

Watlington Neighbourhood Development Plan - Traffic Impact Study Brief



Introduction

Watlington is a unique town with a unique traffic problem ~80% of traffic at peak times is “cut-through” to and from the M40. Watlington is the gateway to South Oxfordshire. A range of traffic management options are therefore required.

The people of Watlington have consistently responded to consultation to the effect that:

- They would like the scale and character of the town to remain as it is, and
- That something needs to be done to change the volume, congestion and disruption that the through traffic causes to daily life, particularly those who live on and use the through-route corridor.

A Traffic Impact study is necessary to support the forthcoming Neighbourhood Plan.

A considerable amount of preparatory work has been carried out & a range of options have been reviewed.

The success of the Neighbourhood plan will be measured by the two factors:

- That new houses can be accommodated so as to retain the scale and character of the town, and that
- Traffic mitigation measures and controls are implemented so as to have a significant impact on the through traffic problem. These may be carried out by through traffic reduction and control measures, or using the housing provision to provide a relief /link road to divert a proportion of the through traffic, or a combination of both.

The traffic solution options have focused on the following issues

- Management of peak-time congestion
- Reduction in HGV traffic
- Linking traffic management with current and new housing requirements, i.e. using a link/relief, or by-pass road.

The traffic solution must also take into account the following issues

- Need to ensure that pedestrians & cyclists are at the core of the plan
- Improvements in air-quality need to be factored in (focused on the town centre)
- Enforcement of the HGV weight-limit must be stepped-up
- Watlington should retain its character for both residents and tourists

Introduction Continued.....1

The project is split into 2 main work stream objectives that we are asking the Traffic Consultants to evaluate:

Objective 1: Provide evidence to support decisions between the options of:

1. Addressing the traffic problems in the town centre, particularly through traffic,
2. Doing the above, as well as choosing sites that provide a link, or part of a relief/link road around Watlington.
3. To assess whether traffic management measures contribute to improving the pedestrian experience in the town, including air quality improvement
4. To assess which traffic management measures are worth considering (Slide 4)

Objective 2: Detailed Evaluation of the potential Relief/Link Road based on current and forecast traffic movements

1. Define the specification of the relief/link road
2. Define the budget range to complete a relief/link road from B4009 to the Britwell Road towards Benson
3. Carry out traffic flow mapping to establish whether the relief/link road would alleviate traffic in the centre of Watlington or encourage more traffic to and from the M40

This evidence should be based on modelling of the situation in Watlington as well as on past experience elsewhere in analogous situations.

The evidence should also take into account the increase in housing numbers in the wider vicinity of Watlington by using forecast traffic movements through Watlington provided by SODC

Please note that the budget for the evaluation can not exceed £14,500 with the proposal clearly stating that £4,500 should be focused on the housing site evaluation and the £10,000 focused on the Relief/Link Road evaluation (Objective 2) and the traffic management approaches (Slide 4)

Objective 1: Content and focus of the Traffic Impact Study

The Traffic Impact Study is to achieve answers to the following questions:

1. Traffic control measures to improve congestion in the Town Centre

What traffic control measures can be implemented in the town centre, and what is the likely reduction in traffic volumes, and the effective control of through traffic HGV's? The solutions for evaluation include, but are not necessarily limited to:

- Smart flow-control traffic lights
- The use of chicanes on the out-skirts of the town
- The use of pedestrian controlled lights
- The use of a 20mph speed limit

The assessment assumes the following will be implemented (no modelling required):

- The use of signs further out from the town warning HGV's of the weight limit
- The possible use of ANPR cameras and their operation as an offence detection device.

It is important that the answers are evaluated in terms of vehicle numbers, percentage reduction, precedent preferably within SODC. Reference should be made to the TPP report dated September 2014, in which data is available on existing traffic volumes.

2. Impact of three housing site scenarios on traffic flow in Watlington

- The key component being the introduction of a relief/link road linking 5 sites

3. Improvement in pedestrian movement assistance measures in the Town Centre: Separate Budget in the Proposal

There are narrow footpaths, difficult carriageway crossings, busy carriageways. What measures can be incorporated so that pedestrian movement in and around the town centre, and pedestrian and cycle routes around the town, can be facilitated and improved.

Possible Options for Watlington 1

Option 1. Town Centre Traffic Reduction measures, Development without a Relief Road.

If a proposed relief road is not suitable for HGV's, and if the effect of limiting through traffic and HGV's through Watlington achieves a high degree of environmental and atmospheric benefit, in a marked improvement in air quality, and in the pedestrian user experience of the Town Centre, then:

1. Advise on models such as the Dorset Model, with Pedestrian priority, or other forms of Pedestrian Priority.
2. Advise on the feasibility of traffic measures below:
 - Smart flow-control traffic lights : **Please advise on optimal location**
 - The use of chicanes on the out-skirts of the town
 - The use of pedestrian controlled lights
 - The use of a 20mph speed limit
- **Advise will also be required on use of traffic measures in combination with Options 2, 3 & 4**



Possible Options for Watlington 2

Relief Road Option 2 Through Sites 7/8,9,10, 11, 12.

In this case a proposed relief/link road will be linked up through sites 8, 9, 10, 11 and 12, past the existing Industrial Estate, with the road to Benson, locally called the Britwell Road.

In this case the additional available land and the permissible density would allow the building of an additional 200 houses, there is a however maximum of ~800 dwelling units permissible with these 5 sites which would need to be modelled in conjunction with the relief/link road.

1. **What beneficial impact** will the construction of such a road have on the town centre, if a) there are traffic control and through traffic reduction measures in place in the town centre, and if b) if the traffic control measures are not viable nor effective or not implemented.
2. **What adverse** effect will be the result of increasing the through traffic opportunity through the bottle-neck of Watlington. Will there be an overall increase in traffic, on the ground of the axiom, "Roads Generate Traffic".
3. **What effect** on the town generally will there be in terms of traffic, if there are a.) 200 dwelling units along the route, or b.) 800 units along the route. (Maximum potential dwellings for all sites)

It is assumed that a relief/link road will carry cars, light vans, school busses, but no HGV's above **7.5 tonnes (TBC)**. Advice on how to limit the use is required. (Location of housing site entrances and exits will be provided)

Please advise on the width requirements for such a road and whether a scheme could be introduced to allow HGV's above 3.5 tonnes (but below legal 7.5 tonne limit) to use this relief/link road route (Note please assume that adjacent Site 7 is incorporated into Site 8)

It is acknowledged that discussion upfront will be required to determine the route and specification of the relief/link road as it is understood that there are a range of options with different cost/impact implications

10 MARCH 2016

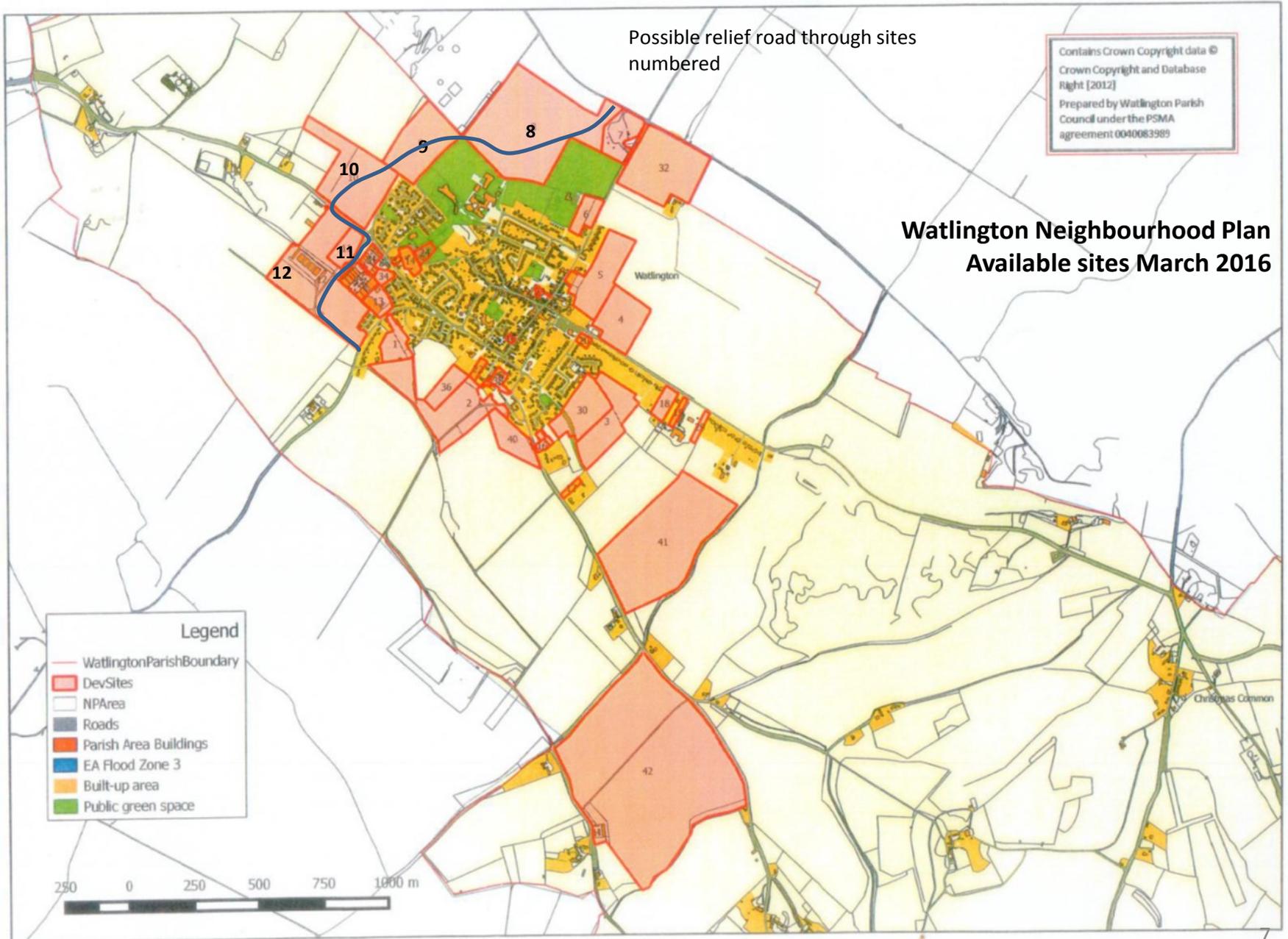
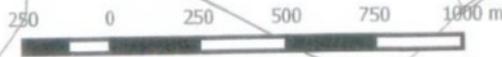
Possible relief road through sites numbered

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Watlington Neighbourhood Plan Available sites March 2016

Legend

- Watlington Parish Boundary
- Dev Sites
- NPA Area
- Roads
- Parish Area Buildings
- EA Flood Zone 3
- Built-up area
- Public green space



Possible Options for Watlington 3

Option 3: Development of Sites 11, 12.

In this case housing development service road only would be linked up through sites 11 and 12, past the existing Industrial Estate, with the road to Benson, locally called the Britwell Road.

In this case the additional available land and the permissible density would accommodate an additional 200 dwelling units into Watlington.

1. **What beneficial impact** will the construction of such a road, as essentially a housing estate feeder road, have on the town centre, if a) there are traffic control and through traffic reduction measures in place in the town centre, and if b)) if the traffic control measures are not viable nor effective or not implemented.
2. **What adverse effect** will be the result of increasing the through traffic opportunity through the bottle-neck of Watlington. Will there be an overall increase in traffic, on the ground of the axiom, "Roads Generate Traffic".
3. **What effect** on the town generally will there be in terms of traffic, if there are 200 dwelling units along the route.

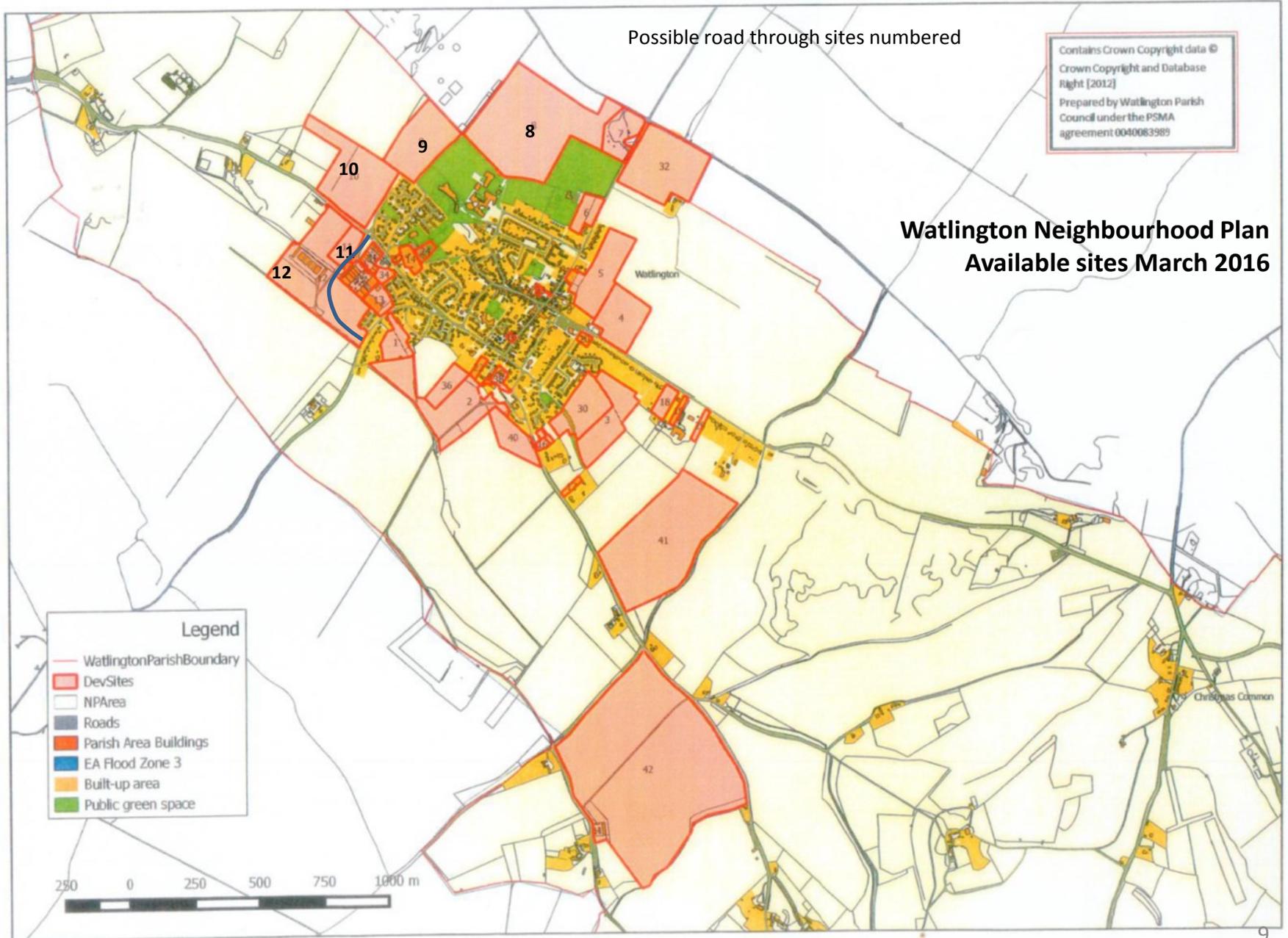
It is assumed that a housing development service road will carry cars, light vans, school busses, but no HGV's above **7.5 tonnes (TBC)**. Advice on how to limit the use is required. (Location of housing site entrances and exits will be provided)

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Possible road through sites numbered

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Watlington Neighbourhood Plan Available sites March 2016



Possible Options for Watlington 4

Option 4: Development Sites 7/8,9 only

In this case a housing development service road only will be linked up through sites 8 and 9 (Route to be confirmed). If the proposed route is through the existing Marlbrook Estate, then question 4 applies.

It is possible that the houses along this route can be limited to 200, which is currently being considered as a viable number, but by the calculation of available land and permissible density they could accommodate as much as **Wat 7/8** 336 dwellings, **Wat 9**, 113 dwelling which equals 449 dwelling units in total. The questions arising out of this option are:

1. **What beneficial impact** will the construction of such a road, as essentially a housing estate feeder road, have on the town centre, if a) there are traffic control and through traffic reduction measures in place in the town centre, and if b)) if the traffic control measures are not viable nor effective or not implemented.
2. **What adverse effect** will be the result of increasing the through traffic opportunity through the bottle-neck of Watlington. Will there be an overall increase in traffic, on the ground of the axiom, "Roads Generate Traffic".
3. **What effect** on the town generally will there be in terms of traffic, if there are a.) 200 dwelling units along the route, or b.) 450 units along the route. (Maximum potential dwellings for all sites)
4. **What adverse effect** to the Marlbrook Estate will there be to have a road pass though the existing estate. What increase in existing traffic numbers would there be?

It is assumed that a housing development service road will carry cars, light vans, school busses, but no HGV's above **7.5 tonnes (TBC)**. Advice on how to limit the use is required. (Location of housing site entrances and exits will be provided)

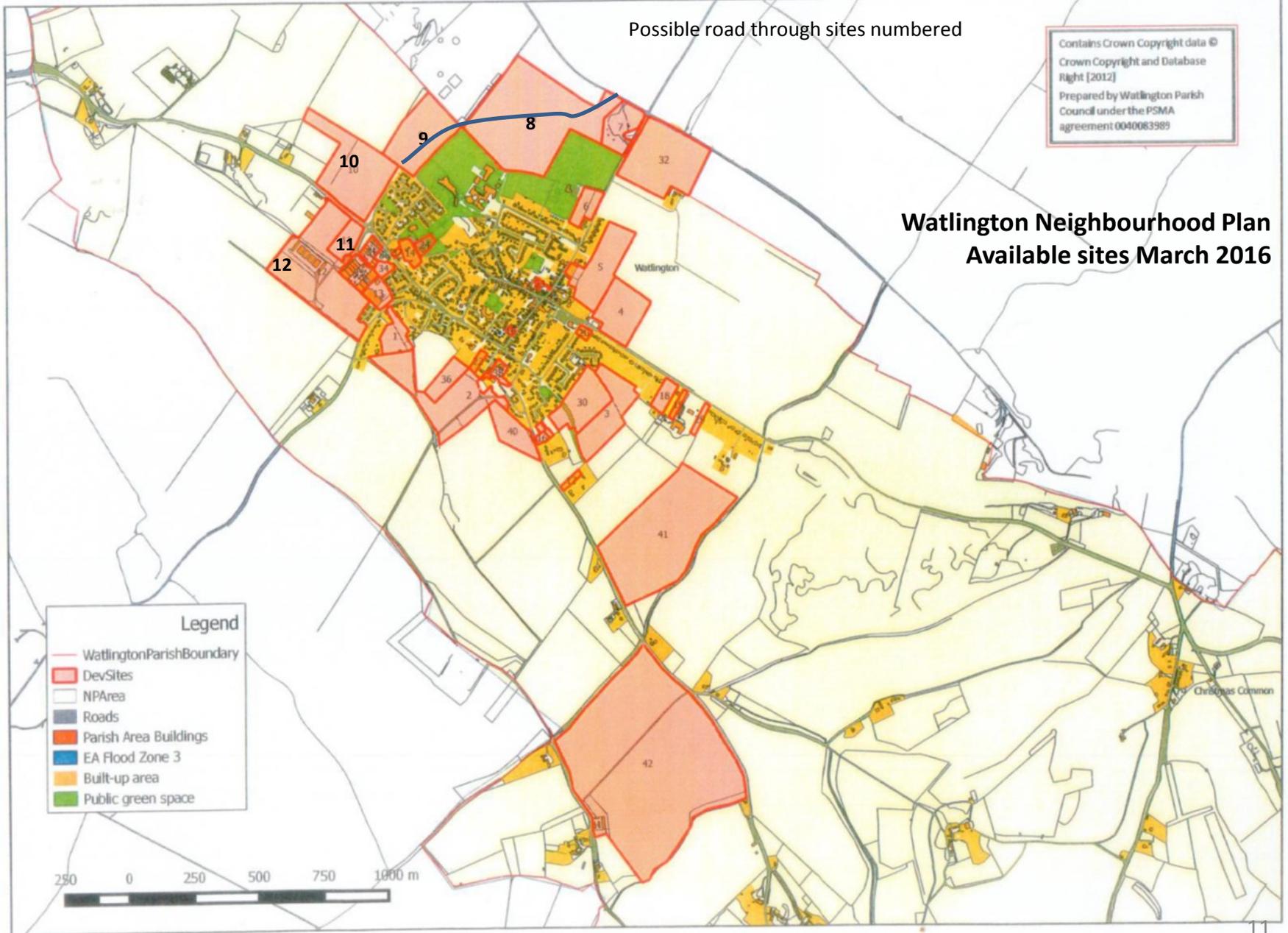
(Note please assume that adjacent Site 7 is incorporated into Site 8)

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Summary:

Site specific traffic impact & access appraisal

This assessment would review the traffic impact from a number of site combination scenarios

- **Scenario 1:** Sites 7/8,9,10,11 & 12 with relief/link road from B4009 to the Britwell Road towards Benson (Assume link/relief road able to carry cars, small vans and School Buses but not lorries with capacity above 3.5 tonnes)
- **Scenario 2:** Sites 11 and 12 only
- **Scenario 3:** Sites 8 & 9 only

Requirements (SODC suggested approach)

- A high level assessment of distribution of trips from the development locations should be carried out
 - We would need to understand trip-rates, vehicle types, frequency, times, directions and number of travellers from and to the dwellings
 - The number of commuters vs. local trips again could be estimated again and covered in the estimation of trip rates
- The additional traffic flow vs. the snap shot traffic survey would be required
- To determine whether the additional traffic associated with these developments impacts significantly on the roads/ junctions through Watlington.
 - To assess this properly, junction modelling will be required.
 - We would like to have a cumulative impact modelling approach with additional modelling at key junctions – these can be prioritised if required
- An assessment of access for each of the sites against a common criteria, including:
 - High-level feasibility/ assessment of highway access
 - Assessment of walk/ cycle and public transport access, with reference to likely mitigation measures required to make the site sustainable from a transport access perspective (e.g. are new footways needed, how far is it from bus routes/ stops etc.)

Summary Objective 1

Traffic management options: Feasibility Study

We would also like to test the impact of a number of traffic management approaches

- The main options are those with precedent in South Oxon and highest priority for Watlington
 1. Smart flow-control traffic lights that manage traffic through the town: Please advise on location
 2. Use of chicanes on the out-skirts of the town
 3. Use of pedestrian controlled traffic lights
 4. Impact of a 20mph speed limit (probably in conjunction with #1 & #2)

Requirements (SODC suggested approach)

- We need to understand if all/any of these options are feasible, how the options could be implemented and would like to understand the overall installation costs associated with each option (a range is fine). We do not at this stage need details of how these options could be installed
 - It will be useful to obtain a plan showing indicative location of measures, but not full engineering feasibility drawings
 - The involvement of a transport planner and an engineer is logical but to restate we do not required engineering feasibility drawings
- The outcome would be an impact assessment again using the previous traffic survey data
 - This may require modelling/ assessment of existing traffic flow/ queuing data?
- The focus is on feasibility and likely impact of these systems used individually and/or in combination: High level scoping rather than implementation

Objective 2

Focus on Potential Relief/Link Road

In addition to the work carried out modelling the various sites (in combination with different road layouts) and the traffic management options the WNP would like to focus on the details of a potential relief/link road from the B4009 and the Britwell Road towards Benson.

The information required is in 3 parts

1. To provide specification for a relief/link road to allow traffic, at peak times of the day, including legal HGV movements to move from the B4009 at the Lewknor junction through sites 7/8,9, 10, 11 and 12 to the Britwell Road towards Benson. The specification must include the following information
 - Width, broad construction depth and required compound layers, drainage, lighting requirements, junctions and/or appropriate roundabouts and signage (current assumption 6.5m wide road in line with B4009)
 - Please note that upfront discussion will be required to determine the options for the relief/link road particularly regarding the tonnage limit for HGVs (the scenarios currently state that no HGV's above 7.5 tonnes will be allowed on the relief/link road, this assumption will require further debate)
2. Gain cost ranges for the construction of the relief/link road based on the agreed specification - the costs do not need to be broken down in detail but should focus on the main components of the construction
3. Carry out traffic flow mapping and analysis to determine the impact of the relief/link road on **current & SODC forecast** traffic flows through the town. The forecast traffic movement scenarios to be provided by SODC are to take into account additional housing in the South Oxfordshire area (2-3 scenarios will be agreed prior to the evaluation)
 - The most important component of the evaluation is to determine whether a relief/link road will improve the traffic flow in Watlington or encourage additional traffic to and from the M40
 - The focus for the relief/link road evaluation should be on the impact of traffic movements through Watlington, the relief/link road should be viewed as one of the traffic management options available for the town. The strategic impact of a relief/link road on South Oxfordshire as a whole will be carried out by SODC

Data support

- Traffic management report carried out by TPP to support Consultation 2 (Sept 2014)
 - ANPR: (7am to 10am & 4pm to 7pm on 18th Sept 2014: Cameras at 4 locations with matched counts to show how many vehicles travelled between the 4 locations
 - Manual Counts (same date and time as above) at 4 locations
 - ATC: Laid on the roads near ANPR cameras from 17th to 25th September
- Census statistic information may be useful to look at commuting patterns.
 - <http://insight.oxfordshire.gov.uk/cms/travel-3>

Additional Datasets:

- Peter Brett Associates: study of traffic impact of proposed development at Lys Mill
- SODC: Air Quality Action Plan
- SODC: Low Emissions Zone Strategy
- SODC: study on B4009 (may not be completed yet but worth checking)
- OCC: Local Transport Plan 4
- Providence Land: traffic study ref WAT 9 OCC. Data re: speed/vehicles for Howe Road and Brook Street May/June 2016

Information not Finalised

- Forecast traffic movements from SODC based on additional housing in South Oxfordshire (Currently being modelled): Detailed discussions with SODC to be arranged
- Details of the legal HGV tonnage limits for the relief/link road to be discussed before commissioning the project – it is understood that this will have a material impact on the specification of the relief/link

Areas for Consideration

Pedestrians: The Town Centre

The pedestrian environment in the Town Centre is an important source of frustration and threat to the residents and users of the Watlington Town Centre. It is HGV's passing within inches of people walking, often with their children, that people find frightening.

The slow speeds, frequent stationary idling, as vehicles wait or have to negotiate passing each other, contribute to a serious Air Quality issue.

The SODC proposes to speed up the flows by removing parking and to create a Freight Clearway, to improve Air Quality.

This has apparently been recommended without any consideration of the factors that the Townspeople find really important, such as safety, calm traffic volumes, preferably no HGV's, as well as the unchangeable pinch points at the Town Hall and in Couching near the Co-op.

Are there scenarios to deal with the traffic and improve the pedestrian experience in the town, such as raised road surfaces, paved or block paving surfaces, one way sections, shared surfaces around the Town Hall? Would they work, given the traffic parameters in and around Watlington?

A separate budget should be given to undertake this consideration.