

# Technical Note

**Project:** Spitfire Road, Calne  
**Date:** 22 September 2026  
**Client:** Allison Homes  
**Subject:** Highway Technical Note

**Job No:** 26171  
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## 1 Introduction

- 1.1 Belvedere Consulting has been appointed by Allison Homes to review the pedestrian crossing provision associated with the reserved matters application (Ref PL/2026/00135) for residential development on land off Spitfire Road, Calne.
- 1.2 The application seeks reserved matters approval for 90 dwellings following the grant of outline planning permission under application PL/2022/07893. The adjoining Local Centre, comprising a convenience store and day nursery, benefits from a separate planning permission (PL/2023/10421).
- 1.3 The reserved matters application for 90 dwellings (Ref PL/2026/00135) was considered by Wiltshire Council's Northern Area Planning Committee on 12 August 2026. The application was deferred, although the provision of a formal pedestrian crossing did not form one of the stated reasons for deferral.
- 1.4 Pedestrian crossing provision was nevertheless discussed by the Committee, including whether a more formal crossing facility should be provided. This Technical Note therefore considers whether the proposed informal crossing arrangements remain appropriate or whether a formal crossing, such as a zebra or signal-controlled crossing, is warranted.
- 1.5 This technical note considers:
  - the relevant planning and highway history;
  - the existing and proposed pedestrian and cycle network;
  - likely pedestrian desire lines;
  - existing traffic flows and forecast pedestrian movements;
  - the separate transport evidence for the Local Centre;
  - relevant national and Wiltshire Council guidance; and
  - whether formal crossing provision is justified.

- 1.6 The adjoining Local Centre is subject to a separate full planning permission. Its transport and pedestrian implications have nevertheless been considered because it forms part of the future highway and pedestrian environment around the application site.

## **2 Planning and Highway History**

- 2.1 The principal planning applications relevant to this review are:
- PL/2022/07893 – Outline residential development: Outline application for residential development of up to 90 dwellings and associated infrastructure on land east of Spitfire Road. Permission was granted on appeal on 17 February 2025 under APP/Y3940/W/24/3351528.
  - PL/2023/10421 – Local Centre: Full application for a 511 sq m Class E(f) day nursery and 326 sq m Class E(a) convenience store, with 31 car-parking spaces, access, landscaping and associated works. Wiltshire Council refused permission on 17 May 2024, but the appeal was allowed on 17 February 2025 under APP/Y3940/W/24/3351527.
  - PL/2026/00135 – Reserved matters for 90 dwellings: Reserved matters application pursuant to PL/2022/07893, addressing access, appearance, landscaping, layout and scale, together with the discharge of specified outline conditions. Officers recommended approval, but the Northern Area Planning Committee deferred the application on 12 August 2026. The application remains undetermined at the date of this Technical Note.
- 2.2 The current reserved matters application, PL/2026/00135, relates solely to the 90-dwelling residential development and does not include the local centre.
- 2.3 The Local Centre benefits from a separate full planning permission under PL/2023/10421. As this is a full permission rather than an outline permission, no subsequent reserved matters application is required for the Local Centre. The approved scheme which was allowed on appeal, includes a package of access and off-site highway improvements shown on drawing H690/1 Rev F which include the widening of the pedestrian crossing islands and kerb alterations at the Abberd Lane roundabout.
- 2.4 In determining the appeal the Planning Inspector also considered representations seeking a dedicated pedestrian and cycle crossing on Spitfire Road in the form of a traffic signals or a zebra crossing. The appeal decision records that the scheme would instead widen the Abberd Lane/Spitfire Road junction and modify the splitter refuge islands as noted above, with tactile paving on the respective arms of the mini roundabout. The Inspector accepted the Highway Authority's position and noted that no additional crossing provision had been sought.
- 2.5 When considering the current reserved matters scheme on 12 August 2026, officers recommended approval and the Highway Authority raised no objection, subject to conditions. However, the Committee deferred the application to seek revisions concerning layout and density, open space, street hierarchy and parking, settlement-edge treatment and architectural character.

- 2.6 The Committee minutes record that while discussion of a formal pedestrian crossing took place, this suggestion was not supported by the Highway Authority.

### **3 Existing and Proposed Pedestrian Environment**

- 3.1 The site lies to the south of Abberd Lane and east of Spitfire Road. Spitfire Road serves a number of established and recently constructed residential developments.
- 3.2 The Council's committee report describes the surrounding highway network as comprising low-traffic single carriageways serving the adjoining housing estates. Spitfire Road is therefore principally residential in character rather than forming a strategic or heavily trafficked through-route.
- 3.3 The Highway Officer has confirmed that traffic volumes on Spitfire Road are low and that there are no particular concerns regarding existing traffic speeds. In the Highway Officer's view, the combination of traffic speed, traffic volume and the general character of the surrounding highway environment does not indicate that a formal pedestrian crossing is required.
- 3.4 Spitfire Road forms part of the local road network serving new residential development in this area. The Transport Assessment describes the road as approximately 7.3m wide, with pedestrian and cycle infrastructure alongside it.
- 3.5 There are no existing formal pedestrian crossings on the Spitfire Road/Gregor Drive corridor. In particular, there are no zebra or signal-controlled crossings along this section of the route. Existing pedestrian movements across Spitfire Road and Gregor Drive therefore take place informally, with pedestrians selecting suitable gaps in traffic and crossing at locations convenient to their individual desire lines or at designated uncontrolled crossing points in the form of dropped kerbs with tactile paving. Abberd Lane roundabout includes uncontrolled crossing points and pedestrian islands on each arm of the roundabout.
- 3.6 The completed development on Land North of Low Lane/Regent's Park (ref 17/00679/OUT) at Sumbler Drive, Lawrence Drive and Gregor Drive provides relevant local context. It introduced a substantial number of dwellings served by the same highway corridor without a formal crossing of Spitfire Road or Gregor Drive being provided. Pedestrian movement associated with that development is instead accommodated through the wider network of footways and shared pedestrian and cycle routes, with uncontrolled crossing points in the form of dropped kerbs and tactile paving.
- 3.7 This supports the Highway Officer's observation that other nearby developments have not been required to provide formal controlled crossings and demonstrates that uncontrolled crossing movements already form part of the established operation of the local highway network. The reserved matters proposals have been amended following discussions with Wiltshire Council. The current proposals include two informal crossing points across Spitfire Road, incorporating dropped kerbs and tactile paving, together with a further informal crossing across Abberd Lane.

- 3.8 Existing bus stops are located on Spitfire Road close to the proposed development access. Pedestrian and cycle routes also connect north towards Abberd Lane and Sand Pit Road, south towards Low Lane, and west into the surrounding residential estates.

## **4 Proposed Connections**

- 4.1 The current reserved matters proposal provides:

- two uncontrolled crossing points across Spitfire Road;
- a further informal crossing across Abberd Lane;
- dropped kerbs and tactile paving;
- a 2-metre footway adjacent to the attenuation pond; and
- connections into the internal residential walking and cycling network.

- 4.2 The wider pedestrian route network is shown on Focus on Design drawing 0841-125, Pedestrian and Cycle Connectivity Plan.

- 4.3 The approved Local Centre application includes the following pedestrian crossing improvements:

- widening of the splitter island on the Abberd Lane arm of the mini roundabout to provide a central width of 2.5 metres, with dropped kerbs and tactile paving;
- associated carriageway widening around the Abberd Lane refuge;
- widening of the splitter island on the Spitfire Road arm to provide a central width of 3.0 metres, with dropped kerbs and tactile paving;
- pedestrian visibility and intervisibility provision; and
- connections to the existing and proposed pedestrian tracks and the wider walking and cycling network.

- 4.4 These improvements are secured by Conditions 11 and 15 of the permitted scheme.

## **5 Pedestrian Desire Lines**

- 5.1 The Highway Officer has identified that pedestrian movements are likely to follow a number of different desire lines rather than being concentrated at one location.

- 5.2 We would agree and note that the pedestrian network does not identify a single dominant desire line. Pedestrians may approach from different directions and travel towards the housing, Local Centre, bus stops, existing residential streets or the wider walking and cycling network.

- 5.3 The two informal Spitfire Road crossing points provide a choice of location and reduce the need for pedestrians to divert from their preferred routes. This is more responsive to the distributed pattern of movement than a single formal crossing and is consistent with Traffic Signs Manual Chapter 6, the historical principles in LTN 2/95 and Wiltshire Council practice.

## **6 Highway Authority Position**

- 6.1 We understand that the Highway Authority has considered Calne Town Council's request for a formal pedestrian crossing. The Committee report records that it does not consider a formalised facility (such as a zebra crossing), appropriate at this location because the nature of Spitfire Road allows pedestrians to cross without one.
- 6.2 The pedestrian impacts of the separately consented Local Centre have also been considered. The Highway Officer concluded that the increased pedestrian movements associated with the Local Centre warranted wider pedestrian provision. The Local Centre permission therefore secures the off-site works including the shared-use connection and the widening of the Spitfire Road and Abberd Lane splitter islands with dropped kerbs and tactile paving. The Inspector considered a Town Council request for a dedicated pedestrian and cycle crossing but accepted these arrangements and noted that the Highway Authority had not sought enhanced provision.
- 6.3 The reserved matters proposals provide two additional connections comprising two uncontrolled crossing points on Spitfire Road, an uncontrolled crossing of Abberd Lane, a footway adjacent to the attenuation pond and links into the residential walking and cycling network. The Highway Authority has raised no objection to this arrangement, which provides crossing opportunities at different locations to reflect the dispersed pedestrian desire lines.

## **7 Traffic and Pedestrian Movements**

### **Transport Assessment PL/2022/07893**

- 7.1 The September 2022 Transport Assessment for the residential development at land off Spitfire Road supported outline application PL/2022/07893. It assessed a development of up to 100 dwellings, although the subsequent appeal permission and current reserved matters application are for 90 dwellings.
- 7.2 A seven-day automatic traffic count undertaken on Spitfire Road between 3 and 9 February 2022 recorded the following average weekday flows:
- AM peak, 08:00–09:00 – 58 vehicles
  - PM peak, 17:00–18:00 – 50 vehicles
  - Average weekday, 24 hours – 667 vehicles

- 7.3 The observed peak-hour flows equate to approximately one vehicle every minute in the morning peak and evening peak, averaged across both directions.
- 7.4 As a result of the proposed development the Transport Assessment forecast:
- 53 additional two-way vehicle trips in the AM peak;
  - 50 two-way vehicle trips in the PM peak;
  - 8 pedestrian trips in the AM peak; and
  - 7 pedestrian trips in the PM peak.
- 7.5 The pedestrian figures represent all walking trips generated by the assessed 100-dwelling development. They are not forecasts of pedestrians crossing Spitfire Road at a particular location.
- 7.6 Some residential walking trips would remain on the eastern side of Spitfire Road. Those requiring a crossing would be distributed between the northern and southern crossing points and potentially other routes.
- 7.7 The accompanying Framework Travel Plan promotes walking, cycling and public transport and identifies the site's connections to local facilities and bus services. The document does not identify a forecast concentration of pedestrian movements at one location on Spitfire Road and does not establish a requirement for a zebra or signal-controlled crossing.

### **Transport Statement P19-0931/TR01**

- 7.8 The January 2023 Transport Statement for the Local Centre at Spitfire Road, reference P19-0931/TR01, relates specifically to the proposed convenience store and day nursery subsequently permitted under PL/2023/10421.
- 7.9 The Local Centre Transport Statement forecasts:
- 71 two-way vehicle trips in the network AM peak;
  - 73 two-way vehicle trips in the network PM peak; and
  - 64 two-way vehicle trips during the store's 18:00–19:00 operational peak.
- 7.10 The Local Centre Transport Statement does not provide a numerical forecast of pedestrian trips or the number of pedestrians likely to cross Spitfire Road.
- 7.11 The Local Centre proposals include 31 car-parking spaces and 12 cycle spaces. The associated highway works extend the shared pedestrian and cycle route and widen the Abberd Lane and Spitfire Road splitter islands, incorporating dropped kerbs and tactile paving.
- 7.12 The officer report records that the increased pedestrian movements associated with the nursery warranted wider pedestrian provision improvements. The Highway Authority raised no

objection, subject to securing the proposed access, footway and roundabout works as described above.

### **Transport Statement for PL/2025/05943**

- 7.13 The June 2025 Transport Statement for up to 20 additional dwellings east of Spitfire Road relates to a separate potential residential phase, subsequently submitted under application PL/2025/05943.
- 7.14 The additional 20-dwelling Transport Statement forecasts 11 two-way vehicle trips in the AM peak and 10 in the PM peak. It does not provide a forecast of pedestrian movements across Spitfire Road.
- 7.15 The additional 20-dwelling site lies immediately south of the consented 90-dwelling site. Its proposed pedestrian connections join the shared footway and cycleway on the eastern side of Spitfire Road. It does not propose a new pedestrian crossing across Spitfire Road along its frontage.

## **8 National and Local Guidance**

### **LTN 1/20 – Cycle Infrastructure Design**

- 8.1 LTN 1/20 Cycle Infrastructure Design is relevant because the proposals connect with the wider walking and cycling network. Section 10.4 considers cycle crossings, while Table 10-2 compares crossing types by speed limit, total traffic flow and the number of lanes crossed in one movement.
- 8.2 Table 10-2 is a cycle-crossing design-selection guide, rather than a requirement or warrant for a pedestrian crossing, however for roads with a speed limit of up to 30 mph and flows below 4,000 passenger car units (pcu) per day, it indicates that:
  - an uncontrolled crossing of two lanes may not be suitable for all users;
  - an uncontrolled crossing of one lane at a time, using a suitable refuge, is suitable for most users; and
  - cycle-priority, parallel and signal-controlled crossings can also be suitable, subject to local circumstances.
- 8.3 The recorded Spitfire Road flow is comfortably within the lowest traffic-flow band. Table 10-2 does not indicate that signal control is necessary, but it supports careful consideration of crossing distance, refuges and accessibility for cyclists. LTN 1/20 confirms that Table 10-2 is a guide and that each location should be assessed individually.

### **DMRB CD 143 – Designing for Walking, Cycling and Horse-Riding**

- 8.4 CD 143 applies to walking, cycling and horse-riding facilities on or adjacent to motorways and all-purpose trunk roads. Spitfire Road is a local road, so the document is not directly

applicable as a mandatory standard. Its principles nevertheless provide useful design guidance.

- 8.5 CD 143 requires routes to avoid unnecessary diversions, obstacles and fragmented facilities. Its five core principles are coherence, directness, comfort, attractiveness and safety. These support the provision of more than one crossing opportunity where, as here, users travel between several origins and destinations.
- 8.6 The England National Application Annex refers to LTN 1/95 and LTN 2/95 for the assessment and design of pedestrian crossings. Although those documents have been withdrawn from general DfT use, this supports consideration of their underlying principles as historical context rather than as current crossing warrants.
- 8.7 CD 143 does not contain a traffic-flow threshold requiring a formal crossing in these circumstances. Its relevance is principally to route quality and detailed design. Applied as contextual guidance, it supports:
  - direct crossings aligned with actual desire lines;
  - more than one crossing opportunity where routes are dispersed;
  - suitable refuge dimensions where staged crossing is proposed, and
  - dropped kerbs and tactile paving.
- 8.8 The proposed scheme is consistent with those principles, however CD 143 does not provide a separate basis for requiring a zebra or signal-controlled crossing on Spitfire Road.

### **LTN 1/95 – The Assessment of Pedestrian Crossings**

- 8.9 LTN 1/95 has been withdrawn and is not current policy. It remains useful as historical context because it considered pedestrian and vehicle flows, speeds, available gaps, waiting time, crossing distance, vulnerable users, collision history and desire lines.
- 8.10 LTN 1/95 also included the historic  $PV^2$  methodology, combining pedestrian flow with the square of vehicle flow as an indication of pedestrian and vehicle interaction.  $PV^2$  was intended to inform professional judgement rather than act as an automatic warrant.
- 8.11 A full historic  $PV^2$  calculation would require pedestrian and vehicle surveys covering the relevant busiest pedestrian hours. No surveyed pedestrian-crossing counts are available for the proposed crossing locations, so a formal  $PV^2$  assessment cannot be completed.
- 8.12 The forecast residential demand nevertheless provides a useful sensitivity check. Even if all 8 forecast AM pedestrian trips for the originally assessed 100 dwellings were assumed to cross at one location, the combination of that demand with the low vehicle flow would produce a very low  $PV^2$  value.

## **LTN 2/95 – The Design of Pedestrian Crossings**

- 8.13 LTN 2/95 has also been withdrawn but remains useful historical guidance on crossing location and design.
- 8.14 Of particular relevance is its emphasis on locating crossings close to pedestrian desire lines, avoiding unnecessary diversion, providing adequate visibility and considering nearby junctions, bus stops and vulnerable users.
- 8.15 The local network does not identify one dominant desire line. Two uncontrolled crossings with dropped kerb and tactile paving are therefore more responsive to the anticipated pattern of movement than one formal crossing at a fixed location.

## **Designing for Walking - CIHT 2015**

- 8.16 The document includes guidance as to when different crossing types are appropriate. Table 3 of the document indicates that dropped kerb crossings are appropriate to use in 30mph areas and up to 40mph where traffic flows are low.
- 8.17 The guidance also notes that signal controlled crossings are also suitable to use for speeds up to 40mph depending on traffic flow levels.

## **Traffic Signs Manual Chapter 6**

- 8.18 Traffic Signs Manual Chapter 6 sets out suggested criteria for use when assessing the provision of stand-alone crossings including the provision of uncontrolled or informal crossings, for example a pedestrian refuge or dropped kerb, zebra and parallel crossings and signal controlled crossings. The guidance requires a site-specific assessment of pedestrian and vehicle flows, speeds, available gaps, pedestrian delay, crossing distance, visibility, vulnerable users, collision history and desire lines.
- 8.19 The guidance recognises that uncontrolled crossings can operate satisfactorily where vehicle speeds and flows are low and suitable gaps are available.
- 8.20 The recorded flows on Spitfire Road do not indicate sustained traffic conditions that would prevent pedestrians finding suitable gaps. No evidence has been identified within the application documents of material pedestrian delay, crossing difficulty or a relevant pedestrian collision pattern.

## **Accessibility and Tactile Paving Guidance**

- 8.21 The proposed crossings should comply with the Department for Transport's Guidance on the Use of Tactile Paving Surfaces and Inclusive Mobility.
- 8.22 The detailed design should provide appropriate dropped kerbs, gradients, blister tactile paving, tonal contrast, effective widths, drainage, waiting space and intervisibility. It should accommodate children, older people, visually impaired people, wheelchair users, mobility scooters, pushchairs and cycles.

- 8.23 Subject to those requirements, the proposed dropped kerb and tactile crossing points would provide more clearly defined and accessible informal crossing opportunities than currently exist.

### **Wiltshire Council Practice for Pedestrian Crossings 2020**

- 8.24 Wiltshire Council's pedestrian-crossing guidance applies a general screening criteria of an average of 50 pedestrians per hour over the four busiest pedestrian hours before a formal crossing is considered, with vulnerable pedestrians counted twice.
- 8.25 Wiltshire's assessments also consider vehicle flows and speeds, available gaps, pedestrian delay, crossing distance, collision history, vulnerable users, desire lines and the wider street environment.

### **Application to the Residential Scheme**

- 8.26 The Transport Assessment for the proposed scheme identified that the scheme would generate 8 pedestrian trips in the AM peak and 7 in the PM peak for the larger 100-dwelling development originally assessed. These figures are substantially below the Wiltshire screening criteria.
- 8.27 The comparison is also conservative because the current application is for 90 dwellings, the figures represent all walking trips rather than crossings of Spitfire Road, and any crossing movements would be distributed between different routes and locations.
- 8.28 The number of forecast pedestrian movements does not therefore indicate pedestrian demand approaching the level at which Wiltshire would normally consider a formal crossing.

## **9 Assessment**

### **Formal Crossing Provision**

- 9.1 The available evidence does not identify a technical requirement for a zebra, parallel or signal-controlled crossing arising from the 90-dwelling reserved matters scheme.
- 9.2 In particular:
- the Residential Transport Assessment recorded observed peak flows of approximately one vehicle per minute;
  - the forecast number of pedestrian trips is below the Authority's own criteria for a formal pedestrian crossing;
  - only a proportion of those walking trips would cross Spitfire Road;
  - crossing movements would be distributed between different routes;

- two uncontrolled crossings are proposed on Spitfire Road with dropped kerb and tactile paving;
- a further uncontrolled crossing is proposed across Abberd Lane;
- no evidence has been identified of material pedestrian delay or an inadequate supply of traffic gaps;
- no relevant pedestrian collision problem has been identified within any of the supporting documents; and
- the Highway Authority has raised no objection to the proposed arrangement.

- 9.3 A signal-controlled crossing would be particularly difficult to justify on the available evidence. There is no evidence of the sustained traffic flow, pedestrian delay or crossing difficulty that would normally support signal control.
- 9.4 A zebra crossing would be less infrastructure-intensive but would still require evidence that pedestrian or cycle demand is sufficiently concentrated at one location and that priority over traffic is necessary.
- 9.5 The two proposed uncontrolled dropped crossing points with dropped kerbs and tactile paving would represent an improvement over the existing situation, in which crossing movements on the Spitfire Road/Gregor Drive corridor generally take place informally without a defined formal facility.
- 9.6 Wiltshire Council's own guidance does not support the provision of a controlled pedestrian crossing at this location as the forecast residential demand is substantially below the Council's screening criterion. The low vehicle flows, availability of traffic gaps and dispersed pedestrian desire lines provide further support for the Highway Authority's conclusion that a controlled crossing is not justified.
- 9.7 Although the Local Centre may generate additional pedestrian activity, this has been fully considered and permission was granted on appeal subject to the provision of improvements to existing informal pedestrian crossings.

### **Pedestrian Desire Lines**

- 9.8 The pedestrian network does not indicate a single dominant desire line. Pedestrians may approach from the north, south, east or west and travel towards the housing, Local Centre, bus stops, existing residential streets or wider walking and cycling network.
- 9.9 Providing two uncontrolled dropped crossing points on Spitfire Road gives pedestrians a choice and reduces the likelihood of requiring a material diversion from their preferred route.
- 9.10 A single formal crossing could attract some pedestrians away from their direct route while leaving other desire lines unaffected. It could therefore provide a less complete response to the distributed pattern of movement than the proposed network of uncontrolled crossings.

- 9.11 This approach is consistent with Traffic Signs Manual Chapter 6, the historical desire-line principles in LTN 2/95 and Wiltshire Council practice.

### **The Local Centre**

- 9.12 The Local Centre is expected to generate pedestrian movements from the established residential areas west and south of Spitfire Road. These movements arise from the separately consented convenience store and nursery and should not be attributed to the 90-dwelling reserved matters application.
- 9.13 The Local Centre's pedestrian effects have already been assessed and agreed through a planning appeal. The planning permission secures the access and off-site highway improvements shown on drawing H690/1 Rev F, including the shared-use connection and widened splitter islands with dropped kerbs and tactile paving. The Inspector considered the request for a dedicated pedestrian and cycle crossing but accepted these measures and the Highway Authority's conclusion that no enhanced provision was required.

## **10 Conclusions**

- 10.1 Belvedere Consulting has been appointed by Allison Homes to review the pedestrian crossing arrangements on Spitfire Road in connection with reserved matters application PL/2026/00135 for 90 dwellings. The review has considered the planning and highway history, the surrounding walking and cycling network, relevant national guidance and Wiltshire Council's guidance and practice.
- 10.2 The evidence indicates that pedestrian movements will follow a number of different desire lines rather than being concentrated at a single location. The two proposed uncontrolled crossings on Spitfire Road, together with the crossing of Abberd Lane, provide a choice of routes and represent an improvement over the existing informal crossing arrangements along the Spitfire Road/Gregor Drive corridor.
- 10.3 The forecast pedestrian demand associated with the residential scheme is substantially below Wiltshire Council's locally applied screening criteria. The low-traffic environment, availability of gaps in traffic flow and the absence of a single dominant desire line also support the Highway Authority's view that a formal or controlled crossing is not justified.
- 10.4 The pedestrian and highway effects of the separately consented Local Centre have already been assessed and mitigated through the access and off-site improvements secured by its permission.
- 10.5 Overall, the proposed uncontrolled crossing arrangements are considered appropriate and sufficient for the 90-dwelling reserved matters scheme and are consistent with the relevant national guidance and Wiltshire Council guidance. The available evidence provides no technical or policy justification for requiring a zebra or signal-controlled crossing and the Highway Authority has raised no objection to the proposed scheme. On this basis the proposals are considered acceptable.