses to employment areas	Secondary	Physical	public transport	NCC	Developers / NCC	Yes	NK	NK	£2.2m	NCC	Taken from Northampton Bus Priority Strategy Report November 2010

Reference	SUE / Wider Area	Development	Infrastructure Project	Infrastructure Project Source	Description	Infrastructure Status	Infrastructure Type	Infrastructure Category	Responsibility / for Provision	Source of Funding	Potential Funding Gap?	Start Date	Duration	Cost	Source of Cost	Comments
R25	Northampton General	Northampton General	Wellingborough Road bus priority improvements	NCC	Bus priority measures on Wellingborough Road to shorten journey times and to improve reliability of buses to meet the target for modal shift	Secondary	Physical	public transport	NCC	NCC	Yes	NK	NK	£1.4m	NCC	Taken from Northampton Bus Priority Strategy Report November 2010
R26	Northampton General	Northampton General	Secondary School	NCC	1 x 8 form of entry secondary school at Dallington Grange	Secondary	Social	education	NCC	Developers / NCC	No	Linked to development of Dallington Grange	NK	£35 m	NCC	Dallington Grange is preferred location for the next town Secondary School. An alternative location exists at Upton Park, but NCC has decided not to progress this option. The school will take pupils from developments in Northampton West and Northampton North, and contributions will be sought from the developers of these SUEs.
S	Towcester Town Centre & General				Works to enhance Towcester town centre in light of the Towcester Urban Extension and Moat Lane proposals											
S1	Towcester TC & Gen.	Towcester Town Centre	Police - Towcester 'One Stop Shop'	Northamptonshire Police	A shared public sector front desk providing the best standard of customer service in partnership to the community.	Secondary	Social	emergency services	SNC/Police Authority	Police	No	To be confirmed	To be confirmed	Nil		
S2	Towcester TC & Gen.	Towcester Town Centre	Library	WNJPU	New library to be provided as part of Moat Lane development	Tertiary	Social	community facilities	NCC	WNDC/SNC/NCC/Developers	No	2013		NK		Dependant on Moat Lane development
S3	Towcester TC & Gen.	Towcester General	Cycling routes, crossings, strategy and parking	NCC	Links - on- and off- new and existing carriageway cycling provision - improvement of existing cycle routes, parking, signing, planning	Secondary	Physical	public transport	NCC / Developer	Developer / NCC / LTP/ Sustrans	No	2010 - 2030	20 years	£2.12m	SNC	From Towcester Cycling Development Plan 31 March 2010
S4	Towcester TC & Gen.	Towcester General	Civic and community facilities	WNJPU	New facilities to be provided in town centre extension to north east of A5. To include civic offices, tourist facilities, leisure services and cultural facilities.	Tertiary	Social	community facilities	SNC / Developer	Developer	No	2013	5 years			Supported by EJCS. Plan may not come forward in its entirety but certain items seem likely.
S5	Towcester TC & Gen.	Towcester General	Primary school	NCC	1 x 2 form of entry school, 1 x 1.5 form entry school	Secondary	Social	education	NCC	Developer/NCC	No	2017	2 years	£6.5m	NCC	A second primary school would be needed after 2026 if development were to continue. Item confirmed by EJCS. Final cost will need to be confirmed with NCC.
T	Towcester South				Mixed use neighbourhood comprising 1500 homes and 1500 jobs, with supporting B1, B2 and B8 employment land.							2013	13 years			Development of a further 1800 homes and 1800 homes planned beyond 2026.
T1	Towcester South	Towcester Urban Extension	Health centre	WNJPU	between 800sqm and 5000sqm	Secondary	Social	healthcare	PCT	NHS / Developer	No	before 2016	4 years	£6.5m	WNJPU	Confirmed in EJCS.
T2	Towcester South	Towcester Urban Extension	Community facilities	WNJPU	Provision of a community building or other community facilities to serve the development	Tertiary	Social	community facilities	SNC	Developer	No	To follow development	Contribution only	£0.658m	WNDC	from WNDC Planning Obligations Strategy @ £439 per dwelling. Supported by EJCS.
T3	Towcester South	Towcester Urban Extension	Highway / walking / cycling improvements	NCC	Further highway, walking and cycling improvements to mitigate the impacts of the development and to provide connectivity	Primary	Physical	footway / cycleway	NCC	Developers	No	NK	NK	NK	-	
T4	Towcester South	Towcester Urban Extension	Secondary school	NCC	Secondary school of 7.7ha secured for 6 form entry with additional 3.4ha reserved for 10 form entry	Secondary	Social	education	NCC	Developer/NCC	No	2017	3 years	£40m	NCC	Alternative option is to expand Sponne School on existing site, but relocation is preferred. Final cost will need to be clarified with NCC.
T5	Towcester South	Towcester Urban Extension	Town park	WNJPU	New town park to be provided as part of structural greenspace requirement within development.	Tertiary	Green	open space	Developer	Developer	No	before 2016			WNJPU	Supported by EJCS. WNJPU has confirmed no cost information is yet available. Assumes park will provide sports pitches and green infrastructure for the development
T6	Towcester South	Towcester Urban Extension	Enhanced sport and leisure	WNJPU	To include new playing fields within the development	Secondary	Social	open space	SNC	Developer	No	before 2016	1 year	£1.136m	WNDC	Cost taken from WNDC Planning Obligations Strategy @ £757 a dwelling
T7	Towcester South	Towcester Urban Extension	Police - Safer Community Team Facility	Northamptonshire Police	To provide a place for the Safer Community Team to use (either drop in or base) as part of a shared facility with other partners	Secondary	Social	emergency services	Police	Police	No	2012	In line with dev't	Maximum of £500,000	Police	Cost quoted may be on the high side
T8	Towcester South	Towcester Urban Extension	Wastewater Treatment Works	WCS (draft)	Extension required to Towcester wastewater treatment works.	Primary	Physical	Utilities	AWS	AWS	No	2014	4 years	£5.14m	ECH	In the short term, the WwTW has capacity for the five-year housing land supply. In the longer term, after 2015, an extension will need to be funded and delivered through the AWS business planning process. The environmental capacity assessment and infrastructure feasibility assessment have not identified any constraints to providing this extension.
T9	Towcester South	Towcester Urban Extension	Waste Water Network	WCS (draft)	Infrastructure to deal with wastewater beyond the initial five-year housing supply	Primary	Physical	utilities	Anglian Water	Developer	No	2013	2 years	£4.04m	ECH	Anglian Water have advised that detailed planning of this infrastructure will not begin until either the sites are allocated in the JCS or they receive a direct approach from developers requesting a connection to the drainage network. The most appropriate and cost effective solution to meet the developments requirements will be determined at that stage (strategic sewer or existing system upgrade).
T10	Towcester South	Towcester Urban Extension	Water Supply infrastructure	WCS (draft)	Additional water supply infrastructure required - final option still to be agreed by AW.	Primary	Physical	utilities	Anglian Water	Developer	No	Linked to development	1 - 2 years	£1.82m	ECH	Anglian Water have identified two potential options to serve this site, and the option chosen will depend upon the location of the first phases of development. AW have advised there may be engineering difficulties. Due to the size and nature of the schemes, ecology and archaeology surveys will be required and the selected technique for the railway or road crossing will need to be checked and signed off by the appropriate bodies. Depending upon the timing of the development, there may be capacity to supply the first phases of this development from the existing network.
T11	Towcester South	Towcester Urban Extension	Employment Training	WNDC	Contribution towards training places for local people when development takes place	Tertiary	Social	community facilities	Developer	Developer	No	Linked to development	Contribution only	£0.145m	WNDC	From WNDC Planning Obligations Strategy @ £97 per dwelling
T12	Towcester South	Towcester Urban Extension	Equipped and non equipped Play Area	WNDC	Contribution towards playspace to serve the development	Secondary	Social	community facilities	Developer	Developer	No	Linked to development	Contribution only	£1.868m	WNDC	from WNDC Planning Obligations Strategy @ £1097 for equipped and £148 per non-equipped per dwelling
T13	Towcester South	Towcester Urban Extension	Leisure provision	WNDC	Contribution towards sports hall and swimming pool to serve the development	Tertiary	Social	community facilities	SNC	Developer	No	To follow development	Contribution only	£1.102m	WNDC	from WNDC Planning Obligations Strategy @ £735 per dwelling
T14	Towcester South	Towcester Urban Extension	Public realm	WNDC	Contribution towards high quality public realm within and around the development	Tertiary	Green	open space	Developer	Developer	No	Linked to development	Contribution only	£0.720m	WNDC	from WNDC Planning Obligations Strategy @ £480 per dwelling
T15	Towcester South	Towcester Urban Extension	Electrical supply	WSP	The housing development is likely to draw circa 3 MW and require circa 6 to 8 distribution substations.	Primary	Physical	utilities	Central Networks	Developer	No	Linked to development	In line with dev't	£1.63m	WSP	Cost shown is the typical cost of connecting this number of properties to the 11kV network. The local 11 kV network will require reinforcement to cater for the new load (see below)
T16	Towcester South	Towcester Urban Extension	Gas supply	WSP	The housing development is likely to have an annual gas consumption of 28,500 MWh with a peak instantaneous demand of circa 2,093 m³/h.	Primary	Physical	utilities	National Grid	Developer	No	Linked to development	In line with dev't	£1.12m	WSP	Cost shown is the typical cost of connecting this many properties to the medium pressure gas network. The local low pressure gas network serving this area will not have sufficient spare capacity to serve the development
T17	Towcester South	Towcester Urban Extension	Gas Network Reinforcement	WSP	Low pressure gas supply to be taken off a medium pressure gas main via a gas regulator.	Primary	P	utilities	National Grid	Developer	No	Linked to development	TBC	£1.00m	ECH	national grid to be requested to carry out a network analysis based upon the stated consumption to determine the system pressure and connection point in their system and to generate a budget cost for the required plant and works. NG typically respond within 2 to 3 months
T18	Towcester South	Towcester Urban Extension	Bus service	NCC	Improved bus services to Towcester, serving the SUE, and providing access to key destinations in Northampton and Milton Keynes	Secondary	Social	public transport	NCC	S106 / bus operator	No	NK	NK	NK	-	
U	Silverstone				Improvements to racing circuit, plus 6 million square feet of high tech employment											
U1	Silverstone	Silverstone	Public transport	NCC	Improved public transport links needed to Towcester, Brackley and farther afield, both for events and new office development	Secondary	Social	public transport	NCC	Developer	No	Linked to development	NK	NK	-	Scope to be determined by NCC once plans for Silverstone have been firm'd up. Remains important long term goal.
U2	Silverstone	Silverstone	Electrical supply	Scottish Power	A new primary substation and potentially major reinforcement of the existing grid	Primary	Physical	utilities	Central Networks	Developer / Provider	Yes	TBC	4 - 5 years	£1.36m	ECH	Power consumption per square metre cannot be worked out until more is known about the type of floorspace and layout of buildings. At 30 MW plus, this would generally mean a grid sub station connection and 4 - 5 year lead-in time for full power supply
U3	Silverstone	Silverstone	Highway / walking / cycling improvements	NCC	Further highway, walking and cycling improvements to mitigate the impacts of the development and to provide connectivity	Primary	Physical	footway / cycleway	NCC	Developers	No	NK	NK	NK	-	
V	Brackley Town Centre & General				Masterplan being produced to invest in new employment, retail, leisure, community and enhance the key gateways to the town.											
V1	Brackley TC & Gen.	Brackley Town Centre	New Primary Care Centre	PCT	To include: two relocated GP surgeries, pharmacy, NHS dental facility and 60-bed care home, including an intermediate care bed facility	Secondary	Social	healthcare	PCT	NHS	No	2011	18 months	Not available	-	Detail confirmed by Northamptonshire NHS. Delivery expected in 2011 but dependant on site-specific issues being resolved (preferred site is on HS2 route, amongst other things). NHS could not provide cost details.
V2	Brackley TC & Gen.	Brackley General	Cycling routes, crossings, strategy and parking	NCC	Links - on- and off- new and existing carriageway cycling provision - improvement of existing cycle routes, parking, signing, planning	Secondary	Physical	public transport	NCC / Developer	Developer / NCC / LTP/ Sustrans	No	2010 - 2030	20 years	£5.79m	NCC	From Brackley Cycling Development Plan 31 March 2010
V3	Brackley TC & Gen.	Brackley General	Employment Training	WNDC	Represents S106 contribution to training places for local people when large development takes place	Tertiary	Social	community services	SNC	S106	No	TBC	Contribution only	£0.158m	WNDC	From WNDC Planning Obligations Strategy £97 per dwelling / £1 per sqm commercial floorspace
V4	Brackley TC & Gen.	Brackley Town Centre	PLACE community destination	Brackley Masterplan	a new mixed use community destination in the marketplace comprising: Library, Community Resource Centre, café, performance space, community rooms and a 'Changing Place' as part of new multiuse development to help stimulate vitality and linked trips.	Tertiary	Social	community services	SNC	TBC	Yes	TBC	TBC	NK	-	NCC officers have already expressed an interest in relocating the library, but no overall cost is yet available for PLACE.

Reference	SUE / Wider Area	Development	Infrastructure Project	Infrastructure Project Source	Description	Infrastructure Status	Infrastructure Type	Infrastructure Category	Responsibility / for Provision	Source of Funding	Potential Funding Gap?	Start Date	Duration	Cost	Source of Cost	Comments
V5	Brackley TC & Gen.	Brackley General	Wastewater Treatment Works	WCS (draft)	Extension likely to be required to Brackley Wastewater Treatment Works.	Primary	Physical	utilities	Anglian Water	Provider	Yes	2018	4 years	£4.93m	ECH	In the short term, the WwTW has capacity for the five-year housing land supply. In the longer term, an extension will need to be funded and delivered through the AWS business planning process. The environmental capacity assessment and infrastructure feasibility assessment have not identified any constraints to providing this infrastructure. There are currently high unaccounted for flows at Brackley WwTW. A new consent may be needed by 2016 dependant on the success of the unaccounted for flow reduction scheme.
V6	Brackley TC & Gen.	Brackley General	Wastewater network	WCS (draft)	New strategic sewerage solution may be required. Could include a new sewer from the east of the town to the WwTW.	Primary	Physical	utilities	Anglian Water	Developer	Yes	2018	2 years	£3.87m	ECH	Brackley WwTW is situated on the eastern side of the town and therefore the growth sites are a significant distance away. If these developments were to drain through the existing sewer network, they are likely to cause foul flooding, and may increase discharge from combined sewer overflows. A potential strategic solution was identified in Phase 1 of the WCS whereby a new sewer would extend from the east of Brackley to the WwTW which could serve both of these sites. Anglian Water Services have advised that further planning will not begin until either the sites are allocated by the JCS or they receive a direct approach from developers requesting a connection to the drainage network.
V7	Brackley TC & Gen.	Brackley General	Bus services	NCC	Improvements needed to both town and intra urban services.	Secondary	Physical	public transport	NCC	Developer/NCC	No	TBC	NK	NK		To be provided in accordance with SNC policy - town and intra urban services identified in EJCS.
V8	Brackley TC & Gen.	Brackley General	Secondary school	NCC	Consolidation of secondary school onto a single site	Secondary	Social	education	NCC	Developer/NCC	No	Linked to development of Brackley SUEs	NK	depends on option		Both NCC and SNC have expressed a wish to rebalance secondary school provision around the town and to consolidate schools onto single sites. A new school will not be provided in either SUE.
W	Brackley North				Infrastructure requirements to facilitate growth in Brackley North, identified in the EJCS to accommodate 1380 homes to 2026							6 years				1250 homes, comprising Radstone Fields and Robson Land
W1	Brackley North	Brackley North	Primary schools	NCC	1 x 2 form of entry primary school	Secondary	Social	education	NCC	Developer/NCC	No	Linked to development		£6.45m	NCC	Both NCC and SNC have expressed a wish to rebalance provision around the town and to consolidate schools onto single sites. New primary school could be provided here or at Brackley East
W2	Brackley North	Brackley North	Highway / walking / cycling improvements	NCC	Further highway, walking and cycling improvements to mitigate the impacts of the development and to provide connectivity	Primary	Physical	footway / cycleway	NCC	Developers	No	NK	NK	NK	-	
W3	Brackley North	Brackley North	Sports provision	Brackley Masterplan	Contributions towards enhanced sport and leisure provision, to include the redevelopment and expansion of the Brackley Leisure Centre with new indoor facilities, outdoor pitches (including an astro turf pitch), a new Swimming Pool and a Wellbeing Centre.	Tertiary	Social	sport and leisure	SNC	Developer/SNC	No	Not supplied	NK	£1.865m	WNDC	Need confirmed in EJCS and Brackley Masterplan but no cost given. SNC will commission a viability study and a development brief before confirming costs. Cost shown based upon standard contribution towards leisure and sports pitches from WNDC Planning Obligations Strategy (£1492 per dwelling)
W4	Brackley North	Brackley North	Community facilities	WNDC	Contribution towards a community building or other community facilities to serve the development	Tertiary	Social	community facilities	SNC	Developer	No	To follow development	Contribution only	£0.549m	WNDC	from WNDC Planning Obligations Strategy @ £439 per dwelling.
W5	Brackley North	Brackley North	Halse Road - Northampton Road link	08 IDP	Provision of new through road to improve network and to prevent rat running	Primary	Physical	road works	NCC	NCC	Yes	TBC	NK	£5.25m	ECH	Need confirmed in EJCS but no cost given. HA does not support the provision of this item, and has resisted the scheme in the past. Provision would be unlikely if the HA objected to the application
W6	Brackley North	Brackley North	Water Supply infrastructure	WCS (draft)	Approximately 3.3km of 250mm OD main to be laid, and the strategic Deanshanger to Greatworth main to be completed.	Primary	Physical	utilities	Anglian Water	Developer	No	Linked to development	1 - 2 years	£4.57m	ECH	Phase 1 of this scheme has already been completed, and depending upon the exact scale and timing of this development, phase 2 may need to be completed prior to connection. This infrastructure scheme will only go ahead once a requisition or firm commitment has been received from the developer. Depending upon the timing of the development there may be capacity to supply the first phases of this development from the existing network.
W7	Brackley North	Brackley North	Green Infrastructure	WNDC	Contribution towards green infrastructure to serve the development	Secondary	Green	open space	Developer	Developer	No	Linked to development	Contribution only	£0.312m	WNDC	from WNDC Planning Obligations Strategy @ £250 per dwelling
W8	Brackley North	Brackley North	Employment Training	WNDC	Contribution towards training places for local people when development takes place	Tertiary	Social	community facilities	Developer	Developer	No	Linked to development	Contribution only	£0.121m	WNDC	From WNDC Planning Obligations Strategy @ £97 per dwelling / £1 per sqm commercial floorspace
W9	Brackley North	Brackley North	Equipped and non equipped Play Area	WNDC	Contribution towards playspace to serve the development	Secondary	Social	community facilities	Developer	Developer	No	Linked to development	Contribution only	£1.556m	WNDC	from WNDC Planning Obligations Strategy @ £1097 for equipped and £148 per non-equipped per dwelling
W10	Brackley North	Brackley North	Public realm	WNDC	Contribution towards high quality public realm within and around the development	Tertiary	Green	open space	Developer	Developer	No	Linked to development	Contribution only	£0.600m	WNDC	from WNDC Planning Obligations Strategy @ £480 per dwelling
W11	Brackley North	Brackley North	Health Centre	WNDC	Contribution towards health centre to serve development (based upon 4GPs and dental practice)	Secondary	Social	healthcare	PCT	NHS	No	Linked to development	Contribution only	£1.302m	WNDC	from WNDC Planning Obligations Strategy @ £1042 per dwelling
W12	Brackley North	Brackley North	Electrical supply	WSP	The housing development is likely to draw circa 2.5 MW and require circa 4 to 6 distribution substations.	Primary	Physical	utilities	Central Networks	Developer	No	Linked to development	In line with dev't	£1.36m	WSP	Cost shown is the typical cost of connecting this number of properties to the 11kV network. The local 11 kV network is likely to require reinforcement to cater for the new load (see below)
W13	Brackley North	Brackley North	Electrical Network Reinforcement	WSP	Local reinforcement in the event that the 11 kV network is unable to cope with the additional load	Primary	Physical	utilities	Central Networks	Developer	Yes	Linked to development	six months	£0.17m	WSP	Central Networks to undertake a network analysis and advise whether off site reinforcement works are required together with a budget cost. It is possible that the local 11 kV network may be able to cope with the additional load but it would be prudent to allow a sum of £150k to cover local reinforcement works.
W14	Brackley North	Brackley North	Gas supply	WSP	The housing development is likely to have an annual gas consumption of 23,750 MWh with a peak instantaneous demand of circa 1,744m ³ /h.	Primary	Physical	utilities	National Grid	Developer	No	Linked to development	In line with dev't	£0.93m	WSP	The local low pressure gas network serving the area is unlikely to have sufficient spare capacity to serve the development
W15	Brackley North	Brackley North	Gas Network Reinforcement	WSP	Low pressure gas supply to be taken off a medium pressure gas main via a gas regulator.	Primary	Physical	utilities	National Grid	Developer	Yes	Linked to development	TBC	£1.00m	ECH	National Grid to be requested to carry out a network analysis based upon the stated consumption to determine the system pressure and connection point in their system, and to generate a budget cost for the required plant and works. NG typically respond within 2 to 3 months
X	Brackley East				Infrastructure requirements to facilitate growth in Brackley East, identified in the EJCS to accommodate 380 homes and 1000-1200 jobs							2016	2 years			
X1	Brackley East	Brackley East	Primary and secondary schools	NCC	Consolidation of primary and secondary schools around Brackley, with increased capacity, where needed, to cater for Brackley East development.	Secondary	Social	education	NCC	Developer/NCC	No	Linked to development		See Brackley North	NCC	Both NCC and SNC have expressed a wish to rebalance provision around the town and to consolidate schools onto single sites. New primary school could be provided here or at Brackley North. Cost is shown under Brackley North only.
X2	Brackley East	Brackley East	Highway / walking / cycling improvements	NCC	Further highway, walking and cycling improvements to mitigate the impacts of the development and to provide connectivity	Primary	Physical	footway / cycleway	NCC	Developers	No	NK	NK	NK	-	
X3	Brackley East	Brackley East	Traffic calming	WNJPU	Traffic calming and realignment required on Turweston Lane	Primary	Physical	road works	NCC	NCC	Yes	NK	NK	£0.13m	ECH	Need confirmed in EJCS but no cost given so ECH estimate used.
X4	Brackley East	Brackley East	Flood attenuation measures	WNJPU	Package of measures to include surface water management and flood mitigation from all sources	Primary	Physical	flood attenuation	NCC / EA	Developer	No	Linked to development	NK	£2.26m	ECH	Need confirmed in EJCS but no cost given so ECH estimate used.
X5	Brackley East	Brackley East	Community facilities	WNDC	Contribution towards a community building or other community facilities to serve the development	Tertiary	Social	community facilities	SNC	Developer	No	To follow development	Contribution only	£0.167m	WNDC	from WNDC Planning Obligations Strategy @ £439 per dwelling. Supported by EJCS.
X6	Brackley East	Brackley East	Sports pitches	WNDC	Contribution towards sports pitches to serve the development	Tertiary	Green	open space	Developer	Developer	No	Linked to development	Contribution only	£0.288m	WNDC	from WNDC Planning Obligations Strategy @ £757 per dwelling
X7	Brackley East	Brackley East	Green Infrastructure	WNDC	Contribution towards green infrastructure to serve the development	Secondary	Green	open space	Developer	Developer	No	Linked to development	Contribution only	£0.095m	WNDC	from WNDC Planning Obligations Strategy @ £250 per dwelling
X8	Brackley East	Brackley East	Employment Training	WNDC	Contribution towards training places for local people when development takes place	Tertiary	Social	community facilities	Developer	Developer	No	Linked to development	Contribution only	£0.037m	WNDC	From WNDC Planning Obligations Strategy @ £97 per dwelling / £1 per sqm commercial floorspace
X9	Brackley East	Brackley East	Equipped and non equipped Play Area	WNDC	Contribution towards playspace to serve the development	Secondary	Social	community facilities	Developer	Developer	No	Linked to development	Contribution only	£0.473m	WNDC	from WNDC Planning Obligations Strategy @ £1097 for equipped and £148 per non-equipped per dwelling
X10	Brackley East	Brackley East	Leisure provision	WNDC	Contribution towards sports hall and swimming pool to serve the development	Tertiary	Social	community facilities	SNC	Developer	No	To follow development	Contribution only	£0.279m	WNDC	from WNDC Planning Obligations Strategy @ £735 per dwelling
X11	Brackley East	Brackley East	Public realm	WNDC	Contribution towards high quality public realm within and around the development	Tertiary	Green	open space	Developer	Developer	No	Linked to development	Contribution only	£0.182m	WNDC	from WNDC Planning Obligations Strategy @ £480 per dwelling
X12	Brackley East	Brackley East	Health Centre	WNDC	Contribution towards health centre to serve development (based upon 4GPs and dental practice)	Secondary	Social	healthcare	PCT	NHS	No	Linked to development	Contribution only	£0.396m	WNDC	from WNDC Planning Obligations Strategy @ £1042 per dwelling
X13	Brackley East	Brackley East	Electrical supply	WSP	The housing development is likely to draw circa 0.9 MW and require 1 or 2 distribution substations.	Primary	Physical	utilities	Central Networks	Developer	No	Linked to development	in line with dev't	£0.41m	WSP	The local electrical network is likely to have the spare capacity but may require minor local reinforcement to cater for the new load.

Reference	SUE / Wider Area	Development	Infrastructure Project	Infrastructure Project Source	Description	Infrastructure Status	Infrastructure Type	Infrastructure Category	Responsibility / for Provision	Source of Funding	Potential Funding Gap?	Start Date	Duration	Cost	Source of Cost	Comments
X14	Brackley East	Brackley East	Gas supply	WSP	The housing development is likely to have an annual gas consumption of 7,220 MWh with a peak instantaneous demand of circa 531 m ³ /h.	Primary	Physical	utilities	Central Networks	Developer	No	Linked to development	in line with dev1	£0.28m	WSP	The local gas network is likely to have the spare capacity but may require minor local reinforcement to cater for the new load.
Y	South Northamptonshire General				Any infrastructure requirements elsewhere in South Northamptonshire, some of which may be needed to enable development in the Towcester and Brackley growth areas. Development of up to 2,554 dwellings											
Y1	SNC General	SNC General	Walking and Cycling improvements	WNJPU	Districtwide walking and cycling improvements	Secondary	Green	footway / cycleway	NCC	Unknown	Yes	Ongoing and long term		£0.072m	WNJPU	Taken from Towcester and Brackley Cycling Development Plans
Y2	SNC General	SNC General	Electrical Network Reinforcement	WSP	One new substation plus circuit reinforcement needed.	Primary	Physical	utilities	Central Networks	Developer	Yes	Linked to development	18 months	£2.35m	Scottish Power / WSP	Reinforcement will serve Stony Stratford, Buckingham, Wicken and Towcester. Central Networks will need to confirm that this upgrade supports the new housing targets
Y3	SNC General	SNC General	Education service	NCC	2 x special needs units	Secondary	Social	education	NCC	NCC	Yes	Linked to development	NK	£2m	NCC	Need confirmed by NCC in December 2010
Y4	SNC General	SNC General	A5 bypass	WNJPU	Bypass proposed from the A43 to the Whittlebury turn east of the town.	Primary	Physical	road works	HA	HA / Developer	Yes	2015 (est.)	4 years	£29.60m	EC Harris	Bypass and possible connections to A43 are currently subject to a study being undertaken on behalf of the WNJPU and other partners, the results of which are expected in March 2011.
Y5	SNC General	SNC General	Improvements to A5 / A43 junction	HA	Linked to bypass project - one solution required. Improvements would cover both the Tove and Abthorpe Roundabouts.	Primary	Physical	road works	HA	HA / Developer	Yes	After 2015 (est.)	2 years	£13.85m	WNDC	Confirmed in EJCS and by HA. Will need to be checked for possible service diversions, which could add to the cost. Timing dependant on Towcester bypass. Date and duration are consultant's estimates.
Y6	SNC General	SNC General	A43 Highway improvements	NCC	Considerable highway works required with potential improvements needed to the A43, A5 and at M1 and M40 junctions.	Primary	Physical	road works	HA	HA / Developer	Yes	TBC	TBC	£5.8m	EC Harris	Works not yet undertaken but supporting transport information completed. Given extensive nature of works, delivery is unlikely at present unless covered by improvements already committed along the A43 corridor. T6 will go some way to providing the level of improvements needed.
Y7	SNC General	SNC General	A43 Junction Infrastructure	HA	Minor junction improvements	Primary	Physical	road works	HA / NCC	HA / NCC	Yes	Linked to development		£0.65m	WNDC	Will need to be checked for possible service diversions, which could add to the cost.
Z	Daventry Town Centre				Redevelopment of shopping facilities (town centre sites 1, 2, 3, 5 and 6) to double floorspace and to enable Daventry town centre to fulfil its role, along with 2000 new jobs and new learning quarter											Redevelopment of town centre could also include up to 300 new dwellings; these will use the existing infrastructure in the town centre, along with any new capacity created by the commercial redevelopment, and will not require the same level of investment as the SUEs
Z1	Daventry Town Centre	Daventry Town Centre	Learning Quarter	DDC	16+ (or 14+) educational provision.	Secondary	Social	education	Probably Northampton college leading a consortium	Consortium	Yes	2011		NK		
Z2	Daventry Town Centre	Daventry Town Centre	Town centre CCTV	DDC	Extended camera network and 'back office' infrastructure	Secondary	Physical	utilities	Developer / DDC	Developer	No	TBC				
Z3	Daventry Town Centre	Daventry Town Centre	Police - Daventry 'One Stop Shop'	Northamptonshire Police	A shared public sector front desk providing the best standard of customer service in partnership with the community.	Tertiary	Social	emergency services	DDC / Police	Police Authority	Yes	TBC	TBC	Nil		
Z4	Daventry Town Centre	Daventry Town Centre	Canal link	DDC	Canal arm linking town centre to Grand Union Canal	Tertiary	Green	open space	DDC / Developer	Not known	Yes	NK	NK	TBC	DDC	Proposed as tourist attraction and opportunity to provide waterside floorspace in town centre. Proposal not yet costed, not needed for growth and judged not to be a priority for investment.
Z5	Daventry Town Centre	Daventry Town Centre	Re-locate and improve bus station (Daventry Town Centre)	DDC	Improved bus station including information and waiting facilities, plus junctions improvements to allow cross-town bus trips in all directions	Secondary	Physical	public transport	DDC	Developer	No	before 2016	3 years	£5m	WNJPU	Will need to be checked for possible service diversions, which could add to the cost.
Z6	Daventry Town Centre	Daventry Town Centre	Requirement for enhancements to telecommunications	British Telecom	Requirement for enhancements to existing cables - these are for upgrade to existing fibre optics cables to enhance data capacity and speed.	Primary	Physical	utilities	Provider/DDC	Provider	No	TBC		£1.11m	ECH	Unlikely to cost the Developer at this stage. Telecomms costs are covered by Ofcom based on current regulations.
Z7	Daventry Town Centre	Daventry Town Centre	Library	DDC	New library to be provided on car park when old library site is redeveloped for retail. Larger facility to accommodate increased demand.	Secondary	Social	community facilities	WNDC / NCC / Developer	Developer	No	TBC		NK	-	Dependant on retail expansion
Z8	Daventry Town Centre	Daventry Town Centre	Eastern Way Junctions	WNJPU	Improvements needed to improve traffic flow	Primary	Physical	road works	NCC	NK	Yes	NK	NK	£1m	WNJPU	Depending on where these are, probably at least partially included in town centre road changes and / or developer works at NE Daventry
Z9	Daventry Town Centre	Daventry Town Centre	Stefan Way / Leamington Way Junction	WNJPU	Improvements needed to this junction	Primary	Physical	road works	NCC	NK	Yes	NK	NK	£0.65m	WNJPU	
Z10	Daventry Town Centre	Daventry Town Centre	Ashby Road / Henmans Road Bus Priority	WNJPU	Improvements needed to include bus priority	Primary	Physical	road works	NCC	NK	Yes	NK	NK	£0.65m	WNJPU	
AA	Daventry North East				Infrastructure requirements to facilitate growth in Daventry North East for development of 2500 homes to 2026							2012	14 years			Further homes and infrastructure are to be provided after 2026; these are not included in this Schedule.
AA1	Daventry North East	Daventry North East	Primary school	NCC	1 x 2 form of entry Primary Schools	Secondary	Social	education	NCC	Developer/NCC	No	Linked to development		£6.5m	NCC	Two further schools to be provided after 2026, if growth continues.
AA2	Daventry North East	Daventry North East	Highway / walking / cycling improvements	NCC	Further highway, walking and cycling improvements to mitigate the impacts of the development and to provide connectivity	Primary	Physical	footway / cycleway	NCC	Developers	No	NK	NK	NK	-	
AA3	Daventry North East	Daventry North East	Community facilities	WNDC	Provision of a community building or other community facilities to serve the development	Tertiary	Social	community facilities	DDC	Developer	No	To follow development	Contribution only	£0.878m	WNDC	from WNDC Planning Obligations Strategy @ £439 per dwelling. Supported by EJCS.
AA4	Daventry North East	Daventry North East	Sports pitches	WNDC	Provision of sports pitches to serve the development	Tertiary	Green	open space	Developer	Developer	No	Linked to development	Contribution only	£1.514m	WNDC	from WNDC Planning Obligations Strategy @ £757 per dwelling
AA5	Daventry North East	Daventry North East	Green Infrastructure	WNDC	Provision of green infrastructure to serve the development	Tertiary	Green	open space	Developer	Developer	No	Linked to development	Contribution only	£0.500m	WNDC	from WNDC Planning Obligations Strategy @ £250 per dwelling
AA6	Daventry North East	Daventry North East	Health Centre	NHS	Three GP health centre to be provided in accordance with DDC policy in proposed local centre.	Secondary	Social	healthcare	NHS	Developer	No	2012+	Contribution only	£1.550m	WNDC	from WNDC Planning Obligations Strategy £775 per dwelling. Supported by EJCS. NHS have confirmed NE Daventry offers an opportunity to create a larger health centre for 15,000 patients serving a wider areas of Daventry, although plans for this have not yet been worked up.
AA7	Daventry North East	Daventry North East	Employment Training	WNDC	Contribution towards training places for local people when development takes place	Tertiary	Social	community facilities	Developer	Developer	No	Linked to development	Contribution only	£0.194m	WNDC	From WNDC Planning Obligations Strategy @ £97 per dwelling / £1 per sqm commercial floorspace
AA8	Daventry North East	Daventry North East	Equipped and non equipped Play Area	WNDC	Provision of play space to serve the development	Secondary	Social	community facilities	Developer	Developer	No	Linked to development	Contribution only	£2.490m	WNDC	from WNDC Planning Obligations Strategy @ £1097 for equipped and £148 per non-equipped per dwelling
AA9	Daventry North East	Daventry North East	Norton Traffic Calming	NCC	Traffic calming measures to be introduced through village	Primary	Physical	road works	NCC	NK	Yes	Linked to development		£0.9m	EC Harris	
AA10	Daventry North East	Daventry North East	B4036	DDC	Realignment (including site access points and Norton Spur) and footway / cycleway to be provided	Primary	Physical	road works	NCC	NK	Yes	Linked to development		£0.35m	WNJPU	
AA11	Daventry North East	Daventry North East	Link from Northern Way/ Welton Road to B4036 Long Buckby Road	HA	Sustainable transport link (Public transport/ walk/ Cycle only) Northern Way/ Welton Road to B4036 Long Buckby Road to orbital radial connections and reduce barrier effect of Daventry Reservoir.	Primary	Physical	public transport	NCC	Developer	No	Linked to development		£3.38m	WNJPU	Public transport link still under consideration
AA12	Daventry North East	Daventry North East	Diversion of high voltage electricity supplies	Central Networks	Diversion / undergrounding of 132kV overhead cables (from just north of GUC to Daventry BSP)	Primary	Physical	utilities	Central Networks	Developer	No	Would be required in advance of development		£17.31m	ECH	Evidence taken from 2008 IDP but not confirmed by utility providers in 2010. Included for completeness. Cost are unclear and will need to be confirmed by the utility company once a decision has been made.
AA13	Daventry North East	Daventry North East	Oil pipelines	08 IDP	Reinforcement / protection of BPA oil pipelines	Primary	Physical	utilities	Developer	Developer	No	Would be required in advance of development		£0.59m	ECH	Evidence taken from 2008 IDP but not confirmed by utility providers in 2010. Included for completeness. Cost could run into millions so will need to be confirmed by the utilities once a decision has been made.
AA14	Daventry North East	Daventry North East	Public transport	DDC	Expansion of bus services to reflect development	Secondary	Physical	public transport	Developer	Developer / LTP	No	2015		NK		From Daventry Bus Development Plan March 2010
AA15	Daventry North East	Daventry North East	Daventry Country Park expansion	DDC	Enlargement to Daventry Country Park (Stages 1 - 3) to secure long term possession of land for recreational use (Refer also to WNS 131) ;	Secondary	Green	open space	DDC	Developer	No	before 2016	7years	£3.45m	WNJPU	Details based upon DDC's Application to the 2006/7 and 2007/8 Growth Areas Fund for an enhanced green space provision to cater for Daventry's population increase to 40,000 by 2021.
AA16	Daventry North East	Daventry North East	Wastewater Treatment Works	WCS (draft)	Upgrading of the Whilton Sewage treatment works to ensure sufficient capacity at the treatment works	Primary	Physical	utilities	Anglian Water	Anglian Water	No	2011	4 years	£4.93m	ECH	Funding confirmed by Anglian Water. Scope confirmed by WCS and WNJPU officers.

Reference	SUE / Wider Area	Development	Infrastructure Project	Infrastructure Project Source	Description	Infrastructure Status	Infrastructure Type	Infrastructure Category	Responsibility / for Provision	Source of Funding	Potential Funding Gap?	Start Date	Duration	Cost	Source of Cost	Comments	
AA17	Daventry North East	Daventry North East	Wastewater network	WCS (draft)	Upgrade required to main sewer from Daventry to Whitton WwTW, which is at capacity. Optimum solution is for developers to agree costs between them and make funds available to Anglian Water.	Primary	Physical	utilities	Anglian Water	Anglian Water	No	2014	3 years	£6.98m	ECH	The existing trunk sewer to Whitton WwTW is considered to be operating at capacity. AWS have expressed that they require a joint strategy by all developers connecting to a dedicated new trunk sewer. Alternative is that AW provide this item themselves, although this could not happen before 2015.	
AA18	Daventry North East	Daventry North East	Water Supply infrastructure	WCS (draft)	Various strategic upgrades are needed, which will include: 6.5km of 450 mm OD main between storage points, modification to the reservoir inlet pipework, upgrade of the pumping station and additional storage capacity. This solution caters both for the Daventry North East and South East SUEs.	Primary	Physical	Utilities	Anglian Water	Anglian Water	No	Linked to development	1 - 2 years	£2.48m	ECH	There may be engineering difficulties associated with the provision of this infrastructure. Due to the size and nature of the scheme, ecology and archaeology surveys will need to be completed, and the selected technique for the motorway crossing will need to be checked and signed off by the appropriate bodies.	
AA19	Daventry North East	Daventry North East	Leisure provision	WNDC	Contribution towards sports hall and swimming pool to serve the development	Tertiary	Social	community facilities	DDC	Developer	No	To follow development	Contribution only	£1.470m	WNDC	from WNDC Planning Obligations Strategy @ £735 per dwelling	
AA20	Daventry North East	Daventry North East	Public realm	WNDC	Contribution towards high quality public realm within and around the development	Tertiary	Social	open space	Developer	Developer	No	Linked to development	Contribution only	£0.960m	WNDC	from WNDC Planning Obligations Strategy @ £480 per dwelling	
AA21	Daventry North East	Daventry North East	Electrical supply	WSP	The housing development is likely to draw circa 4 MW and require circa 6 to 8 distribution substations.	Primary	Physical	utilities	Central Networks	Developer	No	Linked to development	In line with dev't	£2.18m	WSP	Cost shown is the typical cost of connecting this number of properties to the 11kV network. The local 11 kV network is likely to require reinforcement to cater for the new load (see below)	
AA22	Daventry North East	Daventry North East	Electrical Network Reinforcement	WSP	New primary substation to be provided.	Primary	Physical	utilities	Central Networks	Developer	No	Linked to development	18 months	£2.30m	WSP	Central Networks to undertake a network analysis and advise whether off site reinforcement works are required, together with a budget. The cost shown assumes one primary substation will be provided.	
AA23	Daventry North East	Daventry North East	Gas supply	WSP	The housing development is likely to have an annual gas consumption of 38,000 MWh with a peak instantaneous demand of circa 2,790 m³/h.	Primary	Physical	utilities	National Grid	Developer	No	Linked to development	In line with dev't	£1.49m	WSP	Cost shown is the typical cost of connecting this many properties to the medium pressure gas network. The local low pressure gas network serving this area is unlikely to have sufficient spare capacity to serve the development	
AA24	Daventry North East	Daventry North East	Gas Network Reinforcement	WSP	Low pressure gas supply to be taken off a medium pressure gas main via a gas regulator.	Primary	Physical	utilities	National Grid	Developer	No	Linked to development	TBC	£1.00m	ECH	National Grid to be requested to carry out a network analysis based upon the stated consumption to determine the system pressure and connection point in their system, and to generate a budget cost for the required plant/works. NG typically respond within 2 to 3 months	
AB	Daventry North (Monksmoor)				Infrastructure requirements to facilitate growth in Daventry North, identified for a possible 1000 homes to 2026 (although not in current EJCS)												Although not currently included in the EJCS, this SUE has been retained for future reference. Infrastructure costs associated with this SUE have not been included in the totals provided in the IDP Report. Also known as Monksmoor.
AB1	Daventry North	Daventry North	Primary school	NCC	1 x 2 form of entry primary school	Secondary	Social	education	NCC	Developer/NCC	No	Linked to development		£6.45m	NCC	1.5 form of entry to serve site. 0.5 form of entry to serve neighbouring developments. Secondary school places would be provided at other schools, with a contribution from this SUE	
AB2	Daventry North	Daventry North	Provision for buffering of development adjacent to Daventry Country Park;	DDC	Additional work to buffer the perimeter of the Country Park is identified in the WNIS / 130	secondary	Green	open space	DDC	Developer	No	before 2016	4years	£0.6m	WNJPU	Estimate from DIS, should be delivered by developer anyway	
AB3	Daventry North	Daventry North	Welton Lane	WNJPU	pedestrian/cycle improvements needed	Tertiary	Social	footway / cycleway	NCC	S106	No	Linked to development		NK		Timing and cost still to be identified	
AB4	Daventry North	Daventry North	Police - Safer Community Team Facility	Northamptonshire Police	To provide a place for the Safer Community Team to use (either drop in or base) as part of a shared facility with other partners	Secondary	Social	emergency services	Developer	Developer	No	Not supplied	In line with development	Maximum of £500,000	Police	Cost and description provided by Northamptonshire Police	
AB5	Daventry North	Daventry North	Public transport	DDC	Expansion of bus services to reflect development	Secondary	Physical	public transport	Developer	Developer / LTP	No	2015		NK		From Daventry Bus Development Plan March 2010	
AB6	Daventry North	Daventry North	Water Supply infrastructure	WCS (draft)	1.7km of 355mm OD main to be laid along Western Avenue and London Road.	Primary	Physical	Utilities	Anglian Water/developers	Provider/Developer	No	Linked to development	1 year	£29.75m	WNJPU	It should be noted that elsewhere in the network the capacity for this development may be taken up by future or ongoing growth. Available capacity would then be dependent upon the exact timing of the development. Daventry North East or Daventry South, if they were to go ahead before Daventry North, would use any available spare capacity in the network. This scheme will go ahead once a requisition or firm commitment has been received from the developer.	
AB7	Daventry North	Daventry North	Community facilities	WNDC	Contribution towards a community building or other community facilities to serve the development	Tertiary	Social	community facilities	DDC	Developer	No	To follow development	Contribution only	£0.439m	WNDC	from WNDC Planning Obligations Strategy @ £439 per dwelling.	
AB8	Daventry North	Daventry North	Sports pitches	WNDC	Contribution towards sports pitches to serve the development	Tertiary	Green	open space	Developer	Developer	No	Linked to development	Contribution only	£0.757m	WNDC	from WNDC Planning Obligations Strategy @ £757 per dwelling	
AB9	Daventry North	Daventry North	Green Infrastructure	WNDC	Contribution towards green infrastructure to serve the development	Secondary	Green	open space	Developer	Developer	No	Linked to development	Contribution only	£0.250m	WNDC	from WNDC Planning Obligations Strategy @ £250 per dwelling	
AB10	Daventry North	Daventry North	Employment Training	WNDC	Contribution towards training places for local people when development takes place	Tertiary	Social	community facilities	Developer	Developer	No	Linked to development	Contribution only	£0.097m	WNDC	From WNDC Planning Obligations Strategy @ £97 per dwelling / £1 per sqm commercial floorspace	
AB11	Daventry North	Daventry North	Equipped and non equipped Play Area	WNDC	Contribution towards play space to serve the development	Secondary	Social	community facilities	Developer	Developer	No	Linked to development	Contribution only	£1.245m	WNDC	from WNDC Planning Obligations Strategy @ £1097 for equipped and £148 per non-equipped per dwelling	
AB12	Daventry North	Daventry North	Leisure provision	WNDC	Contribution towards sports hall and swimming pool to serve the development	Tertiary	Social	community facilities	DDC	Developer	No	To follow development	Contribution only	£0.735m	WNDC	from WNDC Planning Obligations Strategy @ £735 per dwelling	
AB13	Daventry North	Daventry North	Public realm	WNDC	Contribution towards high quality public realm within and around the development	Tertiary	Green	open space	Developer	Developer	No	Linked to development	Contribution only	£0.480m	WNDC	from WNDC Planning Obligations Strategy @ £480 per dwelling	
AB14	Daventry North	Daventry North	Health Centre	WNDC	Contribution towards health centre to serve development (based upon 4GPs and dental practice)	Secondary	Social	healthcare	PCT	NHS	No	Linked to development	Contribution only	£1.042m	WNDC	from WNDC Planning Obligations Strategy @ £1042 per dwelling	
AB15	Daventry North	Daventry North	Highway / walking / cycling improvements	NCC	Further highway, walking and cycling improvements to mitigate the impacts of the development and to provide connectivity	Primary	Physical	footway / cycleway	NCC	Developers	No	NK	NK	NK	-		
AC	Daventry District General				Any infrastructure required elsewhere in the Daventry District to deliver growth. NB some of this infrastructure will contribute to the growth of SUEs identified elsewhere in the IDP, in both Daventry and Northampton. Includes Middlemoor development.												
AC1	Daventry General	Daventry General	Public transport	DDC	High quality public transport solution for local trips (within area) and connections to off-site public transport. Likely to be bus based.	Secondary	Physical	public transport	Developer	Developer / LTP	No	2010 - 2015	5 years	£0.43m	DDC	Costs from Daventry Bus Development Plan March 2010	
AC2	Daventry General	Daventry General	A45 corridor measures, including A45 Northampton to Daventry Link Road	WNJPU	Major new road required to enable growth throughout Daventry. Includes public transport measures in corridor and traffic mitigation measures in Flore, Weedon and Upper Heyford	Primary	Physical	road works	NCC	Developer/NCC	Yes	2013	5years	£30m	WNJPU	A scaled down version, comprising a bypass of Flore and Weedon only, is currently under investigation. EJCS states that a contribution towards improving the A45 will be made by the Daventry North East development. This will necessarily be a significant contribution; however, the Planning Inspectorate have ruled that the whole cost of the road cannot come from development.	
AC3	Daventry General	Daventry General	A5 / A45 crossroads	HA	Improvements to signal-controlled junction (independent of whether A45 Northampton to Daventry Link road goes ahead)	Primary	Physical	road works	HA	Developer	Yes	In advance of development		£0.7m	ECH	Explicitly requested by the HA in addition to the Northampton to Daventry link road. The delivery of the Monksmoor development depends upon these improvements.	
AC4	Daventry General	Daventry General	A361 Daventry-M40 traffic management	WNJPU	Downgrade to 'B' road and discourage through traffic (use A43-A5-A45)	Primary	Physical	road works	NCC	NCC / Developer	Yes	NK		£5m	WNJPU	No comments from NCC on whether this scheme is still going ahead but kept in Schedule for completeness	
AC5	Daventry General	Daventry General	Borough Hill Country Park Extension/enhancement as formal CP	WNJPU	Upgrading of existing park	Secondary	Green	open space	DDC	S106	No	TBC		NK		Enhanced facilities to comprise improved car park; shelter / information area; footpath and bridleway network; heritage trail and archaeological interpretation; biodiversity enhancement / management of species rich grassland. Potential Nature Reserve adjacent to this	
AC6	Daventry General	Daventry General	A361 Improvements	WNJPU	Improvements to A361 north of Daventry	Tertiary	Physical	road works	NCC	NCC / Developer	Yes	Linked to development		£8m	WNJPU	Awaiting outcome of modelling. Assumed half cost from developer in WNDC Standard Charge but only because it is only partly in WNDC area	
AC7	Daventry General	Daventry General	New high pressure gas main	WNJPU	New gas main may be required to supplement the existing Daventry to Long Buckby gas main. Either to be overlaid on existing or construct additional new main between Daventry and Long Buckby	Primary	Physical	utilities	National Grid	National Grid	Yes	In line with development	NK	£1.78m	ECH	Would serve all developments in Daventry. Need not confirmed by Scottish Power or WSP but both advised to keep it in unless it can be proven there is no need	
AC8	Daventry General	Daventry General	Further enhancements to high pressure gas main beyond Long Buckby	WNJPU	Further enhancements beyond Long Buckby	Primary	Physical	utilities	National Grid	NK	Yes	In line with development	NK	£5.42m	EC Harris	Would serve all developments in Daventry. Need not confirmed by Scottish Power or WSP but both advised to keep it in unless it can be proven there is no need. (URS awaiting information from Central Networks)	
AC9	Daventry General	Daventry General	A5 / B5385 junction	WNJPU	Possible signalisation. Design details dependant upon which option is taken forward for improving the A45.	Primary	Physical	road works	NCC	NK	Yes	TBC		£0.68m	EC Harris	Supported by the HA. Similar improvements are likely to be needed at other junctions along the A5, although these scope of these is yet to be determined.	
AC10	Daventry General	Daventry General	Cycling routes, crossings, strategy and parking	DDC	Links - on- and off- new and existing carriageway cycling provision - improvement of existing cycle routes, parking, signing, planning	Secondary	Physical	public transport	NCC / Developer	Developer / LTP	No	2010 - 2030	20 years	2.35m	DDC	From Daventry Cycling Development Plan 31 March 2010	
AC11	Daventry General	Daventry General	New Cemetery	DDC	New cemetery likely to be needed after 2020	Secondary	Social	community facilities	DDC	NK	Yes	2020		NK		Information from DDC suggests there is room in Welton Rd Cemetery for around 10 years	

Reference	SUE / Wider Area	Development	Infrastructure Project	Infrastructure Project Source	Description	Infrastructure Status	Infrastructure Type	Infrastructure Category	Responsibility / for Provision	Source of Funding	Potential Funding Gap?	Start Date	Duration	Cost	Source of Cost	Comments
AC12	Daventry General	Daventry General	Employment Training	WNDC	Represents S106 contribution to training places for local people when large development takes place	Tertiary	Social	community services	DDC	Developer	No	Linked to development	-	£0.291m	WNDC	From WNDC Planning Obligations Strategy £97 per dwelling / £1 per sqm commercial floorspace
AC13	Daventry General	Daventry General	Estate Management Company	DDC	Resident (including businesses) controlled estate management company for housing estates around Daventry town: not specific to any one SUE	Tertiary	Social	community services	NK	Developer	No	TBC				Requested for inclusion by Daventry District Council, who are promoting the principle within Daventry. Cost and timing not provided.
AC14	Daventry General	Daventry General	Education service	NCC	2 x special needs units	Secondary	Social	education	NCC	NCC	Yes	NK	NK	£2m	NCC	Need confirmed by NCC in December 2010
AC15	Daventry General	Daventry General	Parking provision at Long Buckby Station	WNJPU	multi-storey car park or park and ride at Long Buckby station	Secondary	Physical	public transport	NK	NK	Yes	In line with development		NK	-	CP currently at capacity
AC16	Daventry General	Daventry General	Long Buckby Station facilities	WNJPU	Improvements to the station facilities for passengers	Secondary	Social	public realm	Network Rail/NCC	Provider	Yes	In line with development		£1.2m	WNJPU	
AC17	Daventry General	Daventry General	Long Buckby to Daventry bus route	WNJPU	Ideally a dedicated service but could be incorporated into another bus route provided a high standard of service could be guaranteed.	secondary	Social	public transport	NCC	NK	Yes	TBC and dependant on development		£2m	WNJPU	Would need to be considered as part of a package of public transport measures being looked at around Daventry
AC18	Daventry General	Daventry General	Secondary school	NCC	1x8 form of entry secondary school	Secondary	Social	education	NCC	Developer/NCC	No	Linked to development of Daventry SUEs	NK	£35m	NCC/Developer	EJCS calls for 10 hectare site. Costs provided by NCC. School would serve Monksmoor and Daventry North East, and may take pupils from surrounding areas.
AD	Daventry International Railfreight Terminal				Planning consent has been granted for DIRFT 2, comprising 1.945 million sq feet of commercial development along the A428, plus a new rail hub.											
AD1	Daventry International Railfreight Terminal	DIRFT expansion	Highways	08 IDP	M1 J18 minor works. A5 works. Still early days so not sure of scale yet	Primary	Physical	road works	HA	Developer	Yes	Linked to development		£0.65m	ECH	From 2008 IDP. Potential for interaction to adjacent Rugby East development
AD2	Daventry International Railfreight Terminal	DIRFT expansion	Public transport	08 IDP	Improvements needed but not yet quantified. Will include high quality connections to Daventry town and Northampton. In-site "distribution" also needed. Options to be explored.	Secondary	Physical	public transport	NK	Developer / LTP	Yes	Linked to development		NK		From 2008 IDP. Potential for interaction to adjacent Rugby East development
AD3	Daventry International Railfreight Terminal	DIRFT expansion	Electricity	08 IDP	Switch DIRFT to Rugby connection or connection between Bugbrooke and Weedon	Primary	Physical	utilities	Central Networks	Developer	No	TBC		Depends on layout	Scottish Power	From 2008 IDP. Potential for interaction to adjacent Rugby East development
AD4	Daventry International Railfreight Terminal	DIRFT expansion	Sustainable Heat Network	08 IDP	Means of delivering primary infrastructure needs and of meeting Code for Sustainable Buildings in a cost effective way	Primary	Physical	utilities	NK	Developer	No	Linked to development		£1.27m	EC Harris	From 2008 IDP. Potential for interaction to adjacent Rugby East development
AD5	Daventry International Railfreight Terminal	DIRFT expansion	Electricity supply	Scottish Power	One new primary substation plus connections likely to be needed	Primary	Physical	utilities	Central Networks	Developer	No	Linked to development	18 months	Depends on layout	Scottish Power	180,000 m2 of commercial floorspace would require approx. 11 MV of power, which would result in a need for one new primary sub station plus connections. Without a site layout, it is impossible to cost this with any degree of accuracy.
AE	Weedon Depot				Former Royal Ordnance depot which could be brought back into use for commercial or leisure use.											Infrastructure requirements will be addressed in full once the proposed mix of uses is known
AE1	Weedon Depot	Weedon Depot	New access arrangements	DDC	New road access to bring up to current standards prior to possible reuse of building	Primary	Physical	road works	NCC	NK	Yes	TBC		£0.05m	ECH	Little detail known at this stage but included for completeness at the request of Daventry District Council
AE2	Weedon Depot	Weedon Depot	Restoration of historic fabric	DDC	Early 19th Century Barracks in need of restoration to ensure long term survival. To include landscape works as well as restoration of fabric	Secondary	Social	landscape	TBC	NK	Yes	TBC		NK		Little detail known at this stage but included for completeness at the request of Daventry District Council

Appendix Three: IDP Programmes

Attached below are the two Infrastructure Delivery Plan Programmes, one for the 50,000 trajectory and one for the 62,000 trajectory, each showing all the primary infrastructure items identified in the Schedule.

The purpose of the IDP Programmes is to show the impact of essential primary infrastructure on the 50,000 and 62,000 housing trajectories.

Source of information:




Primary infrastructure items are taken from the IDP Schedule, provided in Appendix Two.

Names of housing developments, and numbers of units, are taken from the Housing Trajectories supplied by West Northamptonshire Joint Planning Unit, and contained in Appendix Five.

Structure of the Programme:

The SUEs and developments on the IDP Programmes are grouped by authority: Northampton Borough Council, South Northamptonshire Council or Daventry District Council. Under each development is shown the primary infrastructure required to deliver that development. Within each housing development, the annual completions are shown. Where primary infrastructure items impact upon more than one development, their impact on each development is shown.

Activity bars on the programmes represent:

- Essential primary infrastructure items are shown as red bars 
- Housing developments are show as grey bars, with annual completion numbers shown in each bar 
- The total timescale for each SUE / Development is shown as a black bar * 

* Timescales are shown as accurately as possible on the basis of the information available.

Primary infrastructure projects:

The IDP Programmes show the primary infrastructure items, and their start dates and durations, as listed on the IDP Schedule. Where information is missing, this is noted on the Programmes.

Information governing the timing of the item is noted after the bar on the programme.

Housing developments:

Housing completions, and the years in which these are forecast to take place, are taken from the Joint Planning Unit's trajectories supplied in Appendix Five. Where a development is influenced by the delivery of one or more infrastructure items, the timescale for that development is amended accordingly.

The grey bars show the number of completions for that development in that particular year. The bars for each development are linked to indicate the continuation of the development from one year to the next.

The number of housing units is noted after the relevant bar on the Programme, as well as in the task column.

Timescales:

The start and finish dates for the yearly completions within each housing development are in line with local authority financial years: that is to say, start dates of 1st April and finish dates of 31st March.

For infrastructure items, sources tend to give estimated dates in calendar years. Accordingly, start and end dates for infrastructure items run from 1st January to 31st December. This approach does vary where an infrastructure item is linked to a housing development, in which case the housing development dates prevail.

Links:

Note: the examples given below refer to the IDP Programme of 1st November 2010, 50,000 trajectory.

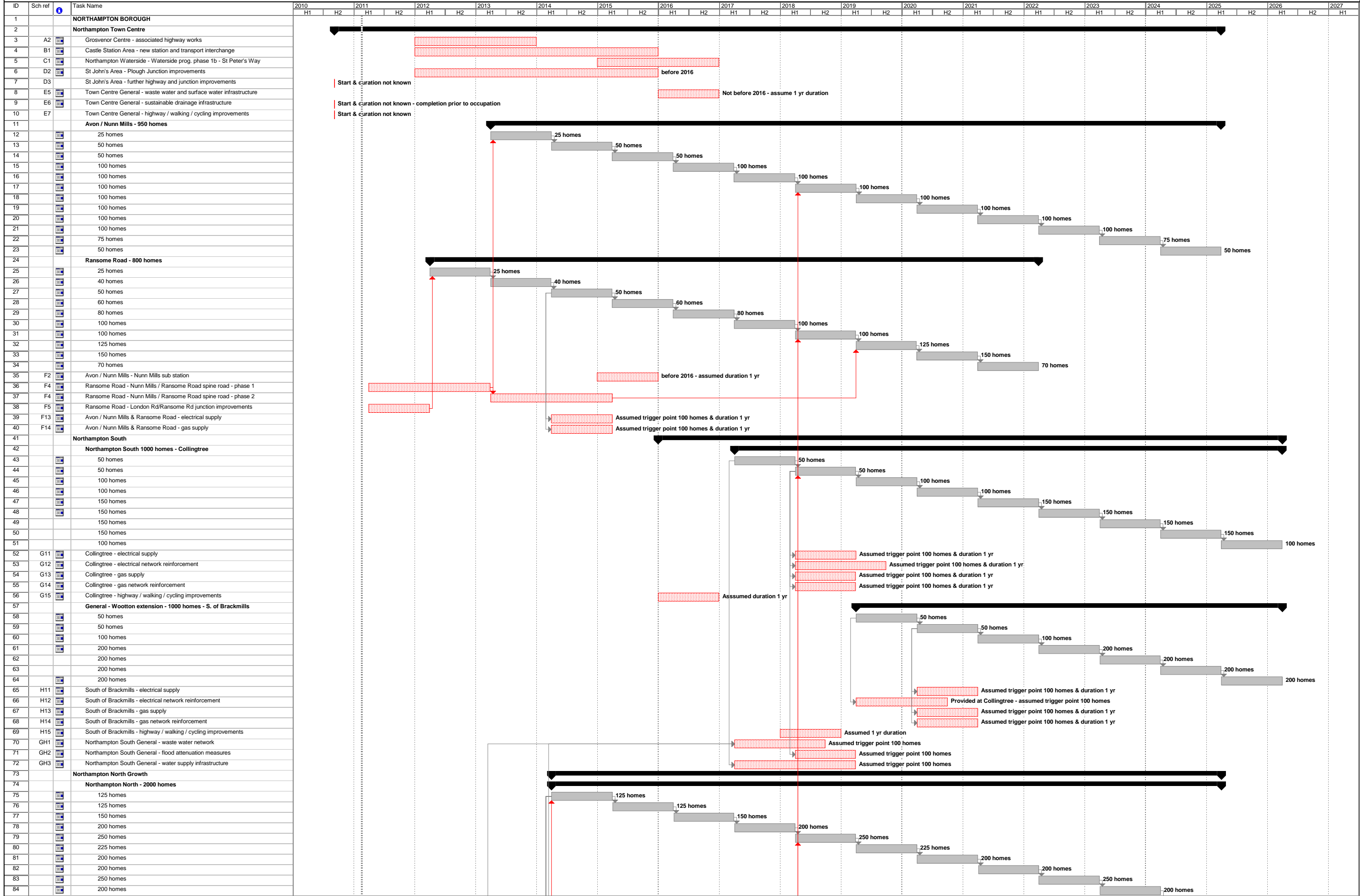
Links are lines representing relationships or dependencies between items shown in the Programme - specifically infrastructure and housing completions.

In cases where a housing development can only proceed, or be occupied, once an infrastructure item is in place (primary infrastructure), a link is shown in red. The development can only be completed / occupied when the linked infrastructure is completed. For example, the Sandy Lane Relief Road (ID 219) and the first 40 homes at Norwood Farm (ID 211).

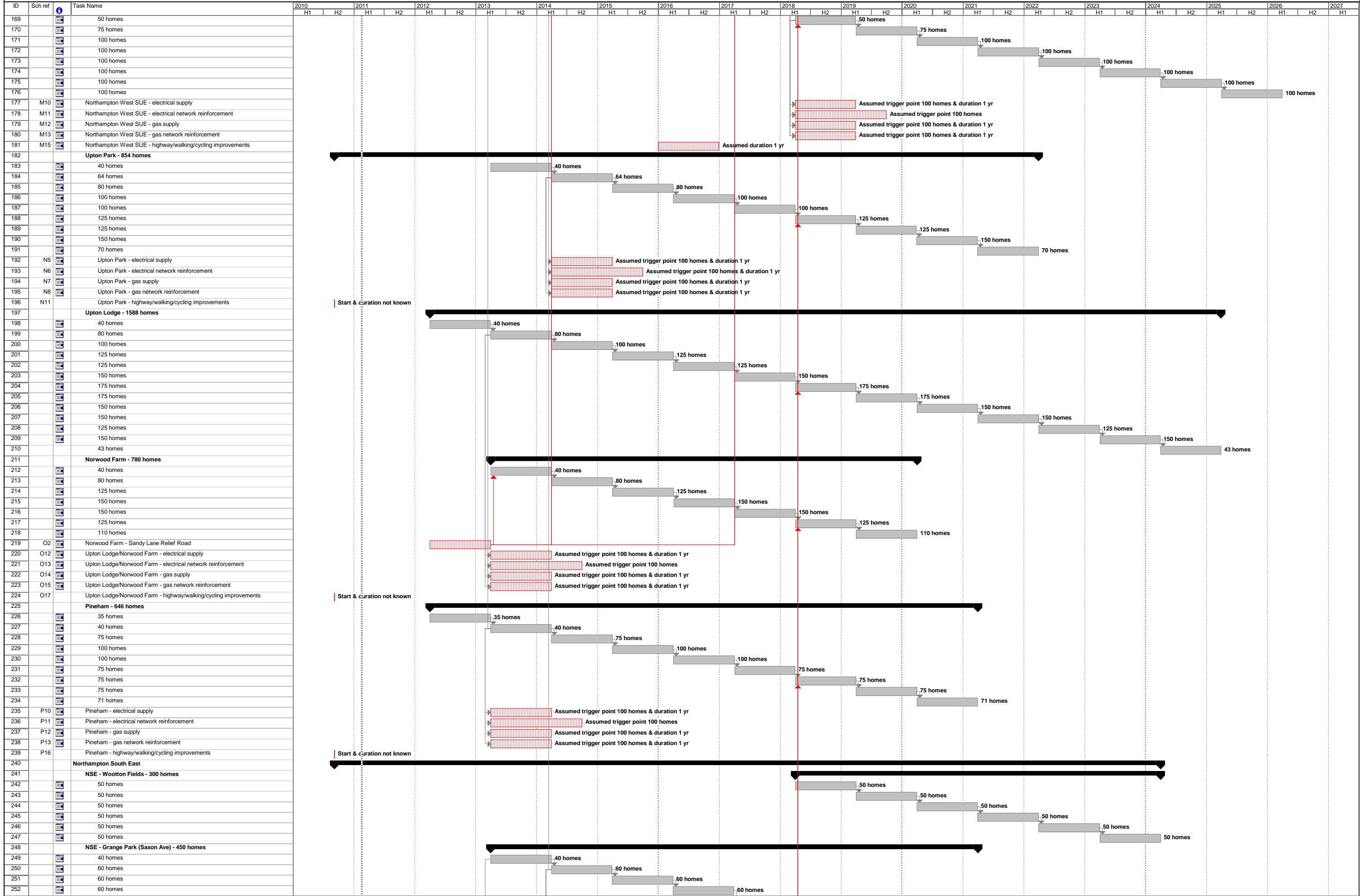
In instances where an infrastructure item has to be completed within a specific period of time from the start of a housing development, the start date of the infrastructure item is shown linked to the start of the housing development, with the link shown in grey. For example, the Northampton North West Bypass (ID 110) and Dallington Grange (ID 97).

For infrastructure items that need to begin once a housing development has reached a certain number of units, the trigger point is assumed to be 100 homes, unless stated otherwise (as agreed with WNDC and the WNJPU). The link to the relevant development is shown in grey. For example, Northampton South General – flood attenuation measures (ID 71) and Northampton South - Collingtree (ID 42).

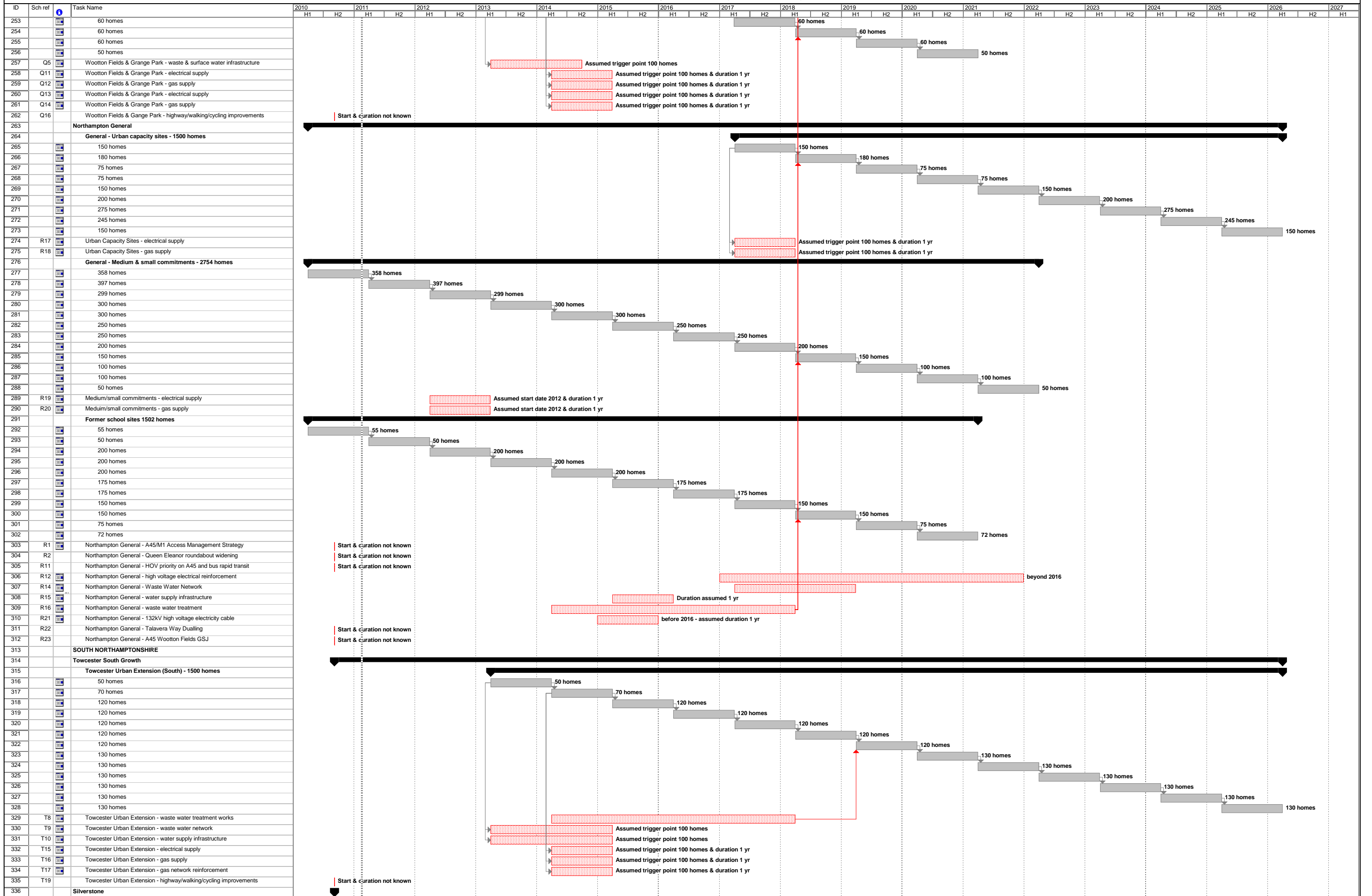
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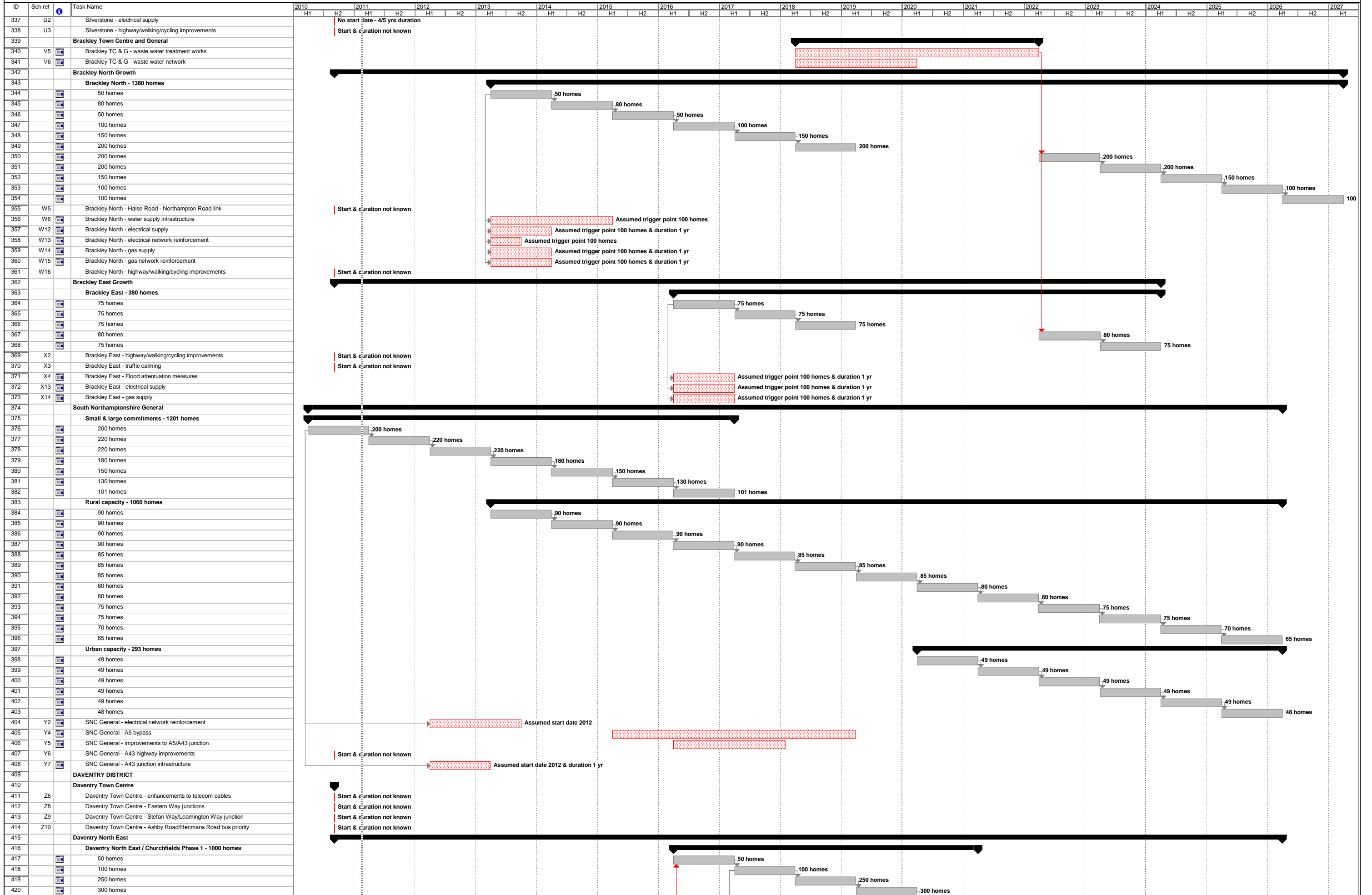
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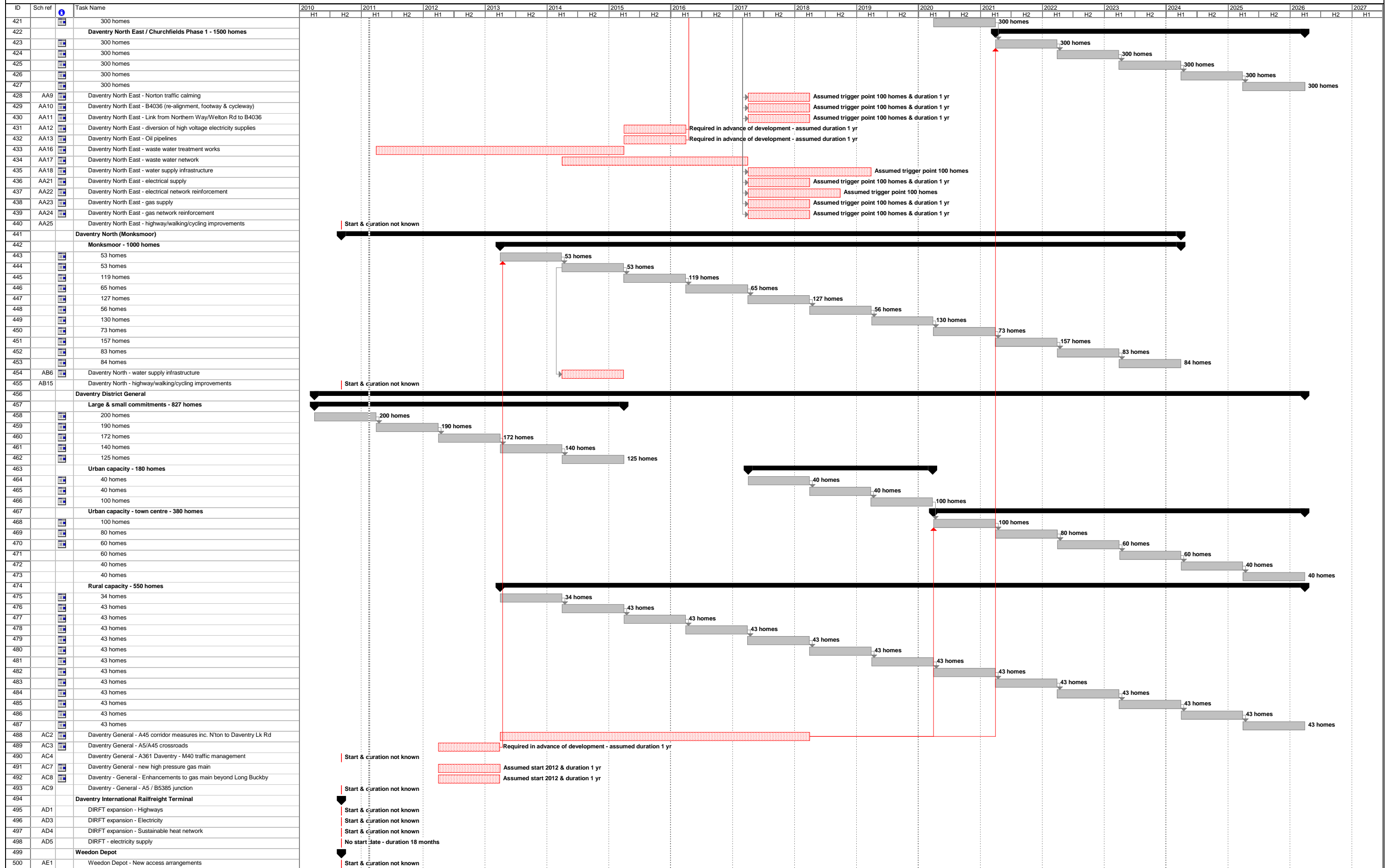
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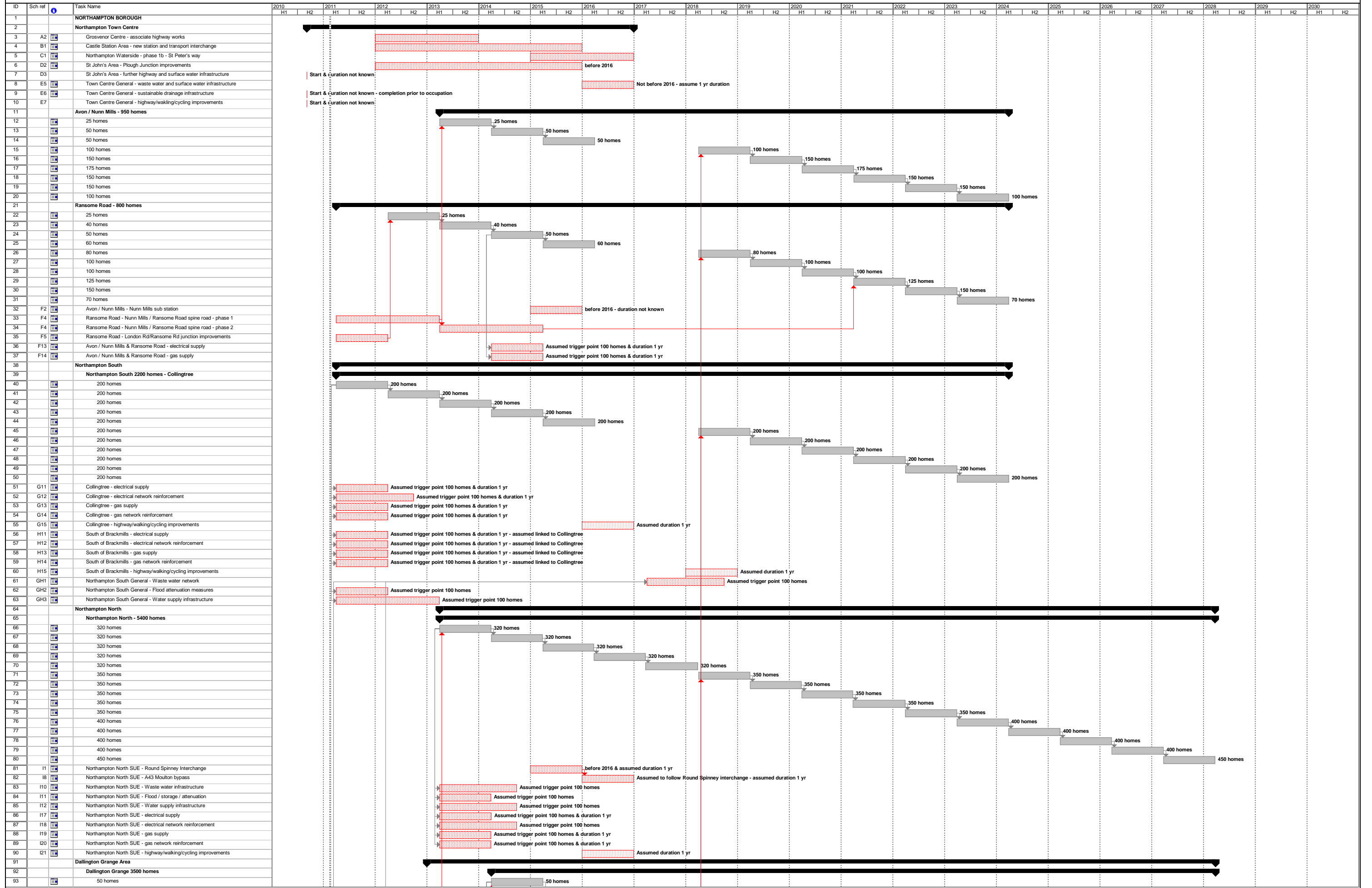
Infrastructure Delivery Plan Programme February 2011 - 50000 traject.mpp



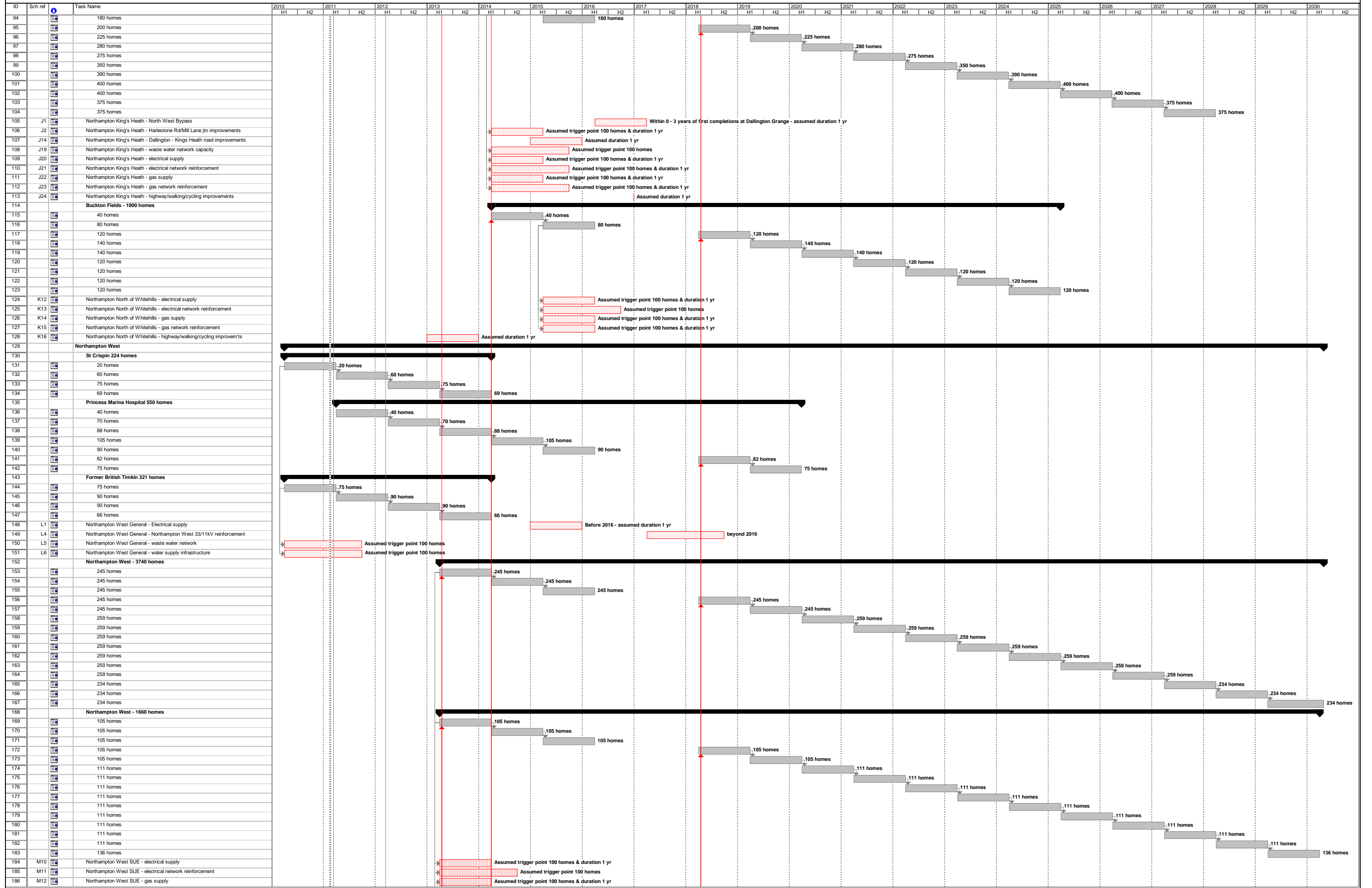
Infrastructure Delivery Plan Programme February 2011 - 50000 traject.mpp



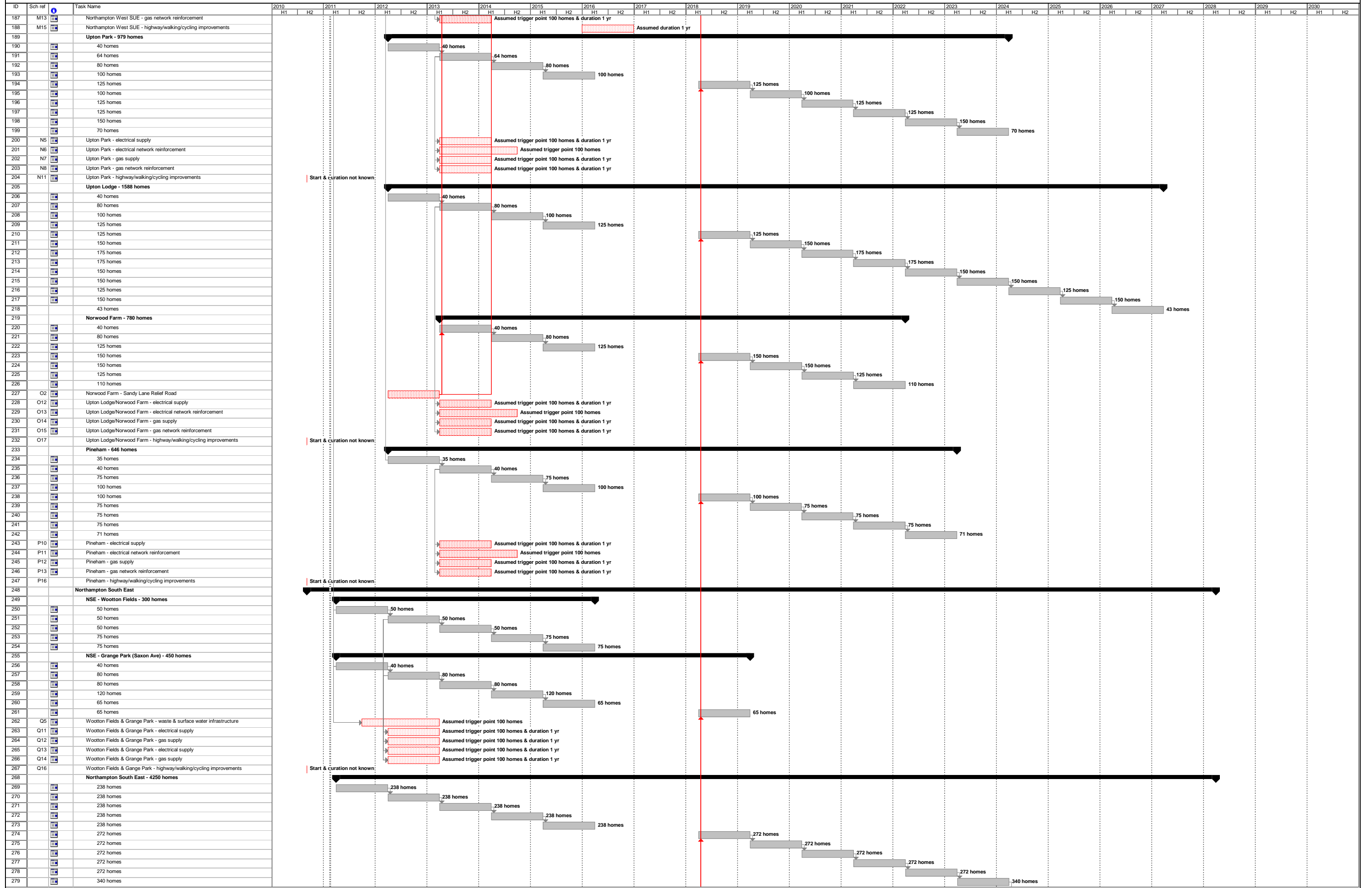
Infrastructure Delivery Plan Programme February 2011 - 62000 traject.mpp



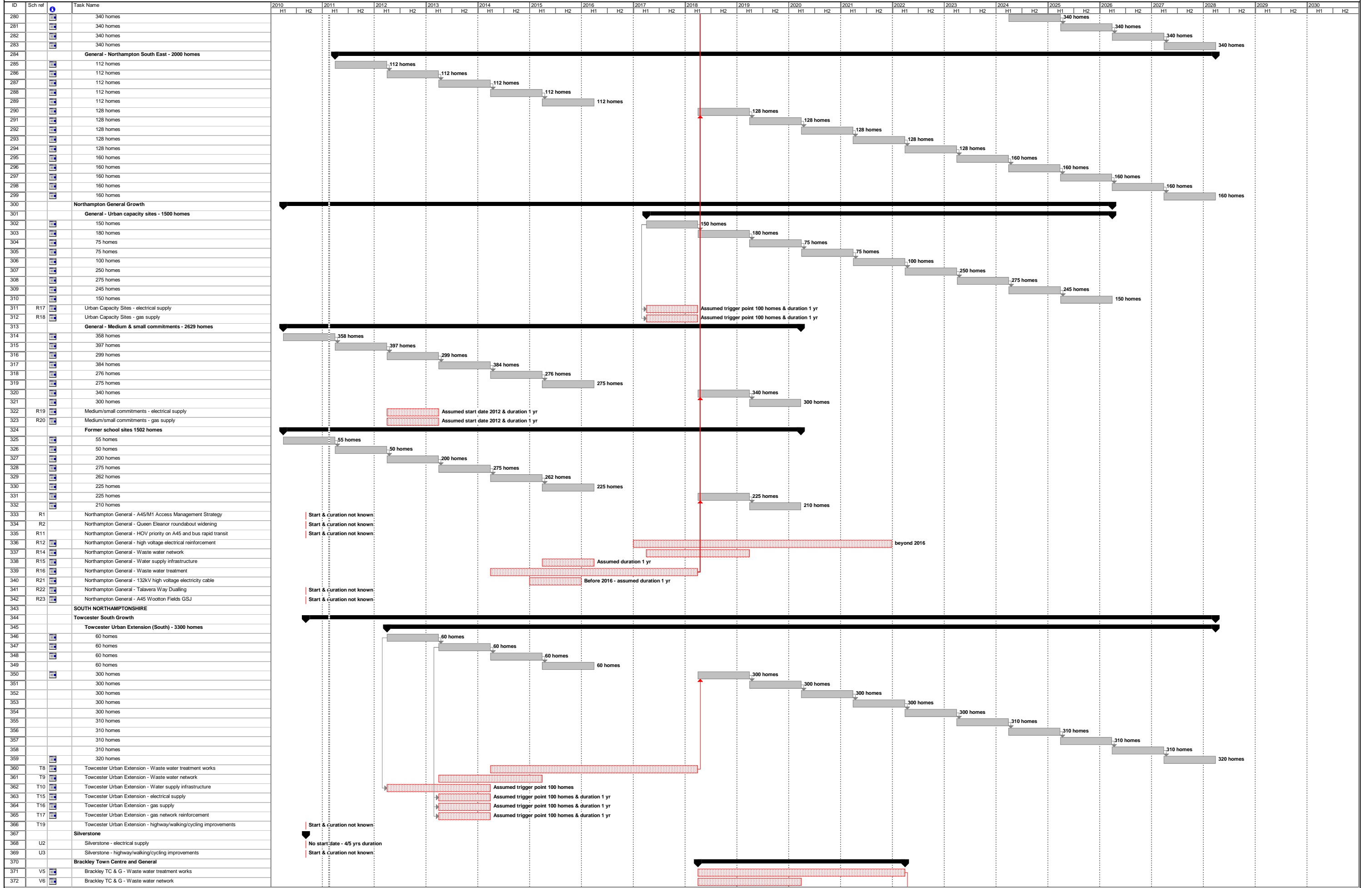
Infrastructure Delivery Plan Programme February 2011 - 62000 traject.mpp



Infrastructure Delivery Plan Programme February 2011 - 62000 traject.mpp



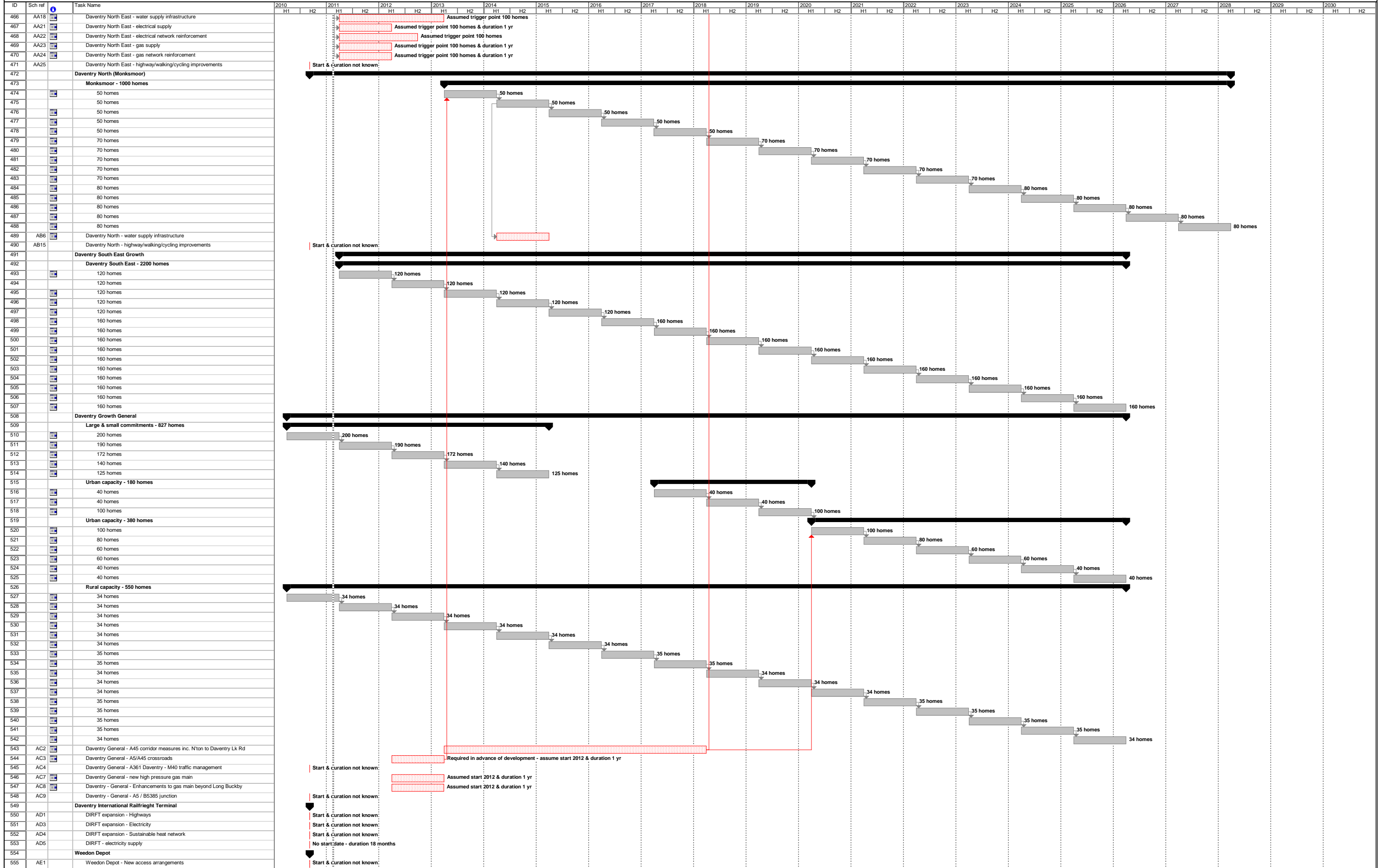
Infrastructure Delivery Plan Programme February 2011 - 62000 traject.mpp



Infrastructure Delivery Plan Programme February 2011 - 62000 traject.mpp



Infrastructure Delivery Plan Programme February 2011 - 62000 traject.mpp



Appendix Four: Trajectories

Overview:

Two housing trajectories for 50,000 dwellings are provided overleaf, showing the impact of key primary infrastructure on the delivery of housing in West Northamptonshire. The trajectories are based upon those shown in the Pre-Submission Joint Core Strategy, amended to take account of the timescales and dependencies shown in the IDP Programmes from Appendix Three.

The 50A trajectory shows the unmitigated impact of Key Primary Infrastructure on the delivery of the Pre-Submission JCS housing trajectory.

The 50B trajectory shows the impact of Key Primary Infrastructure on the Pre-Submission JCS trajectory, with developments less affected by Key Primary Infrastructure brought forward to enable the overall trajectory to be delivered within the IDP period.

Housing trajectories are also provided showing the impact of key primary infrastructure on the delivery of the 62,000 trajectory from the Emergent Joint Core Strategy.

The 62A trajectory shows the unmitigated impact of Key Primary Infrastructure on the delivery of the Emergent JCS housing trajectory.

The 62B trajectory shows the impact of Key Primary Infrastructure on the Emergent JCS trajectory, with developments less affected by Key Primary Infrastructure brought forward to compensate.

Source of information:

The information for the 50A and 62A housing trajectories, the developments, the completion numbers and the period over which the development is due to take place, is taken from the IDP Programmes in Appendix Three. The 50B and 62B trajectories are based upon the 50A and 62A trajectories.

Order of developments:

The SUEs and developments are presented in the same order as the IDP Schedule in Appendix Two.

Information presented:

The Housing Trajectories present the following information:

Column	Title	Content
1st Column	Programme ID	Development reference on the IDP Programme
2nd Column	Key Primary Infrastructure affecting development - Schedule ID	Infrastructure item reference on the IDP Schedule
3rd Column	Development	Title of the SUE / wider area (as IDP Schedule), followed by the title of the development and number of dwellings
4th Column	District	Local authority district within which the development falls
5th Column	From	Date of first year of completions
6th Column	To	Date of completion of the development
7th Column	Total	Total number of dwellings for the development
8th and subsequent columns	2010/11, 2011/12, etc	Years over which completions are expected to occur

The figures in the columns for each year show the number of dwellings expected to be completed in that year. The totals at the foot of the spreadsheet are:

- a) Yearly completions shown on the spreadsheet columns
 - o Further described as, ‘taking into account key primary infrastructure’, for the 50A and 62A Housing Trajectories
 - o Further described as, ‘with key primary infrastructure and sites brought forward’, for the 50B and 62B Housing Trajectories
- b) Yearly completions from the WNJPU trajectory – these are the trajectory figures representing growth forecast in the JCS before the impact of key primary infrastructure is applied

- c) Yearly difference – the difference between the Yearly completions in a) and b) above, i.e. this reflects the impact of key primary infrastructure on the WNJPU's original trajectory.
- d) Cumulative difference – cumulative balance of the yearly differences.
- e) Authority - this is a breakdown of the JCS housing trajectory yearly completions showing the split between the three local authorities.

On both the 62A and 62B trajectories, the years when developments are put back to allow for the time taken to gain planning permission are shown infilled in grey. NB this is shown only for the two 62,000 trajectories.

Where developments have been brought forward, the yearly completion figures are shown in bold. The years from which the developments have been brought forward are shown edged in black.

Some developments, by virtue of being put back by key primary infrastructure and / or time taken to gain planning permission, run beyond the end of the plan period. Where it is possible to complete these developments within the plan period by increasing the yearly completion rate, this is shown on the Trajectories, with the years from which development has been brought forward infilled in red.

West Northamptonshire IDP 50A: Housing Trajectory for 50,000 Dwellings Showing Impact of Key Primary Infrastructure



Programme ID	Key infrastructure affecting development - Schedule ID	Development	District	JPU trajectory period before impact of key primary infrastructure		Total	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28
				From	To																			
2		Northampton Town Centre																						
11	F4	Avon / Nunn Mills - 950 homes	NBC	2011/12	2022/23	950				25	50	50	100	100	100	100	100	100	100	75	50			
24	F4 & F5	Ransome Road - 800 homes	NBC	2011/12	2020/21	800			25	40	50	60	80	100	100	125	150	70						
41		Northampton South																						
42	R16	Collingtree - 1000 homes	NBC	2017/18	2025/26	1000								50	50	100	100	150	150	150	150	100		
57		South of Brackmills - 1000 homes	NBC	2019/20	2025/26	1000										50	50	100	200	200	200	200		
73		Northampton North																						
74	O2 & R16	Northampton North SUE - 2000 homes	DDC	2014/15	2024/25	2000					125	125	150	200	250	225	200	200	250	200	75			
96		Dallington Grange Area																						
97	O2 & R16	Dallington Grange - 3500 homes	NBC	2014/15	2025/26	3500					50	180	200	225	280	275	350	390	400	400	375	375		
119	O2 & R16	Buckton Fields - 1000 homes	NBC	2014/15	2022/23	1000					40	80	120	140	140	120	120	120	120					
134		Northampton West																						
135		St Crispin - 224 homes	NBC	2010/11	2013/14	224	20	60	75	69														
140		Princess Marina Hospital - 550 homes	NBC	2011/12	2017/18	550		40	70	88	105	90	82	75										
148		Former British Timkin - 321 homes	NBC	2010/11	2013/14	321	75	90	90	66														
197	R16	Upton Lodge - 1588 homes	NBC	2012/13	2024/25	1588			40	80	100	125	125	150	175	175	150	150	125	150	43			
182	R16	Upton Park - 854 homes	NBC	2013/14	2021/22	854				40	64	80	100	100	125	125	150	70						
225	R16	Pineham - 646 homes	NBC	2012/13	2020/21	646			35	40	75	100	100	75	75	75	71							
211	O2 & R16	Norwood Farm - 780 homes	SNC	2013/14	2019/20	780				40	80	125	150	150	125	110								
157	O2 & R16	Northampton West SUE - 750 homes	SNC	2017/18	2025/26	750								25	50	75	100	100	100	100	100	100		
167	O2 & R16	Northampton West SUE - 750 homes	DDC	2017/18	2025/26	750								25	50	75	100	100	100	100	100	100		
240		Northampton South East																						
241		Wootton Fields - 300 homes	SNC	2018/19	2023/24	300									50	50	50	50	50	50				
248	R16	Grange Park (Saxon Ave) - 450 homes	SNC	2013/14	2020/21	450				40	60	60	60	60	60	60	50							
263		Northampton General																						
264	R16	Urban capacity sites - 1500 homes	NBC	2017/18	2025/26	1500								150	180	75	75	150	200	275	245	150		
291	R16	Former school sites - 1502 homes	NBC	2010/11	2020/21	1502	55	50	200	200	200	175	175	150	150	75	72							
276	R16	Medium & small commitments - 2754 homes	NBC	2010/11	2021/22	2754	358	397	299	300	300	250	250	200	150	100	100	50						
314		Towcester South																						
315	T8	Towcester Urban Extension (South) - 1500 homes	SNC	2013/14	2025/26	1500				50	70	120	120	120	120	120	130	130	130	130	130	130		
342		Brackley North																						
343	V5	Brackley North - 1380 homes	SNC	2013/14	2023/24	1380				50	80	50	100	150	200				200	200	150	100	100	
362		Brackley East																						
363	V5	Brackley East - 380 homes	SNC	2016/17	2020/21	380							75	75	75				80	75				
374		South Northamptonshire General																						
375		Small & large commitments - 1201 homes	SNC	2010/11	2016/17	1201	200	220	220	180	150	130	101											
383		Rural capacity - 1060 homes	SNC	2013/14	2025/26	1060				90	90	90	90	85	85	85	80	80	75	75	70	65		
397		Urban capacity - 293 homes	SNC	2020/21	2025/26	293											49	49	49	49	49	49	48	
415		Daventry North East																						
416 & 422	AC2	Daventry North East / Churchfields Phase 1 - 2500 homes	DDC	2016/17	2025/26	2500							50	100	250	300	300	300	300	300	300	300		
442	AC3	Monksmoor - 1000 homes	DDC	2012/13	2022/23	1000				53	53	119	65	127	56	130	73	157	83	84				
456		Daventry District General																						
457		Large & small commitments - 827 homes	DDC	2010/11	2014/15	827	200	190	172	140	125													
463 & 467	AC2	Urban capacity - 560 homes	DDC	2017/18	2025/26	560								40	40	100	100	80	60	60	40	40		
474		Rural capacity - 550 homes	DDC	2010/11	2025/26	550				34	43	43	43	43	43	43	43	43	43	43	43	43		

Yearly completions taking into account key infrastructure	34470	908	1047	1226	1625	1910	2052	2336	2715	2979	2768	2763	2639	2815	2716	2120	1751	100	0
Yearly completions from JPU trajectory	34470	908	1097	1344	1660	2036	2068	2418	2644	3078	3016	3042	2620	2586	2382	1920	1651	0	0
Yearly difference		0	-50	-118	-35	-126	-16	-82	71	-99	-248	-279	19	229	334	200	100	100	0

West Northamptonshire IDP 50A: Housing Trajectory for 50,000 Dwellings Showing Impact of Key Primary Infrastructure



Programme ID	Key infrastructure affecting development - Schedule ID	Development	District	JPU trajectory period before impact of key primary infrastructure	Total	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28
		Cumulative difference				0	-50	-168	-203	-329	-345	-427	-356	-455	-703	-982	-963	-734	-400	-200	-100	0	0
Shortfall at end of Plan period - 2025/26																				-100			
Authority																						Total	
		Northampton Borough Council				508	687	899	983	1054	1180	1232	1375	1410	1300	1288	1135	1125	1175	1013	825	17189	
		South Northamptonshire Council				280	370	440	620	720	731	810	720	430	470	444	404	414	414	414	413	8094	
		Daventry District Council				234	224	259	227	443	304	432	596	794	827	961	918	999	820	575	574	9187	
		Total				1022	1281	1598	1830	2217	2215	2474	2691	2634	2597	2693	2457	2538	2409	2002	1812	34470	

West Northamptonshire IDP 50B: Housing Trajectory for 50,000 Dwellings Showing Impact of Key Primary Infrastructure and Developments Brought Forward to Compensate for Shortfalls

KEY		Years from which development has been brought forward
		Years from which development has been brought forward to bring completions within the IDP period

Programme ID	Key infrastructure affecting development - Schedule ID	Development	District	JPU trajectory period before impact of key primary infrastructure		Total	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27
				From	To																		
2		Northampton Town Centre																					
11	F4	Avon / Nunn Mills - 950 homes	NBC	2011/12	2022/23	950				25	50	50	100	100	100	100	100	100	100	75	50		
24	F4 & F5	Ransome Road - 800 homes	NBC	2011/12	2020/21	800			25	40	50	60	80	100	100	125	150	70					
41		Northampton South																					
42	R16	Collingtree - 1000 homes	NBC	2017/18	2025/26	1000				50	50	100	100	150	150	150	150	100					
57		South of Brackmills - 1000 homes	NBC	2019/20	2025/26	1000				50	50	100	200	200	200	200							
73		Northampton North																					
74	O2 & R16	Northampton North SUE - 2000 homes	DDC	2014/15	2024/25	2000				125	125	150	200	250	225	200	200	250	200	75			
96		Dallington Grange Area																					
97	O2 & R16	Dallington Grange - 3500 homes	NBC	2014/15	2025/26	3500				50	180	200	225	280	275	350	390	400	400	375	375		
119	O2 & R16	Buckton Fields - 1000 homes	NBC	2014/15	2022/23	1000				40	80	120	140	140	120	120	120						
134		Northampton West																					
135		St Crispin - 224 homes	NBC	2010/11	2013/14	224	20	60	75	69													
140		Princess Marina Hospital - 550 homes	NBC	2011/12	2017/18	550		40	70	88	105	90	82	75									
148		Former British Timkin - 321 homes	NBC	2010/11	2013/14	321	75	90	90	66													
197	R16	Upton Lodge - 1588 homes	NBC	2012/13	2024/25	1588			40	80	100	125	125	150	175	175	150	150	125	150	43		
182	R16	Upton Park - 854 homes	NBC	2013/14	2021/22	854				40	64	80	100	100	125	125	150	70					
225	R16	Pineham - 646 homes	NBC	2012/13	2020/21	646			35	40	75	100	100	75	75	75	71						
211	O2 & R16	Norwood Farm - 780 homes	SNC	2013/14	2019/20	780				40	80	125	150	150	125	110							
157	O2 & R16	Northampton West SUE - 750 homes	SNC	2017/18	2025/26	750				25	50	75	100	100	100	100	100	100					
167	O2 & R16	Northampton West SUE - 750 homes	DDC	2017/18	2025/26	750				25	50	75	100	100	100	100	100	100					
240		Northampton South East																					
241		Wootton Fields - 300 homes	SNC	2018/19	2023/24	300				50	50	50	50	50	50								
248	R16	Grange Park (Saxon Ave) - 450 homes	SNC	2013/14	2020/21	450				40	60	60	60	60	60	60	50						
263		Northampton General																					
264	R16	Urban capacity sites - 1500 homes	NBC	2017/18	2025/26	1500				150	180	75	75	150	200	275	245	150					
291	R16	Former school sites - 1502 homes	NBC	2010/11	2020/21	1502	55	50	200	200	200	175	175	150	150	75	72						
276	R16	Medium & small commitments - 2754 homes	NBC	2010/11	2021/22	2754	358	397	299	300	300	250	250	200	150	100	100	50					
314		Towcester South																					
315	T8	Towcester Urban Extension (South) - 1500 homes	SNC	2013/14	2025/26	1500				50	70	120	120	120	120	120	130	130	130	130	130	130	130
342		Brackley North																					
343	V5	Brackley North - 1380 homes	SNC	2013/14	2023/24	1380				50	80	50	100	150	200			200	200	150	100	100	
362		Brackley East																					
363	V5	Brackley East - 380 homes	SNC	2016/17	2020/21	380				75	75	75						80	75				
374		South Northamptonshire General																					
375		Small & large commitments - 1201 homes	SNC	2010/11	2016/17	1201	200	220	220	180	150	130	101										
383		Rural capacity - 1060 homes	SNC	2013/14	2025/26	1060				90	90	90	90	85	85	85	80	80	75	75	70	65	
397		Urban capacity - 293 homes	SNC	2020/21	2025/26	293				49	49	49	49	49	48								
415		Daventry North East																					
416 & 422	AC2	Daventry North East / Churchfields Phase 1 - 2500 homes	DDC	2016/17	2025/26	2500					50	100	250	300	300	300	300	300	300	300			
442	AC3	Monksmoor - 1000 homes	DDC	2012/13	2022/23	1000			53	53	119	65	127	56	130	73	157	83	84				
456		Daventry District General																					
457		Large & small commitments - 827 homes	DDC	2010/11	2014/15	827	200	190	172	140	125												
463 & 467	AC2	Urban capacity - 560 homes	DDC	2017/18	2025/26	560				40	40	100			100	80	60	60	40	40			
474		Rural capacity - 550 homes	DDC	2013/14	2025/26	550				34	43	43	43	43	43	43	43	43	43	43	43	43	43

West Northamptonshire IDP 50B: Housing Trajectory for 50,000 Dwellings Showing Impact of Key Primary Infrastructure and Developments Brought Forward to Compensate for Shortfalls

KEY		Years from which development has been brought forward
		Years from which development has been brought forward to bring completions within the IDP period

Programme ID	Key infrastructure affecting development - Schedule ID	Development	District	JPU trajectory period before impact of key primary infrastructure		Total	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27
				From	To																		
		Yearly completions taking into account key infrastructure			34470	908	1047	1279	2229	2790	2857	3242	3333	3531	3166	2918	2506	1827	1613	886	338	0	
		Yearly completions from JPU trajectory				908	1097	1344	1660	2036	2068	2418	2644	3078	3016	3042	2620	2586	2382	1920	1651	0	
		Yearly difference				0	-50	-65	569	754	789	824	689	453	150	-124	-114	-759	-769	-1034	-1313	0	
		Cumulative difference				0	-50	-115	454	1208	1997	2821	3510	3963	4113	3989	3875	3116	2347	1313	0	0	
		Shortfall at end of Plan period - 2025/26																				0	
		Authority																					Total
		Northampton Borough Council				508	687	899	983	1054	1180	1232	1375	1410	1300	1288	1135	1125	1175	1013	825	17189	
		South Northamptonshire Council				280	370	440	620	720	731	810	720	430	470	444	404	414	414	414	413	8094	
		Daventry District Council				234	224	259	227	443	304	432	596	794	827	961	918	999	820	575	574	9187	
		Total				1022	1281	1598	1830	2217	2215	2474	2691	2634	2597	2693	2457	2538	2409	2002	1812	34470	

Figures supplied by West Northamptonshire Joint Planning Unit

West Northamptonshire IDP 62A: Housing Trajectory for 62,000 Dwellings Showing Impact of Key Primary Infrastructure

KEY  Years during which development cannot start due to time to gain planning permission

Programme ID	Key infrastructure affecting development - Schedule ID	Development		JPU trajectory period before impact of key primary infrastructure		Total	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30
				From	To																					
2		Northampton Town Centre																								
11	F4	Avon / Nunn Mills - 950 homes	NBC	2011/12	2019/20	950				25	50	50			100	150	175	150	150	100						
21	F4 & F5	Ransome Road - 800 homes	NBC	2011/12	2020/21	800			25	40	50	60			80	100	100	125	150	70						
38		Northampton South																								
39	R16	Collingtree - 2200 homes	NBC	2011/12	2021/22	2200					200	200	200	200	200	200	200	200	200	200	200					
64		Northampton North																								
65	O2	Northampton North SUE - 5400 homes	DDC	2011/12	2025/26	5400		320	320	320	320	320			350	350	350	350	350	400	400	400	400	450		
91		Dallington Grange Area																								
92	O2 & R16	Dallington Grange 3500 homes	NBC	2014/15	2025/26	3500					50	180			200	225	280	275	350	390	400	400	375	375		
114	O2 & R16	Buckton Fields - 1000 homes	NBC	2014/15	2022/23	1000					40	80			120	140	140	120	120	120	120					
129		Northampton West																								
130		St Crispin - 224 homes	NBC	2010/11	2013/14	224	20	60	75	69																
135	R16	Princess Marina Hospital - 550 homes	NBC	2011/12	2017/18	550		40	70	88	105	90			82	75										
143		Former British Timkin - 321 homes	NBC	2010/11	2013/14	321	75	90	90	66																
205	R16	Upton Lodge - 1588 homes	NBC	2012/13	2024/25	1588			40	80	100	125			125	150	175	175	150	150	125	150	43			
189	R16	Upton Park - 979 homes	NBC	2012/13	2021/22	979			40	64	80	100			125	100	125	125	150	70						
233	R16	Pineham - 646 homes	NBC	2012/13	2020/21	646			35	40	75	100			100	75	75	75	71							
219	O2 & R16	Norwood Farm - 780 homes	SNC	2013/14	2019/20	780				40	80	125			150	150	125	110								
152	O2 & R16	Northampton West - 3740 homes	SNC	2011/12	2025/26	3740					245	245	245	245	245	259	259	259	259	259	259	259	234	234	234	
168	O2 & R16	Northampton West - 1660 homes	DDC	2011/12	2025/26	1660					105	105	105	105	105	111	111	111	111	111	111	111	111	111	136	
248		Northampton South East																								
284	R16	Northampton South East - 2000 homes	SNC	2011/12	2025/26	2000		112	112	112	112	112			128	128	128	128	128	160	160	160	160	160		
249		Wootton Fields - 300 homes	SNC	2011/12	2015/16	300		50	50	50	75	75														
255	R16	Grange Park (Saxon Ave) - 450 homes	SNC	2011/12	2016/17	450		40	80	80	120	65			65											
268	R16	Northampton South East - 4250 homes	SNC	2011/12	2025/26	4250		238	238	238	238	238			272	272	272	272	272	340	340	340	340	340		
300		Northampton General																								
301		Urban capacity sites - 1500 homes	NBC	2017/18	2025/26	1500								150	180	75	75	100	250	275	245	150				
324	R16	Former school sites - 1502 homes	NBC	2010/11	2017/18	1502	55	50	200	275	262	225			225	210										
313	R16	Medium & small commitments - 2629 homes	NBC	2010/11	2017/18	2629	358	397	299	384	276	275			340	300										
344		Towcester South																								
345	T8	Towcester Urban Extension (South) - 3300 homes	SNC	2012/13	2025/26	3300				60	60	60	60		300	300	300	300	300	310	310	310	310	310	320	
373		Brackley North																								
374	V5	Brackley North - 1600 homes	SNC	2011/12	2020/21	1600				170	170	170	170	170					144	144	154	154	154			
398		South Northamptonshire General																								
399		Small & large commitments - 1331 homes	SNC	2010/11	2015/16	1331	245	245	275	265	190	111														
406		Rural capacity - 560 homes	SNC	2010/11	2025/26	560	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35			
423		Urban capacity sites - 293 homes	SNC	2020/21	2025/26	293											49	49	49	49	49	48				
441		Daventry North East																								
442 & 448	AC2	Daventry North East / Churchfields Phase 1 - 3300 homes	DDC	2011/12	2025/26	3300				200	200	200	200	200	200	200	200	200	200	260	260	260	260	260		
473	AD3	Monksmoor - 1000 homes	DDC	2011/12	2025/26	1000				50	50	50	50	50	70	70	70	70	70	80	80	80	80	80		
491		Daventry South East																								
492		Daventry South East - 2200 homes	DDC	2011/12	2025/26	2200				120	120	120	120	120	160	160	160	160	160	160	160	160	160	160		
508		Daventry District General																								
509		Large & small commitments - 827 homes	DDC	2010/11	2014/15	827	200	190	172	140	125															
515 & 519	AC2	Urban capacity - 560 homes	DDC	2017/18	2025/26	560								40	40	100	100	80	60	60	40	40				
526		Rural capacity - 550 homes	DDC	2010/11	2025/26	550	34	34	34	34	34	34	35	35	34	34	34	35	35	35	35	34				

Yearly completions taking into account key infrastructure	52490	1022	1901	2190	3045	3567	3550	1220	1350	4031	3969	3538	3504	3764	3778	3483	3091	2627	2490	370	0
Yearly completions from JPU trajectory		1022	3041	3405	3630	3627	3670	4071	4129	3688	3578	3408	3309	3154	3059	2877	2822	0	0	0	0
Yearly difference		0	-1140	-1215	-585	-60	-120	-2851	-2779	343	391	130	195	610	719	606	269	2627	2490	370	0

Programme ID	Key infrastructure affecting development - Schedule ID	Development	JPU trajectory period before impact of key primary infrastructure		Total	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30
			From	To																					
		Cumulative difference				0	-1140	-2355	-2940	-3000	-3120	-5971	-8750	-8407	-8016	-7886	-7691	-7081	-6362	-5756	-5487	-2860	-370	0	0

Shortfall at end of Plan period - 2025/26 -5487

Authority Total

Northampton Borough Council	508	999	1251	1478	1420	1637	1800	1863	1438	1303	1194	1070	935	985	823	685	19389
South Northamptonshire Council	245	988	1118	1148	1178	1089	1190	1125	1110	1095	985	909	909	884	884	894	15751
- add for rural capacities	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	560
- add for urban capacities											49	49	49	49	49	48	293
Daventry District Council	200	985	967	935	960	875	1011	1031	1031	1011	1011	1131	1131	1011	1011	1086	15387
- add for urban capacities								40	40	100	100	80	60	60	40	40	560
- add for rural capacities	34	34	34	34	34	34	35	35	34	34	34	35	35	35	35	34	550
Total	1022	3041	3405	3630	3627	3670	4071	4129	3688	3578	3408	3309	3154	3059	2877	2822	52490

Figures supplied by West Northamptonshire Joint Planning Unit

West Northamptonshire IDP 62B: Housing Trajectory for 62,000 Dwellings Showing Impact of Key Primary Infrastructure and Developments Brought Forward to Compensate for Shortfalls

KEY

Years from which development has been brought forward
 Years during which development cannot start due to time to gain planning permission
 Years from which development has been brought forward to bring completions within the IDP period

Programme ID	Key infrastructure affecting development - Schedule ID	Development		JPU trajectory period before impact of key primary infrastructure		Total	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30
				From	To																					
2		Northampton Town Centre																								
11	F4	Avon / Nunn Mills - 950 homes	NBC	2011/12	2019/20	950				25	50	50	100	150	175	150	150	100								
21	F4 & F5	Ransome Road - 800 homes	NBC	2011/12	2020/21	800			25	40	50	60	80	100	100	125	150	70								
38		Northampton South																								
39	R16	Collingtree - 2200 homes	NBC	2011/12	2021/22	2200					200	200	200	200	200	200	200	200	200	200	200					
64		Northampton North																								
65	O2	Northampton North SUE - 5400 homes	DDC	2011/12	2025/26	5400		320	320	320	320	320	350	350	350	350	350	400	400	400	400	450				
91		Dallington Grange Area																								
92	O2 & R16	Dallington Grange 3500 homes	NBC	2014/15	2025/26	3500				50	180		200	225	280	275	350	390	400	400	375	375				
114	O2 & R16	Buckton Fields - 1000 homes	NBC	2014/15	2022/23	1000				40	80		120	140	140	120	120	120								
129		Northampton West																								
130		St Crispin - 224 homes	NBC	2010/11	2013/14	224	20	60	75	69																
135	R16	Princess Marina Hospital - 550 homes	NBC	2011/12	2017/18	550		40	70	88	105	90	82	75												
143		Former British Timkin - 321 homes	NBC	2010/11	2013/14	321	75	90	90	66																
205	R16	Upton Lodge - 1588 homes	NBC	2012/13	2024/25	1588			40	80	100	125	125	150	175	175	150	150	125	150	43					
189	R16	Upton Park - 979 homes	NBC	2012/13	2021/22	979			40	64	80	100	125	100	125	125	150	70								
233	R16	Pineham - 646 homes	NBC	2012/13	2020/21	646			35	40	75	100	100	75	75	75	71									
219	O2 & R16	Norwood Farm - 780 homes	SNC	2013/14	2019/20	780				40	80	125	150	150	125	110										
152	O2 & R16	Northampton West - 3740 homes	SNC	2011/12	2025/26	3740					245	245	245	245	245	259	259	259	259	259	259	259	234	234	234	
168	O2 & R16	Northampton West - 1660 homes	DDC	2011/12	2025/26	1660					105	105	105	105	105	111	111	111	111	111	111	111	111	111	111	136
248		Northampton South East																								
284	R16	Northampton South East - 2000 homes	SNC	2011/12	2025/26	2000		112	112	112	112	112	128	128	128	128	128	160	160	160	160	160				
249		Wootton Fields - 300 homes	SNC	2011/12	2015/16	300		50	50	50	75	75														
255	R16	Grange Park (Saxon Ave) - 450 homes	SNC	2011/12	2016/17	450		40	80	80	120	65	65													
268	R16	Northampton South East - 4250 homes	SNC	2011/12	2025/26	4250		238	238	238	238	238	272	272	272	272	272	340	340	340	340	340				
300		Northampton General																								
301		Urban capacity sites - 1500 homes	NBC	2017/18	2025/26	1500							150	180	75	75	100	250	275	245	150					
324	R16	Former school sites - 1502 homes	NBC	2010/11	2017/18	1502	55	50	200	275	262	225	225	210												
313	R16	Medium & small commitments - 2629 homes	NBC	2010/11	2017/18	2629	358	397	299	384	276	275	340	300												
344		Towcester South																								
345	T8	Towcester Urban Extension (South) - 3300 homes	SNC	2012/13	2025/26	3300				60	60	60	60		300	300	300	300	300	310	310	310	310	310	320	
373		Brackley North																								
374	V5	Brackley North - 1600 homes	SNC	2011/12	2020/21	1600				170	170	170	170	170				144	144	154	154	154				
398		South Northamptonshire General																								
399		Small & large commitments - 1331 homes	SNC	2010/11	2015/16	1331	245	245	275	265	190	111														
406		Rural capacity - 560 homes	SNC	2010/11	2025/26	560	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35				
423		Urban capacity sites - 293 homes	SNC	2020/21	2025/26	293				49	49	49	49	49	48											
441		Daventry North East																								
442 & 448	AC2	Daventry North East / Churchfields Phase 1 - 3300 homes	DDC	2011/12	2025/26	3300				200	200	200	200	200	200	200	200	200	200	260	260	260	260	260		
473	AD3	Monksmoor - 1000 homes	DDC	2011/12	2025/26	1000				50	50	50	50	50	70	70	70	70	70	80	80	80	80	80		
491		Daventry South East																								
492		Daventry South East - 2200 homes	DDC	2011/12	2025/26	2200				120	120	120	120	120	160	160	160	160	160	160	160	160	160	160	160	
508		Daventry District General																								
509		Large & small commitments - 827 homes	DDC	2010/11	2014/15	827	200	190	172	140	125															
515 & 519	AC2	Urban capacity - 560 homes	DDC	2017/18	2025/26	560				40	40	100			100	80	60	60	40	40						
526		Rural capacity - 550 homes	DDC	2010/11	2025/26	550	34	34	34	34	34	34	35	35	34	34	34	35	35	35	35	35	34			

Yearly completions taking into account key infrastructure	52490	1022	1901	2190	3224	3826	3439	3881	3814	3517	3429	3420	3624	3374	3339	3072	2728	1155	1165	370
Yearly completions from JPU trajectory	1022	3041	3405	3630	3627	3670	4071	4129	3688	3578	3408	3309	3154	3059	2877	2822	0	0	0	

Programme ID	Key infrastructure affecting development - Schedule ID	Development	JPU trajectory period before impact of key primary infrastructure		Total	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	
			From	To																						
		Yearly difference				0	-1140	-1215	-406	199	-231	-190	-315	-171	-149	12	315	220	280	195	-94	1155	1165	370		
		Cumulative difference				0	-1140	-2355	-2761	-2562	-2793	-2983	-3298	-3469	-3618	-3606	-3291	-3071	-2791	-2596	-2690	-1535	-370	0		
		Shortfall at end of Plan period - 2025/26																							-2690	
		Authority																								Total
		Northampton Borough Council				508	999	1251	1478	1420	1637	1800	1863	1438	1303	1194	1070	935	985	823	685	19389				
		South Northamptonshire Council				245	988	1118	1148	1178	1089	1190	1125	1110	1095	985	909	909	884	884	894	15751				
		- add for rural capacities				35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	560				
		- add for urban capacities														49	49	49	49	49	48	293				
		Daventry District Council				200	985	967	935	960	875	1011	1031	1031	1011	1011	1131	1131	1011	1011	1086	15387				
		- add for urban capacities											40	40	100	100	80	60	60	40	40	560				
		- add for rural capacities				34	34	34	34	34	34	35	35	34	34	34	35	35	35	35	34	550				
		Total				1022	3041	3405	3630	3627	3670	4071	4129	3688	3578	3408	3309	3154	3059	2877	2822	52490				

Figures supplied by West Northamptonshire Joint Planning Unit

Appendix Five: Original WNJPU Housing Trajectories

This appendix contains a copy of the 50,000 housing trajectory from the Pre-Submission Joint Core Strategy, as supplied by the WNJPU.

It also contains a copy of the 62,000 housing trajectory from the Emergent Joint Core Strategy, again as supplied by the WNJPU.

The housing trajectories that appear in Appendix Four are based upon the trajectories provided overleaf, which show the yearly completion figures for the plan period 2010/11 to 2025/26.

At the time of writing, the 50,000 trajectory is the current version, and appears in the 2011 Pre-Submission Joint Core Strategy. The 62,000 housing trajectory is historic, and has been assessed in the IDP for means of comparison.

Daventry District 50000 Housing Trajectory

		Completions 10/11	Completions 11/12	Completions 12/13	Completions 13/14	Completions 14/15	Completions 15/16	Completions 16/17	Completions 17/18	Completions 18/19	Completions 19/20	Completions 20/21	Completions 21/22	Completions 22/23	Completions 23/24	Completions 24/25	Completions 25/26	Totals
1	Projected net additional dwellings per annum (Large & Small site commitments) - Includes Middlemoor, Daventry Town & Villages	200	190	172	140	125												827
2	Sustainable Urban Extensions																	
2A	Monksmoor	0	0	53	53	119	65	127	56	130	73	157	83	84				1000
2B	Daventry North East/	0	0	0	0	0	0	50	100	250	300	300	300	300	300	300	300	2500
2C	Buckton Fields	0	0	0	0	40	80	120	140	140	120	120	120	120	120	120	120	1000
2D	Northampton North	0	0	0	0	125	125	150	200	250	225	200	200	250	200	75	0	2000
2E	Northampton West							25	50	75	100	100	100	100	100	100	100	750
	Provision	200	190	225	193	409	270	447	521	820	793	877	803	854	600	475	400	8077
	Urban Capacity								40	40	100	100	80	60	60	40	40	560
	Rural	0	0	0	34	43	43	43	43	43	43	43	43	43	43	43	43	550
	Trajectory	200	190	225	227	452	313	490	604	903	936	1020	926	957	703	558	483	9187

Re-profiling to increase Churchfields to 4000 and reduce Northampton West to 500 - Add rural allowance

Northampton Borough 5000 Housing Trajectory

		Completions 10/11	Completions 11/12	Completions 12/13	Completions 13/14	Completions 14/15	Completions 15/16	Completions 16/17	Completions 17/18	Completions 18/19	Completions 19/20	Completions 20/21	Completions 21/22	Completions 22/23	Completions 23/24	Completions 24/25	Completions 25/26	Totals
1	Projected net additional dwellings per annum (Large & Small site commitments)																	0
	Upton Lodge	0	0	40	80	100	125	125	150	175	175	150	150	125	150	43	0	1588
	Upton Park	0	0	0	40	64	80	100	100	125	125	150	70	0	0	0	0	854
	Pineham	0	0	35	40	75	100	100	75	75	75	71	0	0	0	0	0	646
	Avon / Nunn Mills	0	25	50	50	100	100	100	100	100	100	100	75	50	0	0	0	950
	Ransome Road	0	25	40	50	60	80	100	100	125	150	70	0	0	0	0	0	800
	St Crispin	20	60	75	69	0	0	0	0	0	0	0	0	0	0	0	0	224
	Princess Marina Hospital	0	40	70	88	105	90	82	75	0	0	0	0	0	0	0	0	550
	Former school sites	55	50	200	200	200	175	175	150	150	75	72	0	0	0	0	0	1502
	Former British Timkin	75	90	90	66	0	0	0	0	0	0	0	0	0	0	0	0	321
	Urban Capacity Sites	0	0	0	0	0	0	0	150	180	75	75	150	200	275	245	150	1500
	Medium & Small Commitments	358	397	299	300	300	250	250	200	150	100	100	50					2754
2	Sustainable Urban Extensions																	0
2A	Dallington Grange	0	0	0	0	50	180	200	225	280	275	350	390	400	400	375	375	3500
2B	Northampton Wootton Extension (HCA land)										50	50	100	200	200	200	200	1000
2C	Northampton South								50	50	100	100	150	150	150	150	100	1000
	Provision	508	687	899	983	1054	1180	1232	1375	1410	1300	1288	1135	1125	1175	1013	825	17189

Notes	
2B	Need to assume a build rate
2C	Need to assume a build rate

South Northamptonshire 5000 Trajectory

	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	Totals
Projected net additional dwellings per annum (Large & Small site commitments) - Includes Towcester, Brackley & Villages	200	220	220	180	150	130	101	0	0	0	0	0	0	0	0	0	1201
Wootton Fields	0	0	0	0	0	0	0	0	50	50	50	50	50	50	0	0	300
Grange Park (Saxon Ave)	0	0	0	40	60	60	60	60	60	60	50	0	0	0	0	0	450
Norwood Farm	0	0	0	40	80	125	150	150	125	110	0	0	0	0	0	0	780
Sustainable Urban Extensions																	0
Towcester South	0	0	0	50	70	120	120	120	120	120	130	130	130	130	130	130	1500
Brackley North (including Brackley Sawmills)				50	80	50	100	150	200	200	200	150	100	100			1380
Brackley East							75	75	75	80	75						380
Northampton West Village Brownfield Redevelopment								25	50	75	100	100	100	100	100	100	750
Roads											0	0	0	0	0	0	0
Other village allowance	0	0	0	90	90	90	90	85	85	85	80	80	75	75	70	65	1060
Urban capacity											49	49	49	49	49	48	293
Provision	200	220	220	450	530	575	696	665	765	780	734	559	504	504	349	343	8094

Daventry District 62,000 Housing Trajectory

		Completions 10/11	Completions 11/12	Completions 12/13	Completions 13/14	Completions 14/15	Completions 15/16	Completions 16/17	Completions 17/18	Completions 18/19	Completions 19/20	Completions 20/21	Completions 21/22	Completions 22/23	Completions 23/24	Completions 24/25	Completions 25/26	Totals
1	Projected net additional dwellings per annum (Large & Small site commitments) - Includes Middlemoor, Daventry Town & Villages																	
		200	190	172	140	125												
2	Sustainable Urban Extensions																	
2A	Daventry North (Monksmoor)		50	50	50	50	50	70	70	70	70	70	80	80	80	80	80	80
2B	Daventry North East (Churchfields)		200	200	200	200	200	200	200	200	200	200	260	260	260	260	260	260
2C	Daventry South East		120	120	120	120	120	160	160	160	160	160	160	160	160	160	160	160
2D	Buckton Fields	0	0	0	0	40	80	120	140	140	120	120	120	120				
2E	Northampton North		320	320	320	320	320	350	350	350	350	350	400	400	400	400	450	5400
2F	Northampton West		105	105	105	105	105	111	111	111	111	111	111	111	111	111	136	1660
	Provision	200	880	862	830	855	770	900	920	920	900	900	1020	1020	900	900	950	15387

Notes	
2A	Daventry North - Baed on EJCS
2B	Daventry North-East - Based on EJCS
2C	Buckton Fields - Based on the planning application ?
2D	Northampton North - Based on EJCS

Northampton Borough 62,000 Housing Trajectory

		Completions 10/11	Completions 11/12	Completions 12/13	Completions 13/14	Completions 14/15	Completions 15/16	Completions 16/17	Completions 17/18	Completions 18/19	Completions 19/20	Completions 20/21	Completions 21/22	Completions 22/23	Completions 23/24	Completions 24/25	Completions 25/26	Totals
1	Projected net additional dwellings per annum (Large & Small site commitments)																	0
	Upton Lodge	0	0	40	80	100	125	125	150	175	175	150	150	125	150	43	0	1588
	Upton Park	0	0	40	64	80	100	125	100	125	125	150	70	0	0	0	0	979
	Pineham	0	0	35	40	75	100	100	75	75	75	71	0	0	0	0	0	646
	Avon / Nunn Mills	0	25	50	50	100	150	175	150	150	100	0	0	0	0	0	0	950
	Ransome Road	0	25	40	50	60	80	100	100	125	150	70	0	0	0	0	0	800
	St Crispin	20	60	75	69	0	0	0	0	0	0	0	0	0	0	0	0	224
	Princess Marina Hospital	0	40	70	88	105	90	82	75	0	0	0	0	0	0	0	0	550
	Former school sites	55	50	200	275	262	225	225	210	0	0	0	0	0	0	0	0	1502
	Former British Timkin	75	90	90	66	0	0	0	0	0	0	0	0	0	0	0	0	321
	Urban Capacity Sites	0	0	0	0	0	0	0	150	180	75	75	100	250	275	245	150	1500
	Medium & Small Commitments	358	397	299	384	276	275	340	300									2629
2	Sustainable Urban Extensions																	
2A	Dallington Grange	0	0	0	0	50	180	200	225	280	275	350	390	400	400	375	375	3500
2B	Northampton South East		112	112	112	112	112	128	128	128	128	128	160	160	160	160	160	2000
2C	Northampton South		200	200	200	200	200	200	200	200	200	200	200					2200
	Provision	508	999	1251	1478	1420	1637	1800	1863	1438	1303	1194	1070	935	985	823	685	19389

Notes	
2B	Based on EJCS Phasing
2C	Based on EJCS Phasing

South Northamptonshire 62,000 Housing Trajectory

		Completions 10/11	Completions 11/12	Completions 12/13	Completions 13/14	Completions 14/15	Completions 15/16	Completions 16/17	Completions 17/18	Completions 18/19	Completions 19/20	Completions 20/21	Completions 21/22	Completions 22/23	Completions 23/24	Completions 24/25	Completions 25/26	Totals	
1	Projected net additional dwellings per annum (Large & Small site commitments) - Includes Towcester, Brackley & Villages AND Recently Approved Brackley Sawmills (130 dwellings)	245	245	275	265	190	111	0	0	0	0	0	0	0	0	0	0	0	1331
	Wootton Fields	0	50	50	50	75	75	0	0	0	0	0	0	0	0	0	0	0	300
	Grange Park (Saxon Ave)	0	40	80	80	120	65	65	0	0	0	0	0	0	0	0	0	0	450
	Norwood Farm	0	0	0	40	80	125	150	150	125	110	0	0	0	0	0	0	0	780
2	Sustainable Urban Extensions																		0
2A	Towcester South			60	60	60	60	300	300	300	300	300	310	310	310	310	310	320	3300
2B	Brackley North		170	170	170	170	170	144	144	154	154	154							1600
2C	Northampton West		245	245	245	245	245	259	259	259	259	259	259	259	234	234	234	234	3740
2B	Northampton South East		238	238	238	238	238	272	272	272	272	272	340	340	340	340	340	340	4250
	Provision	245	750	880	910	940	851	918	853	838	823	713	569	569	544	544	554	554	11501

Notes	
2A	Based on EJCS
2B	Based on EJCS
2C	Based on EJCS

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Appendix Six: Terminology

Glossary, abbreviated terms and acronyms used in the Report:

Acronyms and abbreviations

08 IDP	-	Infrastructure Delivery Plan prepared in 2008 by EC Harris
CIF	-	Community Infrastructure Fund
CPO	-	Compulsory Purchase Order
DDC	-	Daventry District Council
EA	-	Environment Agency
GAF	-	Growth Area Funding
HA	-	Highways Agency
LTP	-	Local Transport Plan
NBC	-	Northampton Borough Council
NCC	-	Northamptonshire County Council
NHS	-	National Health Service
PCT	-	Primary Care Trust
SNC	-	South Northamptonshire Council
SUE	-	Sustainable Urban Extension
Sustrans	-	Sustainable Transport - UK charity promoting travel by foot, bike or public transport
TOC	-	Train Operating Company
WCS	-	Water Cycle Strategy

- WNDC - West Northamptonshire Development Corporation
- WNJPU - West Northamptonshire Joint Planning Unit
- WSP - WSP Group - engineering consultancy

Glossary

- Housing trajectory - Housing completion numbers and years for those numbers provided by the WNJPU
- IDP Programme - Infrastructure Delivery Plan Programme – produced from WNJPU housing trajectories
- IDP Schedule - Schedule of primary, secondary and tertiary projects with description and information available
- 50A Trajectory - Housing Trajectory for 50,000 Dwellings Showing Impact of Essential Primary Infrastructure
- 50B Trajectory - Housing Trajectory for 50,000 Dwellings Showing Impact of Essential Primary Infrastructure and Developments Brought Forward to Compensate for Shortfalls
- 62A Trajectory - Housing Trajectory for 62,000 Dwellings Showing Impact of Essential Primary Infrastructure
- 62B Trajectory - Housing Trajectory for 62,000 Dwellings Showing Impact of Essential Primary Infrastructure and Developments Brought Forward to Compensate for Shortfalls

Appendix Seven: Reference Documents

The list below shows the documents consulted in the course of preparing the Infrastructure Delivery Plan. WN stands for West Northamptonshire.

Document	Author	Year
WN Infrastructure Delivery Plan	EC Harris	2008
WN Planning Obligations Strategy	WNDC	2009
Revised WN Planning Obligations Strategy	WNDC	2010
WN Emergent Core Strategy	JPU	2009
Northampton Local Plan	NBC	1997
Daventry Local Plan	DDC	1997
South Northamptonshire Local Plan	SNC	1997
Draft Brackley Masterplan	SNC	2010
Draft Towcester Masterplan	SNC	2009
Draft WN Water Cycle Strategy	Halcrow	2010
Pre-submission Northampton Central Area Action Plan	NBC	2010
Northamptonshire Local Transport Plan	NCC	2006
Northamptonshire Transport Strategy for Growth	NCC	2007
WN Sports Facilities Strategy	Syzygy Leisure	2009

Appendix Eight: Contact List

The list below shows contact details for a number of organisations consulted in the course of preparing the Infrastructure Delivery Plan. It includes local authorities, infrastructure providers and consultants representing these organisations.

Contact	Organisation	Telephone	Email
Mick Gailey	Anglian Water		
Casey Balkham	BT Openreach		casey.balkham@openreach.co.uk
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Ash Bansal	East Midlands Ambulance Service	07771 532194	Ash.Bansal@emas.nhs.uk
Lesley Queripel	East Midlands Electricity		lesley.queripel@eme.co.uk
Jennifer Dean	Environment Agency	01536 385137	jennifer.dean@environment- agency.gov.uk
Ben Thornely	Environment Agency	01536 385137	ben.thornely@environment- agency.gov.uk
Paul Golby	Eon		paul.golby@eon-uk.com
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Graham Fry	AECOM (on behalf of Highways Agency)		graham.fry@aecom.com
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Keith Freebairn	Northamptonshire NHS	01604 651853	keith.freebairn@northants.nhs.uk
Natasha Kerrigan	Northamptonshire NHS		natasha.kerrigan@northants.nhs.uk
Paul Bullen	Northamptonshire Police	03000 111 222	Paul.Bullen@northants.pnn.police.uk
Neil Monaghan	River Nene Regional Park	01604 237648	
Andy Jewell	Scottish Power Energy Solutions (ref. utilities)	07501 223056	andrew.jewell@scottishpower.com
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