







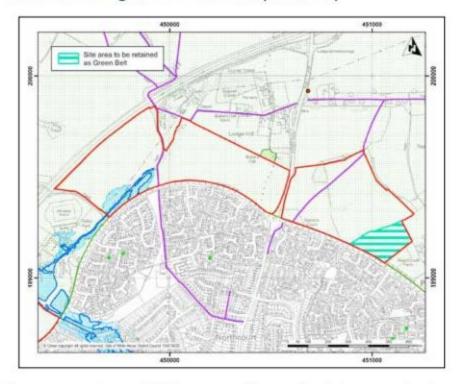




3. Abingdon-on-Thames and Oxford Fringe Sub-Area

In addition to the general requirements set out in section two, development will be required to meet the following infrastructure requirements.

North of Abingdon-on-Thames (50.65 ha)



Use: Around 800 homes, subject to detailed masterplanning.

Key objectives:

 To deliver a high quality, sustainable urban extension to Abingdon-on-Thames integrated with Abingdon-on-Thames so residents can access existing facilities in the town.

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Urban design principles:

- Prepare a Green Infrastructure (GI) strategy for the entirety of the site to set the framework for development. Development should:
 - contribute to GI provision around the northern edge of Abingdon-on-Thames, linking to Radley Park and the Sports Centre;
 - create a substantive GI corridor linking the Sports Centre Grounds to Lodge Hill along the line of the stream; and
 - o enhance GI between the site and Lodge Hill.
- Development should include links from the east to the west of the site, from the site to the ring road and beyond into the development to the south of the ring road. A pedestrian crossing will need to be provided along this route to connect development sites to the north and south of the ring road. This will need to be undertaken in consultation with Oxfordshire County Council.
- Adopt a permeable, perimeter block layout within the site to optimise connectivity within and beyond the site.
- Create a sense of place around the River Stert, e.g. by providing a linear walkway whilst taking advantage of any existing paths and public rights of way.
- Houses will need to front onto the ring road but the treatment of the area between the ring road and the housing line will need to be carefully considered. Create an attractive area at this location along the ring road with particular consideration being given to soft and hard landscaping for the benefit of both pedestrians and cyclists.
- Affordable housing should be evenly distributed across the site and should not be used as a buffer between less desirable aspects of the site (e.g. A34) and market housing.

3. Abingdon-on-Thames and Oxford Fringe Sub-Area

In addition to the general requirements set out in section two, development will be required to meet the following infrastructure requirements.

Utilities:

- Overhead power lines traversing the western part of the western portion of the site will need to be considered as part of an overall masterplan for this site.
- Upgrade the sewer network.

Access and highways:

- Contribute towards delivery of south facing slips on A34 at Lodge Hill.
- Access for the western portion of the site to be provided off Dunmore Road (not Oxford Road). Implications of access arrangements on residential road junctions and potential congestion along Dunmore Road will need to be investigated. Junction improvements at Dunmore Road/A4183 may be required.
- Access arrangements for the eastern portion of the site will need to be investigated.
- Contribute towards future strategic infrastructure improvements to Abingdon-on-Thames and any necessary mitigation measures identified through the site Transport Assessment.
- Layout of site should be mindful of future expansion of the A34 and should not preclude this.
- Improve or make financial contributions towards improved bus services (e.g. bus stops, pedestrian crossing, shelters and real time information displays) in Abingdon-on-Thames, including on the A4183 to the north of Peachcroft Roundabout, along Copenhagen Drive and Dunmore Road, as appropriate.
- Contribute towards additional buses from north Abingdon-on-Thames towards Didcot and other Science Vale destinations to reduce the number of car journeys in this direction at peak

times.

 Include appropriate provision for pedestrians to cross Dunmore Road and Twelve Acre Drive.

Social and community:

- A new 'one and a half form entry' primary school will be required on the site. This should be on a 2.22 ha site to allow for future growth.
- Contribute towards expanding secondary school capacity in Abingdon-on-Thames.
- Police presence will need to be provided on site either through a neighbourhood office or as part of a community hub.

Environmental health:

- Investigate potential noise and air pollution impacts from the A34, A4183, Dunmore Road and Twelve Acre Drive and mitigate (if required) to offset any adverse impacts.
- Consider potential impact on Abingdon-on-Thames Air Quality Management Area (AQMA) and mitigate (if necessary).

Landscape considerations:

- Limit development to those parts of the site identified in the Landscape Capacity Study (2014) and east of Oxford Road Landscape and Visual Impact Assessment (LVIA) as being suitable for development.
- Retain existing trees and hedgerows.
- Plant additional trees along the A34, the ring road and along Twelve Acre Drive.
- · Further woodland planting south of Lodge Hill.
- Limit development to the lower slopes of Lodge Hill.
- · Consider potential impacts on the North Vale Corallian Ridge.
- Design of the development should include appropriate

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3. Abingdon-on-Thames and Oxford Fringe Sub-Area

In addition to the general requirements set out in section two, development will be required to meet the following infrastructure requirements.

landscape mitigation measures to minimise the visual impact of the development on the Green Belt.

 Ensure that any development within the Oxford Green Belt only consists of compatible uses.

Biodiversity and green infrastructure:

 Incorporate an appropriate buffer along either side of the River Stert into the overall development.

Flood risk and drainage:

 Mitigate any detrimental impact on groundwater quality (if required).

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Appendix 3 – Summary of Highway Modelling

1.0 Policy Background

- 1.1 The NPPF (Paragraph 32) requires plans and decisions to take account of whether:
 - the opportunities for sustainable transport modes have been taken up depending on the nature and location of the site, to reduce the need for major transport infrastructure;
 - safe and suitable access to the site can be achieved for all people;
 and
 - improvements can be undertaken within the transport network that effectively limit the significant impacts of the development.
- 1.2 Paragraph 32 goes on to state: "Development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe".
- 1.3 Saved Policy DC5 of the Local Plan 2011 requires safe access for developments and that the surrounding road network can accommodate the traffic arising from the development safely. Core Policy 7 requires developments to make in-kind or financial contributions to a wide range of supporting infrastructure, in accordance with the council's Infrastructure Delivery Plan.

2.0 Evidence Base for Local Plan 2031 Part One

- 2.1 To assist the Vale's work on the Local Plan 2031 Part One, Oxfordshire County Council prepared the Oxfordshire Strategic Model (OSM) that incorporates the Evaluation of Transport Impacts (ETI) Study.
- 2.2 The ETI identified where on the wider highway network significant capacity constraints would occur if all 20,560 dwellings were built in the district across the plan period. The ETI also included allowances for mitigation, such as the south-facing slip roads at Lodge Hill, to understand how this would affect capacity on local roads. The council has concluded that delivering these slip roads is essential mitigation that allows the North Abingdon allocation to be supported.

3.0 "Study Area"

- 3.1 Given the strategic, district wide, nature of the ETI, the applicants were required to agree a scope for assessing the local road network with OCC as the Highway Authority. The agreed "Study Area" included the following junctions:
 - Dunmore Road / Boulter Drive Priority 'T'-Junction;
 - Oxford Road / Twelve Acre Drive / Dunmore Road Roundabout junction;
 - Twelve Acre Drive / Peachcroft Road Priority 'T'-Junction;

- Twelve Acre Drive / Radley Road / Audlett Drive Roundabout junction;
- Radley Road / Audlett Drive Mini-roundabout junction;
- Radley Road / Vineyard / Oxford Road Mini-roundabout junction;
- Vineyard / Stert Street / Stratton Way Signalised 'T'-Junction;
- High Street / Stert Street Priority 'T'-Junction;
- Stratton Way / High Street / Ock Street Signalised 'T'-Junction;
- Bath Street / Stratton Way Priority 'T'-Junction; and
- Dunmore Road / Wootton Road / Copenhagen Drive Roundabout junction.
- 3.2 The applicant undertook a range of traffic surveys across Abingdon in 2015, including Classified Turning Counts, Queue Length Surveys and Automatic Traffic Counts. The date, times and locations of the surveys were agreed with OCC.
- 3.3 These surveys allowed the existing traffic situation to be established and from there, the applicant was able to model the likely impacts of the proposed development, understand where those impacts would be severe and develop a mitigation strategy to reduce those impacts.

4.0 Trip Generation

- 4.1 To be able to model the impacts of this proposal, the applicant has agreed with OCC the likely trip generations from the development, covering all of the proposed uses within the site. These uses can be summarised:
 - Residential including 35% affordable housing and 10% of affordable and market housing being apartments
 - Education including allowances for "internal" trips that will not impact on the wider highway network
 - Retirement accommodation all trips assumed to be "external"
 - Local Centre including Public Houses, Care Home, Nursery, Food Retail and Non-Food retail/commercial.
- 4.2 With the local centre, it is assumed that 100% of the care home trips will be external, whilst 20% of the public house, 20% of the nursery, 50% of the food retail, 30% of the non-food retail and 20% of the commercial services will be external trips. These assumptions have been agreed with OCC.
- 4.3 The applicant has used 2011 Census data as a basis for understanding the likely distribution of where new residents will travel. The main destinations are Oxford (34% of trips), Harwell/Didcot (17%), Central Abingdon (16%) and West Abingdon (11%). Building on the above, the applicant has assessed traffic movements at a number of different years over the predicted build-out programme of the site. These assessment years include scenarios where no development occurs on this site ("do nothing") and scenarios where the site builds out as

predicted ("do something"). The assessment also incorporates other anticipated housing growth, including nearby strategic sites. The applicants Transport Consultant has, for example, shared trip generation information with the transport consultant behind the forthcoming Northwest Radley allocation to ensure a consistency of approach. Where no detailed information is available, the TEMPRO model has been applied with the agreement of OCC.

- 4.4 There is also an allowance made for changes in existing residents' trip patterns changing once the Lodge Hill slips are open. It is a logical part of the applicant's case that the slips will have a positive impact in terms of traffic flows along Dunmore Road, as those existing residents who want to travel south on the A34 will be able to do so from Lodge Hill, rather than having to work their way to the Marcham Interchange through the known traffic congestion points in Abingdon town centre.
- 4.5 The purpose of running these differing scenarios is to understand which junctions will experience the greatest change in traffic flows when the "do nothing" and "do something" scenarios are compared. Where the "do something" scenario shows a greater than 5% increase in traffic flow compared to the "do nothing" scenario, it was agreed with OCC that further investigation of these junctions was needed. The Transport Assessment identified two junctions that required further investigation:
 - Dunmore Road / Boulter Drive Priority 'T'-Junction
 - Oxford Road/ Twelve Acre Drive/ Dunmore Road Roundabout
- 4.6 It is important to be clear that all other junctions, based on the agreed trip generation and distribution rates, were found to not experience more than a 5% increase in traffic as a result of this development and so have not been investigated further.

5.0 Junction Modelling

- 5.1 The applicant has analysed the capacity of these two existing junctions in line with standard practice, focussing on the Ratio of Flow to Capacity (RFC) and queue length. It is generally accepted that a junction is operating within capacity if the RFC is 0.85 or less at the AM or PM peak hours.
- 5.2 Using the baseline year of 2015, both these junctions were found to be operating within capacity. The applicant has then run "do nothing" scenarios for 2020, 2024 and 2028 that assumes that the Lodge Hill slips are operational and all other planned development apart from this site takes place. These scenarios find that the Oxford Road roundabout will exceed a RFC of 0.85 in the PM peak in 2024 and in both AM and PM peaks in 2028. This is, in part, caused by the opening of the Lodge Hill slips encouraging greater use of this

- roundabout, meaning that improvements to the Oxford Road roundabout will be necessary in future.
- 5.3 The applicant has then run the "do something" scenarios for these two junctions, again based on the predicted build out rates for the site. The results show both junctions within capacity in 2020, the Oxford Road roundabout over capacity in 2024 and 2028 at AM and PM peak hours. This means that mitigation works are necessary as a direct result of this application, and these are discussed in the report.
- In consultation, OCC has reviewed the methodology and findings of the Transport Assessment and are satisfied with the conclusions.