CAM PARISH COUNCIL
CAM VILLAGE TRANSPORT STRATEGY

Executive Summary

Miles White Transport Ltd has independently reviewed the standard of the pedestrian, cycle and highway infrastructure over the section of the A4135 extending through Cam from the A38 Bristol Road in the north to the Tilsdown / Dursley Road junction in the south. Chapel Street and Station Road in Cam village centre and the Dursley Road / The Avenue / Tait's Hill Road / Woodfield Road junction to the southwest of the village have also been reviewed.

It is considered that the following list of pedestrian, cycle and highway enhancements would help to alleviate the pressures associated with existing traffic flows through the village and will be required to appropriately mitigate for increased traffic associated with future planned development in the local area. The measures could be advanced through development contributions, Gloucestershire County Council (GCC) transport funding packages or Parish Council funds.

Location	Measure	Funded?
A4135 railway bridge	Shuttle traffic signals and wider footway over bridge.	No
South of A4135 railway bridge	Provide missing link of footway.	To be delivered as part of S.15/2804/OUT consent.
A4135 railway bridge to Box Road	Extend 40mph speed limit to north of railway bridge and 30mph speed limit to north of Box Road.	Included in part within Box Road junction improvements.
A4135 Draycott / Box Road junction	Visibility and pedestrian safety enhancements.	To be delivered by GCC in relation to S.15/2804/OUT consent.
A4135 side road junctions with Draycott Business Park, Kerry's, The Vennings and Courthouse Gardens	Drop kerb and tactile paving enhancements where the eastern A4135 footway crosses the side roads.	To be delivered as part of S.15/2804/OUT consent.
A4135 / Draycott Mills junction	Convert to traffic signal control incorporating pedestrian and cycle crossing facilities.	To be delivered through 19/0758/REM consent.
Box Road to Draycott Mills	Provide a traffic free pedestrian and cycle route.	To be delivered as part of S.15/2804/OUT consent.
Draycott Mills to Cam village centre	Provide a traffic free pedestrian and cycle route.	No
A4135 Shell / Spar petrol filling station to northbound bus stop	Introduce new footway along western verge with crossing points to existing footway on eastern side of Draycott.	No

A4135 Draycott / Manor Avenue junction	Reduce kerb line radii and provide drop kerbs and tactile paving.	No
A4135 side road junctions with Woodend Lane and both arms of Knapp Lane	Drop kerb and tactile paving enhancements where the western A4135 footway crosses the side roads.	No
A4135 High Street splitter island at Noel Lee Way mini-roundabout	Convert to create formal pedestrian crossing refuge.	To be delivered as part of S.15/2804/OUT consent.
High Street / Noel Lee Way / Chapel Street / Cam Pitch junction	Fundamental reconfiguration to enhance capacity, safety and pedestrian links.	No
Chapel Street / Rowley junction	Drop kerb and tactile paving enhancements.	To be delivered as part of S.15/2804/OUT consent.
Chapel Street / Station Road / Everlands junction	Drop kerb and tactile paving enhancements.	No
A4135 Cam Pitch / Tilsdown / Woodfield Road junction	Convert existing mini-roundabout to a larger conventional roundabout.	To be delivered as part of S.15/2804/OUT consent.
A4135 Tilsdown / KIngshill Road / Dursley Road junction	Convert to traffic signal control incorporating pedestrian and cycle crossing facilities.	To be delivered as part of S.15/2804/OUT consent.
Dursley Road / The Avenue / Taits Hill Road / Woodfield Road junction	Reduce kerb line radii and provide drop kerbs and tactile paving.	No
A4135 Draycott / Woodend Lane junction	Implement ‘no parking at any time’ restrictions within the junction bellmouth.	No
A4135 High Street / Knapp Lane junction	Extend ‘no parking at any time’ restrictions further into Knapp Lane.	No
A4135 Cam Pitch / Manor Avenue junction	Implement ‘no parking at any time’ restrictions within the junction bellmouth.	No
Chapel Street	Adjust position of existing permitted parking bay and associated ‘no parking at any time’ restrictions on either side.	No
Chapel Street / Station Road	Implement ‘no parking at any time’ restrictions on both sides of the bend.	No

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1 Introduction

1.1 Miles White Transport Ltd (MWT) has been appointed by Cam Parish Council (CPC) to produce a Transport Strategy for the Cam village centre area and the A4135 corridor through the village. The Strategy seeks to support CPC's existing Neighbourhood Plan and to enable a consistent response to be given to current and future planning applications in the local area.

1.2 The study area comprises the A4135 corridor from the A38 roundabout in the north to the Tilsdown / Dursley Road mini roundabout in the south. It also includes Chapel Street and Station Road to the Upthorne junction and the Dursley Road / Tait's Hill Road junctions to the southwest of Cam. The study area is summarised in **Figure 1** below.

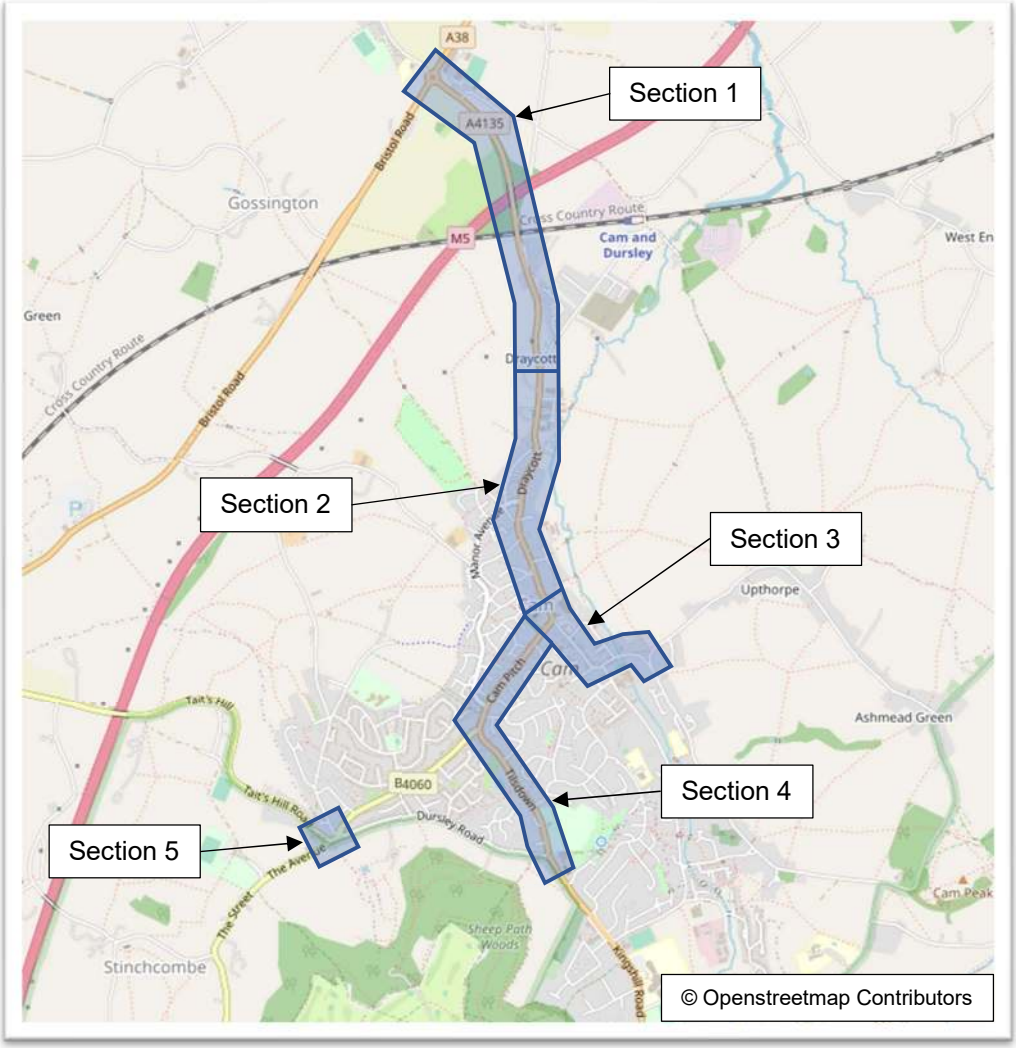


FIGURE 1: Study Area

1.3 For convenience, the study area has been sub-divided into five sections with these being:

- Section 1: A38 roundabout to and including the Box Road junction
- Section 2: The length of Draycott from Box Road to High Street
- Section 3: High Street / Cam Pitch mini roundabout, Chapel Street and Station Road
- Section 4: Cam Pitch and Tilsdown
- Section 5: Dursley Road / Tait's Hill Road junctions

1.4 Each Section has been subject to a site inspection and audit thereby allowing existing transport concerns to be identified. Any committed improvements to the local transport infrastructure associated with permitted development sites in the area are identified and reviewed. Longer term transport proposals contained in the current and emerging Stroud Local Plan are also identified and reviewed. Finally, a list of potential transport infrastructure improvements and priorities is provided and justified.

1.5 It should be noted that all plans of potential infrastructure improvements are presented in sketch form only at this stage. A more detailed assessment of deliverability will be required based on topographical survey information, swept path analysis, junction capacity assessments, implications on Statutory Undertakers and similar prior to confirming their appropriateness.

1.6 Various photographs are attached as **Appendix A** and are cross-referenced throughout the report as (P1) and similar.

2 A38 to Box Road (Section 1)

Audit of Existing Transport Issues

2.1 The junction between the A38 and A4135 is a large diameter conventional four-arm roundabout located approximately 2.5km to the north of Cam village centre. The northeast arm (A38) leads towards Stroud, Gloucester and M5 Junction 13, the southeast arm (A4135) leads to Cam and Dursley, the southwest arm (A38) leads towards Thornbury, Bristol and M5 Junction 14, with the northwest arm leading to and through Slimbridge.

2.2 Traffic flows through the roundabout are not considered to be excessive at present and for the most part the roundabout would appear to operate safely and effectively in its current form. The A38 acts as the signed diversionary route when the M5 Motorway needs to be closed between Junctions 13 and 14 with significant congestion and queuing arising at such times. However, these occurrences are infrequent, and it is not appropriate to implement capacity enhancements solely for such occasions.

2.3 Pedestrians and cyclists are accommodated by the presence of shared use paths on all four 'corners' of the roundabout with drop kerb crossing points available across the splitter islands on all four approaches. On road cycle lanes are also available on both sides of the A38 as it heads north. This is a reasonable provision for the current levels of pedestrian and cycle use although it is to be hoped that walking and cycling will increase going forward with or without future local development. An increased standard of pedestrian and cycle crossing facilities, such as a 'Toucan' signalised crossing of the A38 may therefore be appropriate in the longer term.

2.4 The A4135 as it leads towards Cam is a 7.3m wide, 50mph road with a 2m footway on one side. It rises to bridge over the Motorway with the footway continuing between the vehicle restraint barrier at the edge of the A4135 carriageway and the bridge parapet. Just south of the Motorway, the A4135 bridges over the railway line with the carriageway reducing to 6.0m width and the footway width reducing to just 0.5m width (**P1**).

2.5 There is no formal footway to the south of the railway bridge with pedestrians required to walk on the verge and the access road serving local properties before returning to a formal footway at the A4135 Draycott / Goldfinch Edge side road junction. Pedestrian provision is therefore poor over a total distance of approximately 200m.

2.6 Continuing south, the A4135 Draycott has a 2m footway on its eastern side with the speed limit reducing to 40mph approximately 140m north of the Box Road junction. It is noted that there is only limited street lighting available over the whole distance between the A38 roundabout and the Box Road junction.

2.7 Box Road forms the side arm of a simple priority junction with the A4135 Draycott (**P2**). The side road has a single lane approach that meets the main road at an angle and makes the left turn in / right turn out movements awkward. The angled approach also means that the bellmouth is wider than might otherwise be desirable which in turn puts pedestrians at increased risk when crossing. A central traffic island offers some protection for pedestrians when crossing the bellmouth, but this is not a formal pedestrian refuge island. A pedestrian wishing to cross from north to south also has very restricted visibility into Box Road.

2.8 Driver visibility to the right on egress from Box Road is below that required for a 40mph road with actual traffic speeds considered to be higher. There is also no ghost island right turn lane or similar available for drivers turning into Box Road from the south which can lead to queuing and delays for through drivers particularly in the highway peak hours. It is noted from recent planning applications that the junction is shown to be over capacity during these peak periods.

2.9 Cam & Dursley Railway Station is accessed via Box Road together with large scale, recently constructed, under construction, planned and proposed residential and employment developments. Traffic flows on Box Road and through the A4135 Draycott junction are increasing rapidly with junction capacity and safety issues now becoming obvious. The need for improvements to the junction, with or without further future development in the local area, makes improvements essential.

Committed and Planned Transport Improvements

2.10 Planning permission for application reference S.15/2804/OUT was granted in December 2017 subject to a number of transport related planning conditions. This application related to development of 450 residential units and 10.7 hectares of employment land accessed from both Box Road and the A4135 Draycott. It is noted that the permission has subsequently been increased to 506 residential units.

2.11 Condition 18 has been discharged and relates to off-site pedestrian improvements. The approved improvements are shown on the plan attached as **Appendix B**. On the section between the A38 roundabout and Box Road, the plan shows implementation of a missing link of footway connecting the railway bridge to the local access road with this removing the needs for pedestrians to walk on the verge over an approximately 30m length. This will be beneficial but will not remove the constraint associated with the very narrow footway over the railway bridge itself.

2.12 It is noted that the works themselves have yet to be implemented and there is no guidance available on the Stroud District Council planning portal to identify the likely date for delivery / trigger point linked to residential occupations. It is suggested that Cam Parish Council contact the developer for more guidance on implementation.

2.13 Condition 15 of the planning approval originally required the developer to implement an improvement to the A4135 Draycott / Box Road junction however this Condition was subsequently withdrawn. It was agreed instead that the developer would provide land on the northern side of Box Road to allow Gloucestershire County Council (GCC) as Highway Authority to design and implement their own improvement using S.106 monies obtained from other developments in the local area. An initial proposal for the improvement was produced as shown on the plan attached as **Appendix C**.

2.14 The initial proposal involves a slight tightening of the northeast radius kerb line that in turn will allow introduction of a footway following round to the northern side of Box Road. This will allow a new drop kerb pedestrian crossing with tactile paving to be provided over Box Road itself but located further back from the bellmouth thereby reducing the crossing distance for pedestrians. It is noted that the plan seeks to improve north-south pedestrian connectivity but does nothing to improve the operational capacity of the junction. It does however extend the 30mph speed limit north to where the 40mph limit currently begins thereby bringing the Box Road junction within the 30mph zone and improving road safety. Slower traffic speeds also reduce the visibility required to the right from the side road and overcomes the existing constraint in this regard.

2.15 It is suggested that Cam Parish Council contact GCC in an attempt to influence exactly what will be implemented at the junction and when it will be delivered.

Suggested Transport Improvements

2.16 As mentioned above, the approved but yet to be implemented footway improvements just south of the railway bridge will not address the very narrow footway width over the bridge itself. Indeed, implementing footway improvements on the approach to the bridge only brings into greater focus the need to address this constraint to pedestrian connectivity.

2.17 It may be possible to provide a separate footbridge to the east of the existing railway bridge thereby avoiding the narrow section, but such a structure would likely require third party land and extensive discussions with Network Rail. A simpler solution, and one that could be delivered wholly within the adopted highway, would be to narrow the carriageway to a 3.5m width with traffic signal-controlled shuttle working over an approximately 50m distance (see **Figure 2** below). This would allow the introduction of a 3m wide footway or shared use path over the bridge and connecting into the existing footway to the north and the approved footway to the south.

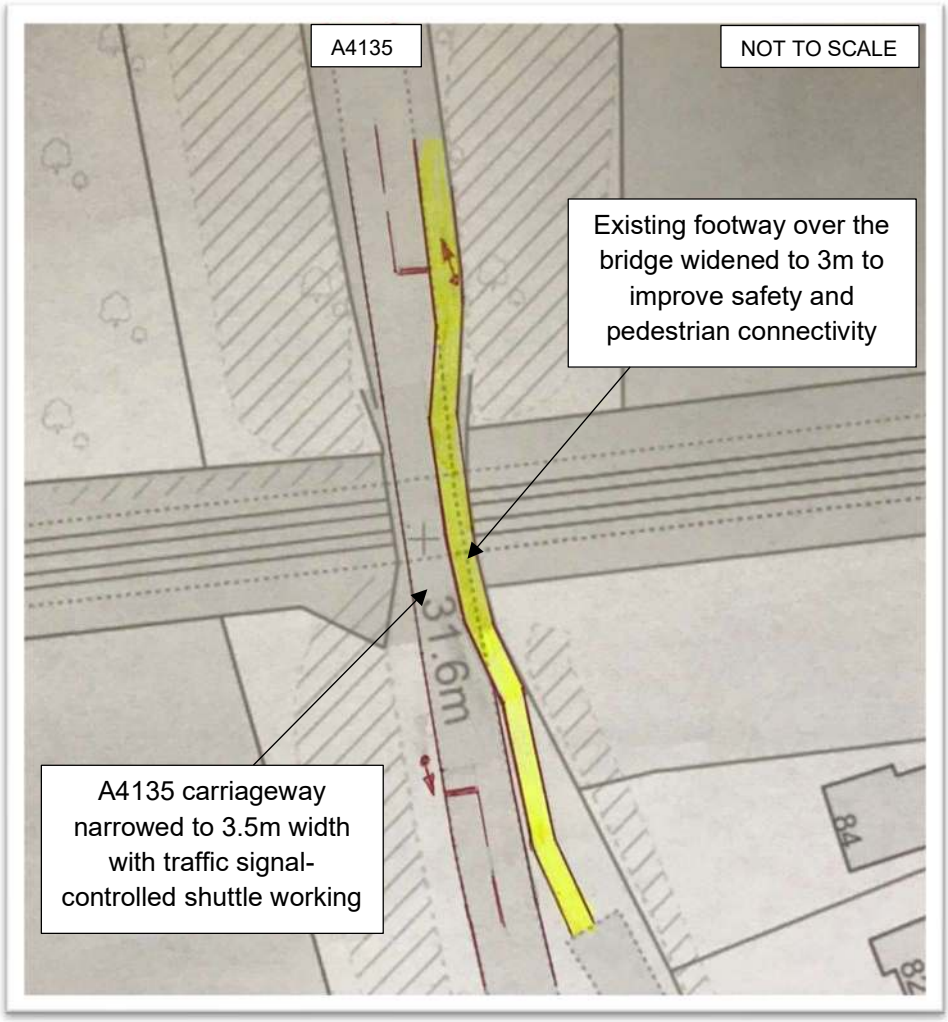


FIGURE 2: Shuttle Signals and Improved Footway at Railway Bridge

2.18 The queuing and delay that would be generated by these traffic signals would need to be carefully considered but in the hierarchy of transport modes, the pedestrian should be given priority over the private car. If implemented, it would also be prudent to extend the start of the 40mph speed limit to a point north of the railway bridge and to implement street lighting over the full section between from the speed limit change to the Box Road junction. It is noted that housing allocations are being proposed for development to the west of the A4135 Draycott and close to the railway bridge. These would create an appropriate funding and delivery mechanism should the planning applications be approved.

2.19 It is maintained that the operational capacity of the A4135 Draycott / Box Road junction should be increased to cater appropriately for the significant levels of local development that have already been implemented and will be implemented in the future. It appears that there is insufficient highway land available to introduce a ghost island right lane for vehicles turning into Box Road although a mini-roundabout could be an appropriate solution (subject to detailed design and capacity analysis). Such junction arrangements offer a practical, relatively low cost solution to constrained urban junctions and offer a genuine increase in operational capacity. It is suggested that Cam Parish Council request that GCC fully consider the potential for a mini-roundabout at this location.

3 Box Road to High Street (Section 2)

Audit of Existing Transport Issues

3.1 Running south from the Box Road junction, the A4135 Draycott is a good standard 40mph single carriageway road with street lighting and a 2m footway on the east side only. Bus stop laybys are available on both sides of the carriageway close to the Draycott Business Park junction but there is no defined pedestrian route or crossing facility available when accessing the northbound stop. Pedestrians must simply cross the road within the extent of the layby itself.

3.2 Access to the Draycott Business Park is taken via a side road junction which benefits from a ghost island right turn lane. This allows drivers turning right into the Business Park to wait clear of northbound through traffic and helps minimise traffic delays on the A4135. The footway towards the village centre crosses the bellmouth of the Business Park junction with drop kerbs being provided but no tactile paving.

3.3 A Petrol Filling Station and forecourt shop is present on the west side of the A4135 with a ghost island right turn lane available at the entrance to the forecourt area. However, there are no footway or pedestrian crossing facilities available to link the eastern footway to the Filling Station site. There is also no pedestrian link into the Filling Station site on the western side of Draycott without the requirement to walk along the slip road that feeds into the forecourt.

3.4 Continuing south, Draycott again widens to include a ghost island right turn lane at the Draycott Mills access. The speed limit also reduces to 30mph at this point. Central pedestrian refuges are available to both the north and the south of the Draycott Mills access which enable safe crossing movements between the footways available on both sides of the A4135. There is no tactile paving provided either where the eastern footway crosses the Draycott Mills access or where the central refuges allow pedestrians to cross the A4135.

3.5 Between the Draycott Mills and Manor Road junctions, the A4135 is of a reasonable standard with footways on both sides and street lighting throughout. However, many of the existing properties on the eastern side of the A4135 over this length have forecourt parking which requires residents to drive over the footway. In places this results in a wide paved area / footway of up to 5m width which encourages inappropriate residential overspill parking that impacts on pedestrian use of the footway (**P3**). In other places the footway is narrow and larger cars parked on the forecourts overhang the footway and again restrict its use.

3.6 Manor Road is a good standard 7.3m wide local distributor road that provides an alternative route to the A4135 connecting Draycott in the north with Cam Pitch to the south. Its junction with Draycott provides a wide bellmouth with excessively large radii kerb lines meaning pedestrians are exposed to turning vehicles for longer than necessary when crossing the bellmouth. There is also no tactile paving available at the crossing point.

3.7 South of Manor Road and up to The Vennings the A4135 carriageway narrows slightly with the eastern footway also reducing to approximately 1.4m. Once past The Vennings and on the section to Woodend Lane the carriageway and footways widen again as Draycott becomes High Street. Cottages on the eastern side of High Street do not benefit from off-street parking so on-street parking starts to become apparent at this point (**P4**). Vehicles travelling in opposite directions can pass even with the on-street parking being present.

3.8 Some on-street parking also occurs within the bellmouth of the Woodend Lane junction which can cause difficulties for other vehicles turning in and out.

3.9 High Street continues towards the village centre at an appropriate width and with a reasonable standard of footway on both sides. Once past Courthouse Gardens on-street parking is for the most part controlled by double yellow line parking restrictions and zig-zag road markings associated with a signalised pedestrian crossing.

3.10 The main exception to the above is a 50m section on the western side of the carriageway in the vicinity of a sandwich shop where again there is limited off-street parking for customers or the adjacent properties. Drivers tend to park part on and part off the footway in this location to ensure no obstruction to through traffic on High Street (**P5**). This may be beneficial to vehicle movements, but it restricts the available width of the footway and could impact on pedestrians with pushchairs, wheelchairs and similar.

3.11 A Puffin signalised crossing connects the footways on either side of High Street at a point approximately 90m north of the mini-roundabout in the village centre. The crossing location is suitable for pedestrians walking north-south to / from the village centre via Draycott and High Street but is remote from the Cam Pitch to Noel Lee Way desire line. Pedestrians walking east-west are therefore more likely to cross at the mini-roundabout where there are no facilities (**P6**) than to divert 90m to use the Puffin crossing.

3.12 Outside the Post Office the eastern footway widens again as it approaches the village centre. Bollards are provided just behind the kerb line to prevent casual parking part on this wider footway section. A parking layby is also available with this subject to a 1 hour limit.

Committed and Planned Transport Improvements

3.13 As mentioned previously, Condition 18 of the planning permission for application reference S.15/2804/OUT relates to a requirement for off-site pedestrian enhancements on the route between Box Road and the village centre. In particular, it requires the introduction of tactile paving at the crossing points of Draycott Business Park, Kerry's, The Vennings and Courthouse Gardens together with the introduction of a central refuge crossing island on the northern arm of the mini-roundabout in the village centre. These facilities will improve the pedestrian route along the eastern side of Draycott / High Street and also better cater for the Cam Pitch – Noel Lee Way desire line at the mini-roundabout.

3.14 Condition 19 of the S.15/2804/OUT permission relates to design and provision of a shared pedestrian / cycle path along the route of the former railway line that links Box Road with Draycott Mills (see plan at **Appendix D**). The route effectively runs parallel to the A4135 Draycott but offset between 100 and 150m to the east. Once constructed, pedestrians and cyclists will therefore be able to avoid the Draycott eastern footway over an approximately 400m length should they wish to do so.

3.15 The above section of pedestrian / cycle path also forms part of a wider route known as the Cam, Dursley, Uley Greenway which will eventually link Cam & Dursley Railway Station / Box Road with Cam village centre before continuing to Dursley and Uley. The Greenway will extend the above pedestrian / cycle path south from Draycott Mills to Old Barn Court and High Street in the village centre. Pedestrian and cycle movements between the Box Road / Railway Station area and the village centre will then have an attractive predominantly traffic free alternative to following the Draycott and High Street footways which should help encourage greater use of sustainable travel modes.

3.16 Although both the above planning conditions have been discharged, the works themselves have yet to be implemented and there is no guidance on the likely date for delivery or a particular trigger point linked to residential occupations. It is suggested that Cam Parish Council contact the developer for more guidance on implementation.

3.17 The S.15/2804/OUT planning permission also requires introduction of a new signal-controlled access junction on the A4135 Draycott to replace the existing Draycott Mills ghost island right turn lane. Planning application 19/0758/REM covered the detailed design of this junction with the approved plan attached as **Appendix E**.

3.18 The new junction layout will cater for the additional development traffic associated with the Draycott Mills redevelopment and will also provide signal-controlled pedestrian crossings of the Draycott Mills and the A4135 northern arm. Advanced cycle stop lines will allow cyclists to pull away before vehicles thereby helping to improve cycle safety. Again, it is not clear when this new junction will be implemented with this needing to be clarified with the developer.

Suggested Transport Improvements

3.19 The above committed and planned transport improvements will clearly help deliver better pedestrian and cycle facilities between Box Road and the village centre particularly on the western side of Draycott and High Street. It is however considered that further improvements are necessary and should be implemented in conjunction with future development proposals and planning applications in the local area.

3.20 It is suggested that a new section of 2m pedestrian footway should be provided on the western side of Draycott between the exit from the Petrol Filling Station forecourt and the existing bus stop approximately 100m further to the north. At present neither the Petrol Filling Station or the bus stop have appropriate pedestrian linkages which a new section of footway and drop kerb crossing points at either end would help to address (see **Figure 3** overleaf). Design details would need to be carefully considered against the extent of the adopted highway and the turning requirements of vehicles exiting the Petrol Filling Station and using the domestic driveways nearby.

3.21 The Manor Road junction currently has an excessively wide bellmouth which encourages fast turning speeds and difficulties for crossing pedestrians. It is considered that the junction should be 'tightened' such that the kerb line radii are reduced to 10m which remains sufficient to accommodate the turning requirements of large refuse collection vehicles and similar (see **Figure 4** overleaf). Smaller kerb line radii will mean the exposure distance for pedestrians when crossing Manor Road will be much reduced. These improvements are unlikely to have an adverse impact on queuing and delays when turning out of Manor Road although this should be double checked through use of the appropriate junction assessment software.

3.22 Committed developments are to implement improved pedestrian facilities along the length of the existing eastern Draycott and High Street footway. For completeness, it is suggested that similar drop kerb crossing points with tactile paving should also be provided where the western Draycott and western High Street footway crosses the various side roads. This would involve improvements to the crossing points at Manor Road (incorporated in the above), Woodend Lane, and both arms of Knapp Lane.

3.23 Again, the housing allocations proposed for development to the west of the A4135 Draycott would create an appropriate funding and delivery mechanism for all of the Section 2 improvements identified above should the planning applications be approved.

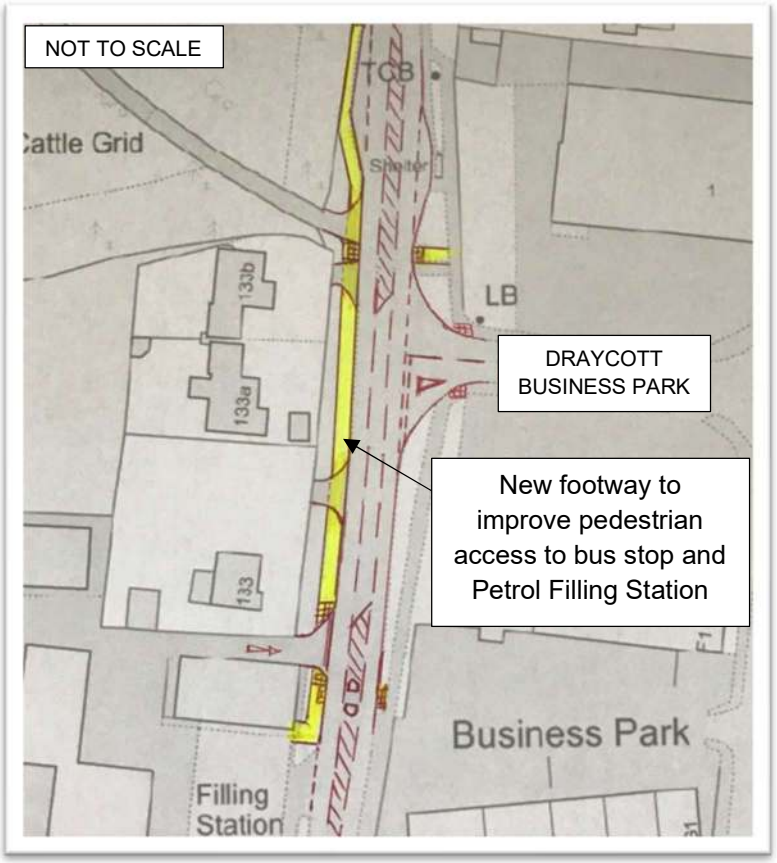


FIGURE 3: Proposed Footway on West Side of Draycott

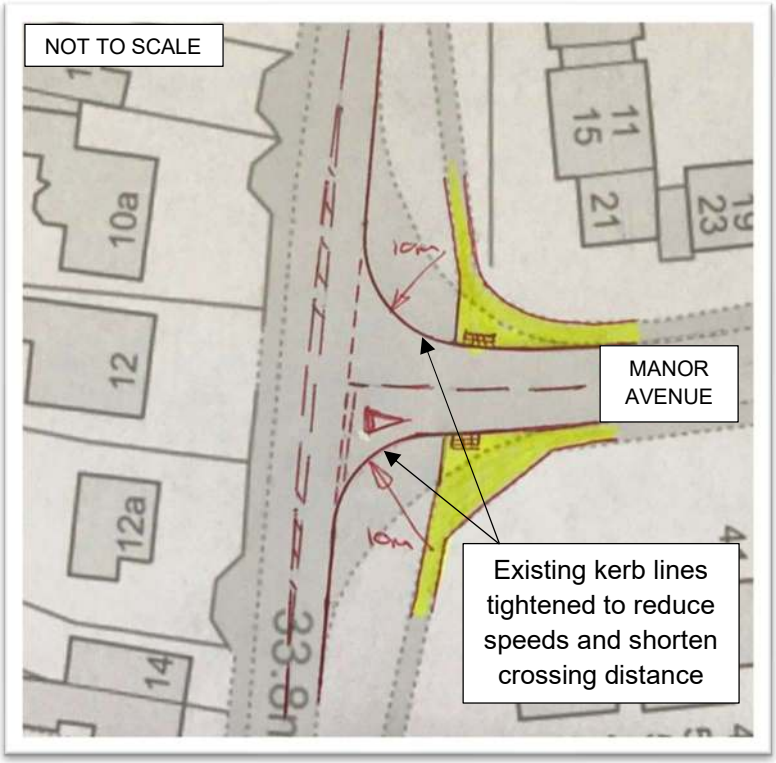


FIGURE 4: Proposed Tightening of Manor Avenue Junction

4 High Street Mini Roundabout, Chapel Street and Station Road (Section 3)

Audit of Existing Transport Issues

4.1 A large mini-roundabout forms the junction between High Street, Noel Lee Way, Chapel Street and Cam Pitch (**P7** and **P8**). The junction has an inscribed circle diameter of approximately 28m with the large expanse of tarmac dominating the village centre area. Despite its size, capacity assessments undertaken as part of recent planning applications identify that it currently operates over capacity during the traditional highway peak hours leading to queuing and delays.

4.2 Pedestrian facilities at the mini-roundabout are provided by drop kerb crossing points with tactile paving incorporated into the splitter islands on the Noel Lee Way and Chapel Street approaches. As previously mentioned, a new splitter island and pedestrian crossing point will be provided on the High Street approach as part of existing committed developments in the area which will leave Cam Pitch as the only approach with no crossing facility. Some pedestrians using the western footway beside Cam Pitch will undoubtedly wish to access Chapel Street so a direct crossing within the splitter island would be beneficial.

4.3 The large diameter of the mini-roundabout is also such that there is little or no entry deflection on the various approaches which can lead to inappropriate speeds through the junction. This is particularly noticeable on the High Street to Chapel Street movement where drivers can 'straight line' the junction and enter Chapel Street travelling faster than desirable for the village centre environment. The straight alignment of Chapel Street leading away from the mini-roundabout further encourages higher speeds.

4.4 Chapel Street has a carriageway width of approximately 6.5m as it leads away from the mini-roundabout with good standard footways on either side. Drop kerbs with tactile paving are provided on both sides of the Chapel Place side road access however the Rowley side road junction benefits from drop kerbs only. Pedestrian visibility at the Rowley side road is also restriction by the close proximity of Cam Methodist Church to the carriageway edge.

4.5 Beyond the Rowley junction, Chapel Street reduces in width to approximately 4.8m as it continues towards the southeast. Footways continue on both sides of the carriageway but with the northern footway reducing in width and varying between approximately1.2 and 1.5m in width.

4.6 No parking at any time restrictions are present on both sides of Chapel Street over the first 175m travelling away from the mini-roundabout. There are however short sections where 30 minute on-street parking is allowed with these comprising a 20m length on the southern side in the vicinity of No.12 (outside the Florist), a 9m length on the northern side in the vicinity of No's 3 and 5 (opposite the Pharmacy / outside the Dental Practice), an 8m length on the northern side in the vicinity of No.13 and a 5m length on the northern side in the vicinity of No.15.

4.7 The time restrictions applied to the on-street parking areas vary along the length of Chapel Street. These factors potentially lead to an element of confusion amongst drivers and an increased willingness to ignore the restrictions that apply.

4.8 The presence of on-street parking in permitted areas is considered to have a beneficial traffic calming effect. Chapel Street is straight meaning speeds would likely be higher than at present if drivers were not required to give and take priority when passing parked cars. Potential changes to the extents of these parking areas are identified later in this report but, as a principle, it is considered that on-street parking in controlled areas along Chapel Street should remain.

4.9 Once beyond the last length of permitted on-street parking (outside No.15) the parking restrictions reduce to a single yellow line with on-street parking allowed during the evenings, overnight and all day on Sundays. These restrictions cover the southeast end of Chapel Street and continue around the tight bend into Station Road before ending at the Everlands junction. Forward visibility for drivers is already restricted by the radius and the presence of walls and buildings on the inside of the bend (**P9**). Parked cars on the bend are therefore likely to further reduce this forward visibility and increase the risks of collisions.

4.10 Opportunities for pedestrians to cross Chapel Street and/or Station Road in the vicinity of the Everlands side road junction are limited and warrant improvement.

4.11 Station Road heads east past The Railway public house and then turns to head south becoming Hopton Road at the junction with Upthorne. The Station Road to Hopton Road movement forms the through movement with Upthorne being the side arm that approaches at an acute angle (**P10**). This angle of approach requires larger vehicles turning between Station Road and Upthorne (and vice versa) to use most of the available carriageway width on both approaches which clearly has road safety implications.

4.12 It is noted that Everlands southeast of Station Road and Hopton Road southeast of Upthorne are both subject to '7.5t Except for Access' weight restrictions. The route via Chapel Street, Station Road and Upthorne is not subject to any weight restrictions.

Committed and Planned Transport Improvements

4.13 Again, as mentioned previously, Condition 18 of the planning permission for application reference S.15/2804/OUT relates to a requirement for off-site pedestrian enhancements. These include provision of a new splitter island with drop kerbs and tactile paving across the High Street approach to the Cam Pitch mini-roundabout thereby enhancing pedestrian connectivity in this location.

4.14 The same Condition also requires improvements to the Chapel Street / Rowley junction whereby the southern Rowley kerb line is realigned away from the Methodist Chapel to enhance pedestrian visibility and enable provision of drop kerbs with tactile paving. This enhances the pedestrian environment along the eastern Chapel Street footway.

Suggested Transport Improvements

4.15 The Cam Village Centre Framework Document (May 2019) considers possible improvements to the mini-roundabout in the village centre. It suggests a new roundabout configuration whereby the existing mini-roundabout is converted into a 'compact' roundabout with a 4m diameter central island and associated over-run area. Enhanced pedestrian crossing facilities, reduced clutter from signage and lighting columns, and gateway features on the approaches also form part of the suggestions made. It is not clear what if any policy status the document has but the proposals are considered appropriate (subject to detailed design and assessment) and should be advanced through whatever means possible.

4.16 A current planning application for Land West of Draycott (21/1870/FUL) has identified that the existing mini-roundabout is already operating over capacity and will only get worse over time with background traffic growth and additional development flows. The planning documents acknowledge this and suggest capacity enhancements through provision of a compact roundabout (see plan attached as **Appendix F**), i.e., broadly in a similar manner to the Village Centre Framework Document. It is however noted that the applicant's current proposals reduce pedestrian facilities / convenience to help increase junction capacity and reduce driver delays. This is contrary to the hierarchy of travel modes where pedestrians, cyclists and public transport should be given greater priority over car drivers.

4.17 The applicant also puts forward an alternative 'traffic management' scheme for the junction whereby raised tables, uncontrolled pedestrian crossings, coloured surfacing and similar would be introduced to improve the public realm, improve the pedestrian and cycle environment, reduce traffic speeds and generally reduce the impact of through traffic in the village centre (see plan attached as **Appendix G**). This alternative approach would likely reduce the capacity of the junction which may in turn lead to through vehicle movements seeking to find an alternative route either locally or more strategically.

4.18 It is likely that a hybrid of the above two options would be the most appropriate long term design solution for the existing mini-roundabout combining the capacity benefits of a compact roundabout with good quality pedestrian crossing facilities over all approaches. Should the current planning application be approved, it will be essential that the developer is required to mitigate for the site's traffic impact through implementation of a comprehensive redesign of the junction. This should be undertaken in conjunction with detailed discussions with Cam Parish Council.

4.19 Alternatively, it may be appropriate for Cam Parish Council to undertake an initial feasibility assessment of the junction so that Gloucestershire County Council highways and potential developers in the area can be made aware of the local aspirations for the junction from the outset. This would require a topographical survey of the junction, traffic surveys and swept path analysis of larger vehicles such that the junction improvements could be appropriately designed and justified.

4.20 Elsewhere, it is suggested that a drop kerb with tactile paving pedestrian crossing facility be provided at some point in the vicinity of the Chapel Street / Station Road junction to primarily connect pedestrians walking on the east side of Chapel Street to the footways that run south via Everlands and the southern footway beside Station Road. The most appropriate location will need to be carefully considered to take account of the adjacent bend, existing levels of on-street parking and pedestrian visibility requirements.

4.21 Ideally the junction between Station Road / Hopton Road and Upthorne would be reconfigured to improve the convenience and safety of larger vehicles undertaking the tight turns to and from Upthorne. However, the gradient of the Station Road and Upthorne approaches, combined with the acute angle between the two, means any meaningful junction improvements would involve significant earthworks and costs which are unlikely to be warranted given the relatively small number of larger vehicles likely to be involved.

5 Cam Pitch and Tilsdown (Section 4)

Audit of Existing Transport Issues

5.1 Heading southwest away from the mini-roundabout in the village centre, Cam Pitch has a carriageway width of approximately 7.3m and an uphill gradient of approximately 1 in 10. There is a good standard footway available on both sides of the carriageway between the mini-roundabout and the Fairmead side road junction (125m) but on the northern side only between Fairmead and an existing Pelican crossing where pedestrians can access Delkin Road (400m). From the Pelican crossing, footways continue on both sides of Cam Pitch and link into existing footways on both sides of Woodfield Road and Tilsdown.

5.2 The junction of Cam Pitch, Woodfield Road and Tilsdown is a three arm, street lit, mini-roundabout of a reasonable standard. It is however noted from Transport Assessments submitted in support of recent planning applications that the junction currently operates at capacity during the highway peak hours and is predicted to be over capacity as future development comes forward.

5.3 The A4135 heads southeast away from the above mini-roundabout but now known as Tilsdown. It is of an appropriate width with a good standard of footway on both sides and street lighting along its length.

5.4 At its southern end, Tilsdown forms another mini-roundabout with the B4060 Dursley Road heading west and the A4135 Kingshill Road continuing southeast towards Dursley. Again, the junction is of a reasonable standard although capacity issues during the highway peak hours can lead to queuing and delays.

5.5 Pedestrian crossing facilities at the mini-roundabout are in need of improvement as there is no facility to cross the Tilsdown approach. Dursley Road benefits from a drop kerb crossing point with tactile paving located approximately 12m back from its give way line while Kingshill Road benefits from a central refuge located approximately 25m back from its give way line. Given the close proximity of Rednock Secondary School, it is considered that pedestrian crossing facilities at the mini-roundabout should be improved.

Committed and Planned Transport Improvements

5.6 As previously identified, planning permission for the large scale Millfields site (S.15/2804/OUT) was granted subject to a number of transport related planning conditions with No's 12 and 13 being of particular interest to this section of the A4135 corridor.

5.7 Condition 12 requires the Tilsdown / Dursley Road / Kingshill Road mini-roundabout to be converted to a signal controlled junction incorporating pedestrian crossing facilities across all three arms. A draft layout of the new junction arrangement is attached as **Appendix H**. It is a requirement of the condition that the improved junction be implemented prior to occupation of the 251st residential unit on the Millfield site.

5.8 Condition 13 requires the Woodfield Road / Tilsdown / Cam Pitch mini-roundabout to be converted to a much larger diameter roundabout with a central island. A draft layout of the new junction arrangement is also attached as part of **Appendix I** with implementation again being required prior to occupation of the 251st residential unit on the Millfield site. It should however be noted that the construction works at the two junctions cannot be undertaken at the same time.

5.9 At present the Stroud District Council website identifies that 244 residential properties on the Millfields site benefit from Reserved Matters or Full planning permissions with many of these already having been occupied or under construction. It is likely therefore that the next phase of development put forward for Reserved Matters approval will trigger the need to implement both junction improvements. Exactly when this will be is currently unknown and it is suggested that Cam Parish Council contact the developer for more guidance on their development programme.

Suggested Transport Improvements

5.10 The above junction improvements should address the existing highway capacity issues at both existing mini-roundabouts and will also address the pedestrian crossing concerns at the Tilsdown / Dursley Road / Kingshill Road junction. Assuming the junction works are constructed within a reasonable timescale, further transport improvements along Cam Pitch and Tilsdown are not considered necessary.

6 Dursley Road, Tait's Hill Road Junctions (Section 5)

Audit of Existing Transport Issues

6.1 The junctions represent the meeting between the B4060 The Avenue, the B4066 Tait's Hill Road, the B4060 Woodfield Road and the B4060 Dursley Road. The priority route through the junctions is Dursley Road to/from Tait's Hill Road with The Avenue and Woodfield Road both forming simple priority junction side arms approximately 50m apart.

6.2 The speed limit through the junctions is 30mph but it is noted that on Dursely Road this only starts approximately 50m to the east of Woodfield Road and on The Avenue this only starts approximately 40m to the west of the give way line. Dursely Road on the westbound approach is wide and straight with observations suggesting actual traffic speeds are higher than the 30mph limit in place. The Avenue is also straight and falls towards the junction which again can encourage faster than desirable speeds on the approach to the give way line with the associated risk of rear end shunts with queuing vehicles.

6.3 Visibility on egress from The Avenue is generally good in both directions. Queuing can occur on the side arm in the highway peak hours although this is generally short lived. Visibility on egress from Woodfield Road is good when looking to the left but restricted by the frontage of the former Yew Tree public house when looking to the right (**P11**). This building restricts the visibility available to approximately 45m which is appropriate for the 30mph speed limit but, as mentioned previously, actual traffic speeds through the junctions appear to exceed this.

6.4 A further complication is the secondary junction where The Quarry meets Woodfield Road. Visibility to the right on egress from The Quarry is also hindered by the former Yew Tree public house with only approximately 25m visibility being available. The kerb alignment and radius means that traffic turning into Woodfield Road from the west can do so without having to slow significantly and therefore visibility on egress from The Quarry is likely to be insufficient for the speed of passing traffic with the associated safety risks this creates.

6.5 The Woodfield Road bellmouth is also very wide with pedestrians being required to cross a total width of approximately 21m. There is a narrow kerbed refuge in the centre of the bellmouth that allows pedestrians to cross in two halves but pedestrians are still exposed to traffic for a long period when crossing.

Committed and Planned Transport Improvements

6.6 None known.

Suggested Transport Improvements

6.7 Building out of the kerb lines on both sides of the Woodfield Road bellmouth would tighten up the junction and reduce traffic speeds when turning into Woodfield Road (see **Figure 5** overleaf). Reducing the speed of traffic turning into Woodfield Road would afford more time to drivers when turning in and out of The Quarry and thereby improve road safety at the junction

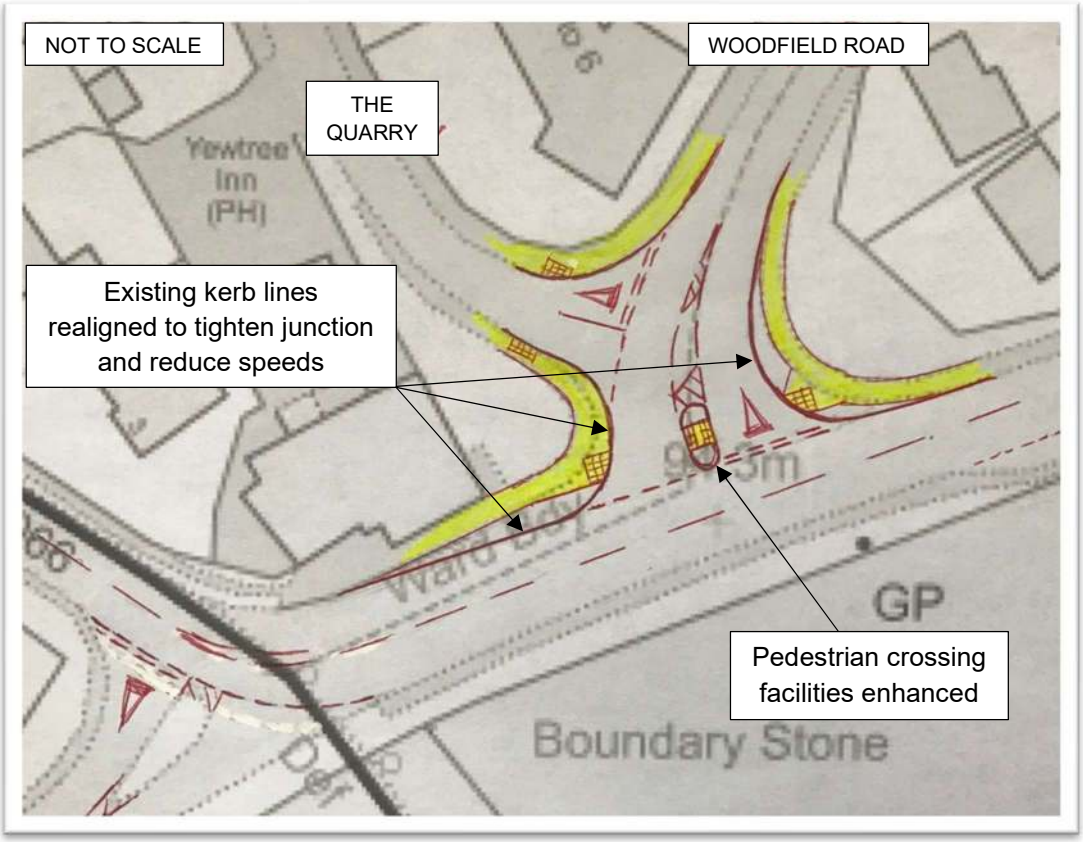


FIGURE 5: Proposed Tightening of Woodfield Road Junction

6.8 A tighter junction arrangement would also allow a larger central refuge to be provided within the Woodfield Road bellmouth thereby improving pedestrian safety when crossing. Similarly, building out the kerb lines would allow wider footway provision adjacent the junction. Given that Cam Woodfield Junior School is accessed via The Quarry, pedestrian improvements at the junction would clearly be beneficial.

6.9 It is also suggested that a gateway feature be introduced on the westbound Dursley Road approach to the start of the 30mph speed limit with this including rumble strip road markings and enhanced signage. Rumble strip road markings and enhanced signage is also suggested on the eastbound The Avenue approach to the junction give way line. These features would help to reduce traffic speeds on the approaches to and through the junctions with the associated improvements in road safety.

7 Adjustments to On-Street Parking Restrictions

7.1 The following are suggested locations where on-street parking restrictions could be implemented or where existing restrictions could be adjusted to better manage traffic flows and safety. The suggestions are shown illustratively only with more detailed plans being required to support the Traffic Regulation Order process

Junction of Draycott and Woodend Lane

7.2 Existing residential properties on the east side of Draycott do not benefit from off-street parking. Residents of these properties park both on Draycott itself and within the bellmouth of its junction with Woodend Lane.

7.3 Parking within the bellmouth can obstruct and obscure other vehicles turning in and out of the side road with the potential to increase road safety concerns. It is suggested that double yellow line 'no parking at any time' restrictions be applied on both sides of the Woodend Lane bellmouth as illustrated in **Figure 6**. These should extend from the give way line of the side road to the limit of the available kerbing on Woodend Lane.

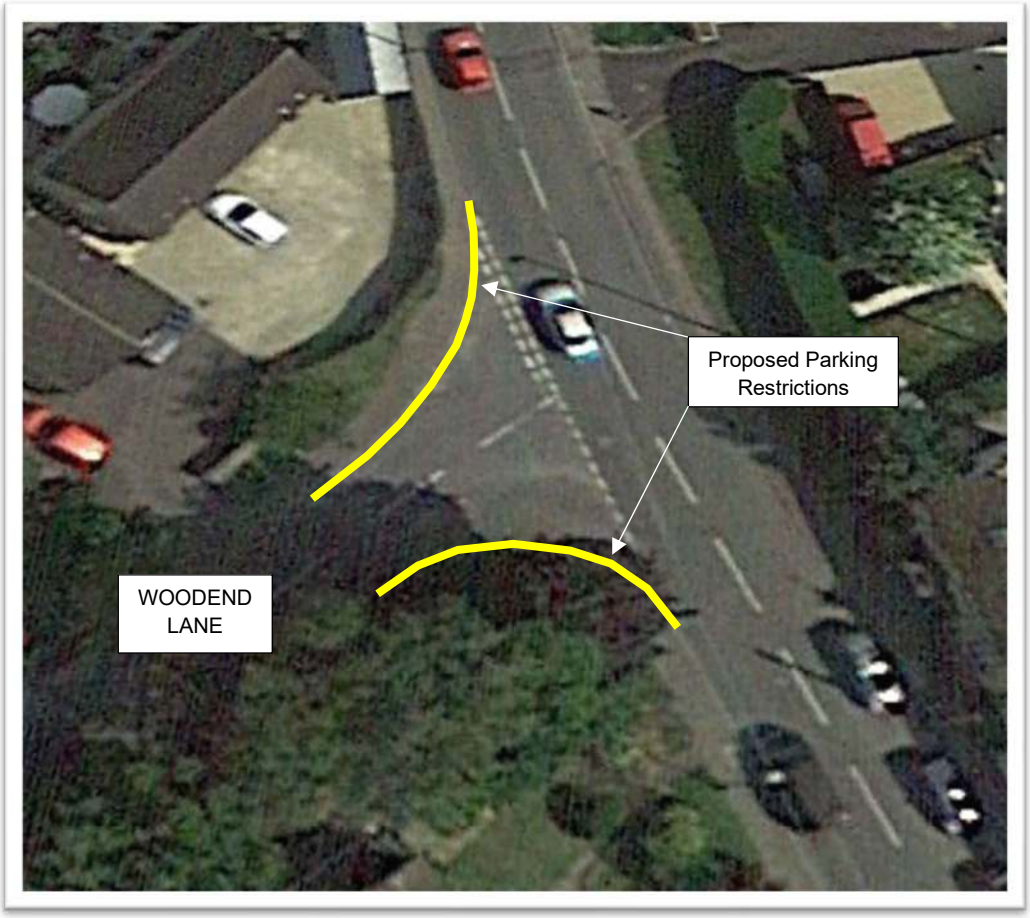


FIGURE 6: Parking Restrictions at Draycott / Woodend Lane Junction

Junction of High Street and Knapp Lane

7.4 Knapp Lane passes both sides of a landscaped island on its approach to High Street. The southern arm is narrow at approximately 5m width with on-street parking frequently occurring and obstructing the turning movements of vehicles heading to / from High Street (south) and Knapp Lane. On-street parking in this area is often associated with the adjacent Chinese takeaway.

7.5 Double yellow line 'no parking at any time' restrictions are already in place around the central island of the junction and on the western side of High Street as it leads south away from Knapp Lane. It is however suggested that these be extended to prevent parking over the full length of the Knapp Lane link as illustrated in **Figure 7**. These should extend the existing restrictions west to the first driveway access on Knapp Lane.

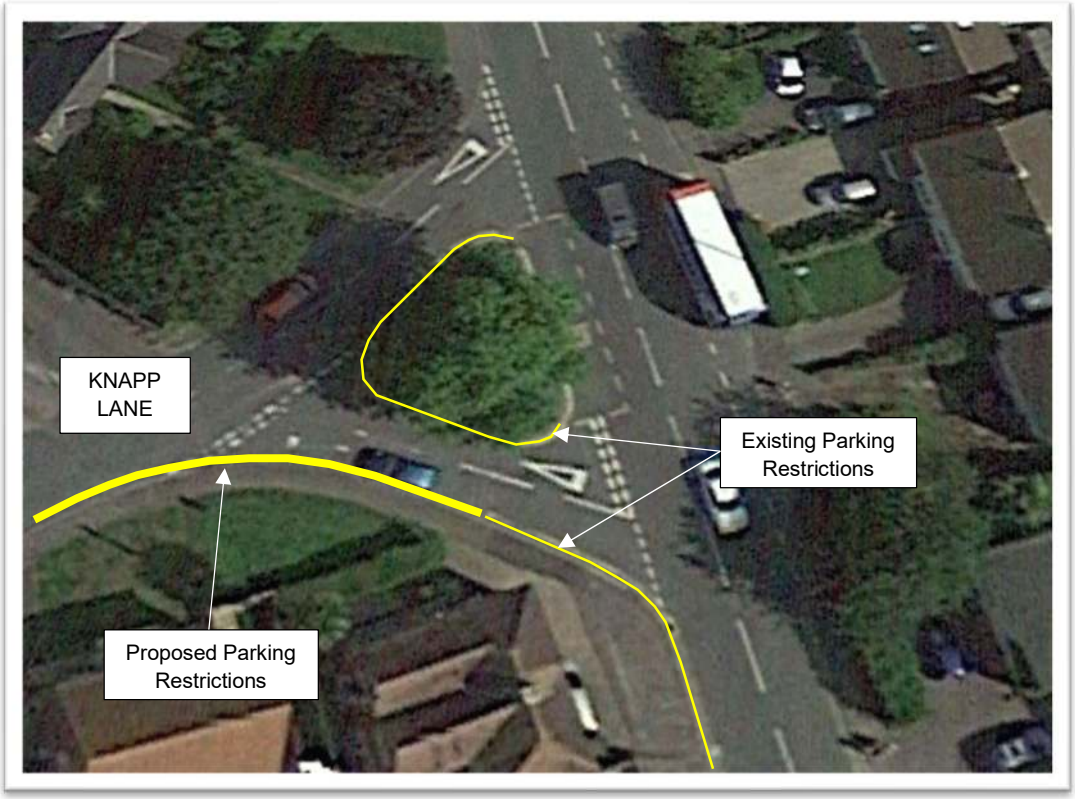


FIGURE 7: Parking Restrictions at High Street / Knapp Lane Junction

Junction of Cam Pitch and Manor Avenue

7.6 Double yellow line 'no parking at any time' restrictions are in place at the junction between Draycott and Manor Avenue to the north and it is considered that similar restrictions should be implemented at the junction between Cam Pitch and Manor Avenue to the south. Manor Avenue is a significant local distributor road where on-street parking close to its junctions with the A4135 is considered inappropriate (**P12**).

7.7 Northbound vehicles can turn into Manor Avenue from Cam Pitch relatively quickly so the immediate presence of on-street parking can lead to road safety concerns. It is suggested that double yellow line 'no parking at any time' restrictions be applied on both sides of the Manor Avenue bellmouth as illustrated in **Figure 8**.

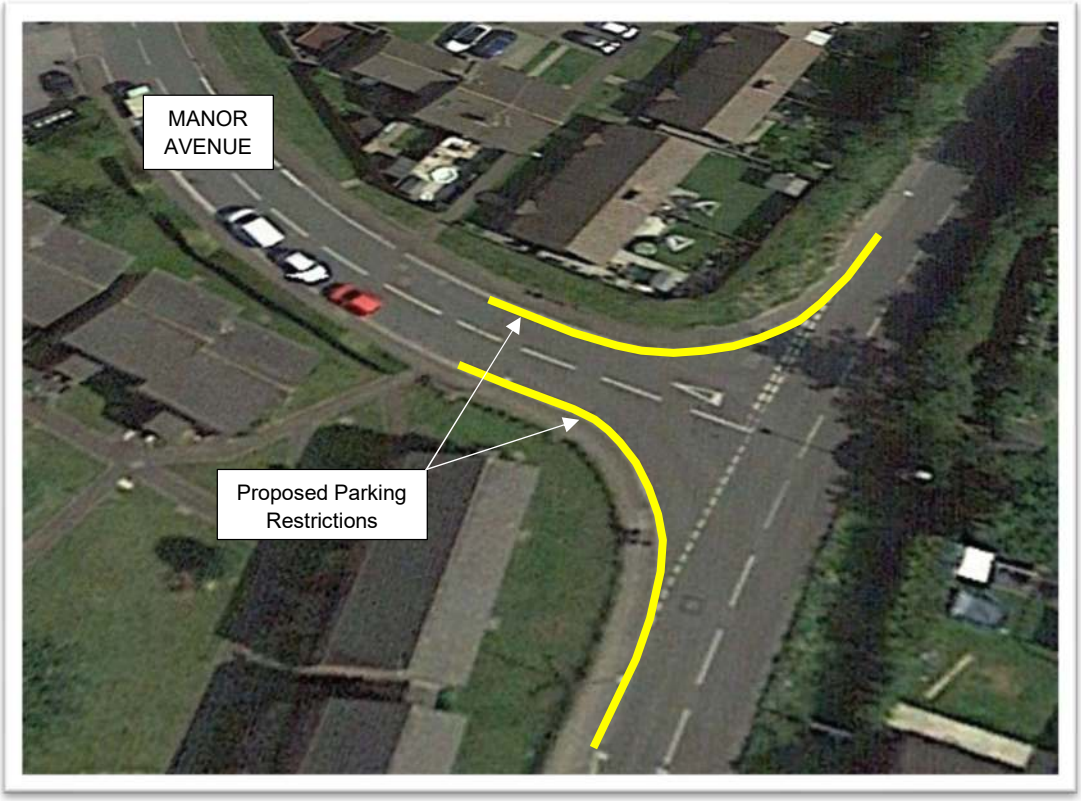


FIGURE 8: Parking Restrictions at Cam Pitch / Manor Avenue Junction

7.8 On the southern side of the junction, these should extend from the existing zig-zag road markings associated with the signal controlled crossing on Cam Pitch to a point 10m beyond the tangent point of the radius into Manor Avenue. On the northern side of the junction, they should extend between points10m beyond the tangent point of the radius along both Manor Avenue and Cam Pitch.

Central Section of Chapel Street

7.9 The presence and general location of time restricted parking bays and double yellow line 'no parking at any time' restrictions along the central section of Chapel Street are considered appropriate. The on-street parking provides for convenient access to local services and facilities while also acting as a natural traffic calming feature. The restricted sections also ensure that the on-street parking does not have an adverse impact on through traffic movements. It is noted that the yellow line markings have recently been repainted to reinforce their presence.

7.10 Close examination of the extents of the restrictions identifies that the eastern edge of the parking bay outside No.13 Chapel Street extends part way across the driveway of the property. This is considered inappropriate, and it is suggested that the full length of the bay be repositioned approximately 2m to the west (see **Figure 9** overleaf). This will clear the driveway of No.13 without adversely affecting the driveway of the neighbouring property No.11.

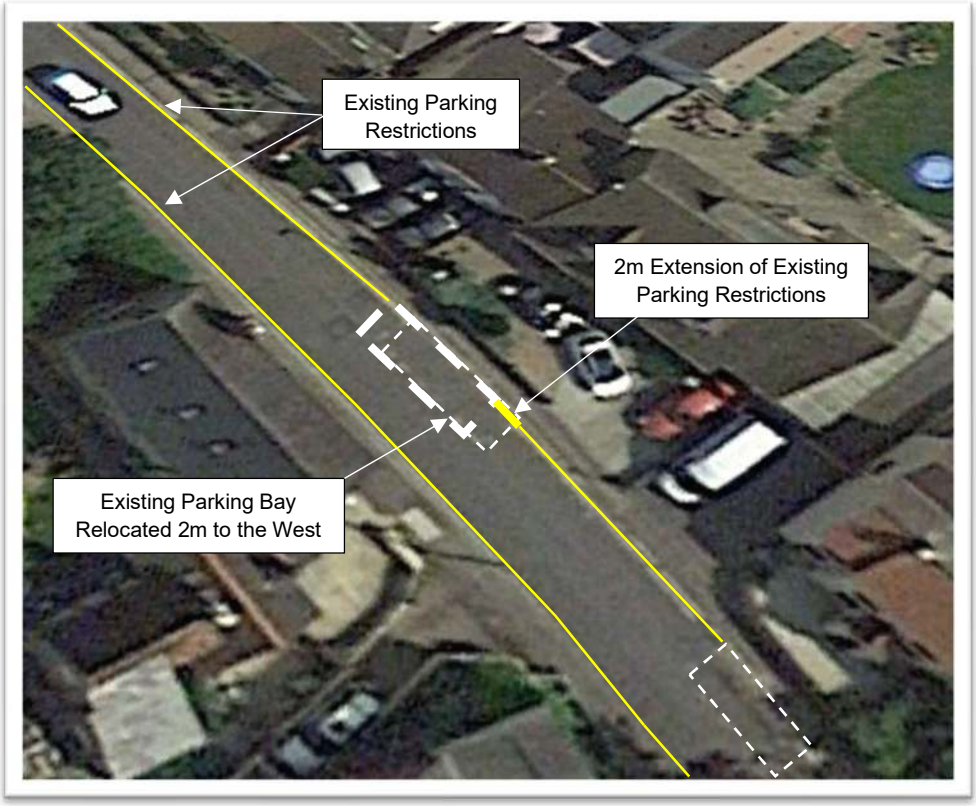


FIGURE 9: Adjustment of Parking Restrictions at No.13 Chapel Street

Southwest End of Chapel Street

7.11 At present there are single yellow line 'Monday to Saturday 8am to 6pm' parking restrictions on both sides of Chapel Street at its southwest end and where it turns to become Station Road. The bend between Chapel Street and Station Road has a radius of approximately 30m with built form on the inside that restricts forward visibility for drivers. When vehicles are permitted to park in this area, they create a hazard as drivers are forced onto the opposite side of the carriageway just where forward visibility is at its worst.

7.12 It is suggested that the existing single yellow line restrictions are retained on the straight section of Chapel Street but that these are upgraded to double yellow line 'no parking at any time' restrictions on the bend itself (see **Figure 10** overleaf). This will continue to provide opportunities for overnight parking in appropriate locations while enhancing road safety by ensuring two-way traffic can be accommodated on the bend at all times.

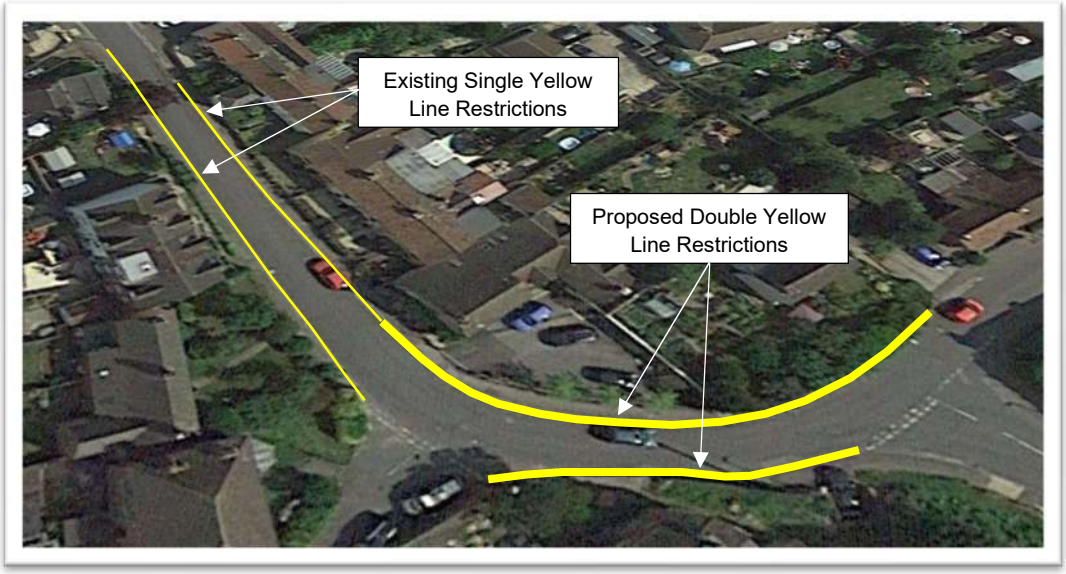


FIGURE 10: Adjustment of Parking Restrictions on Chapel Street

APPENDIX A

Photographs

Photograph 1

Photograph 2

Photograph 3

Photograph 4

Photograph 5

Photograph 6

Photograph 7

Photograph 8

Photograph 9

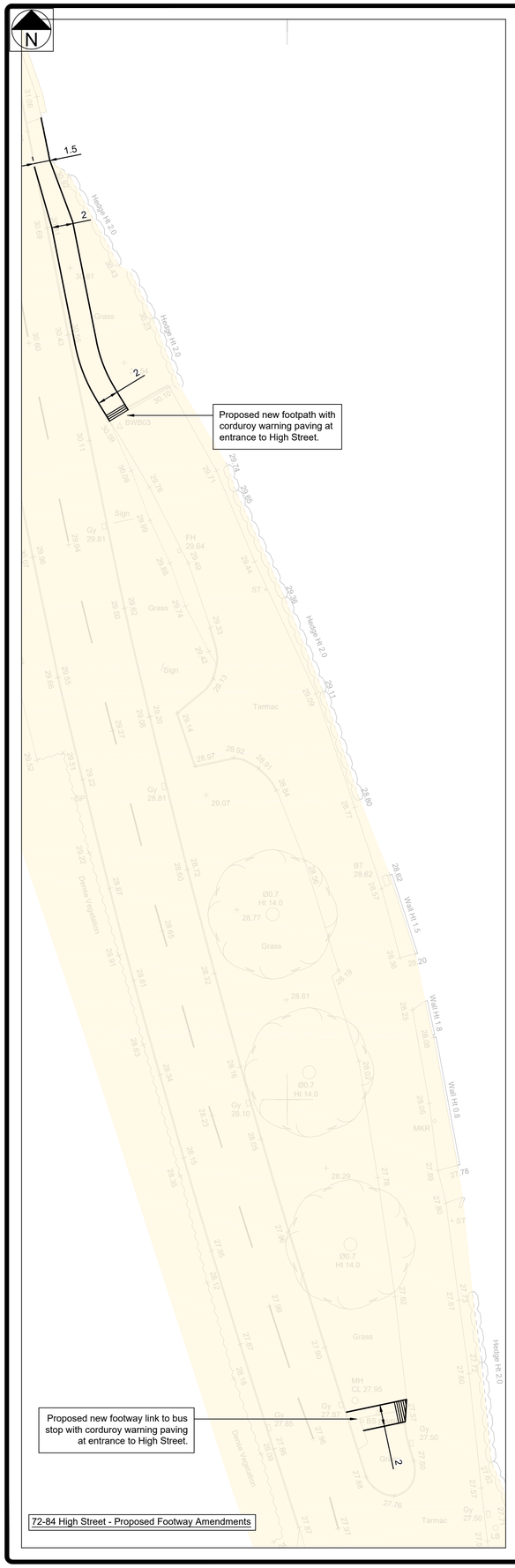
Photograph 10

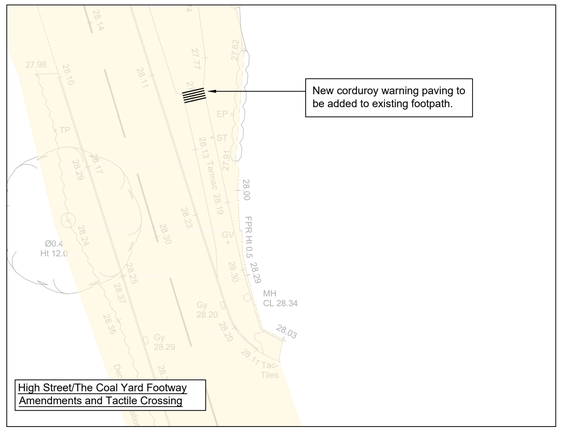
Photograph 11

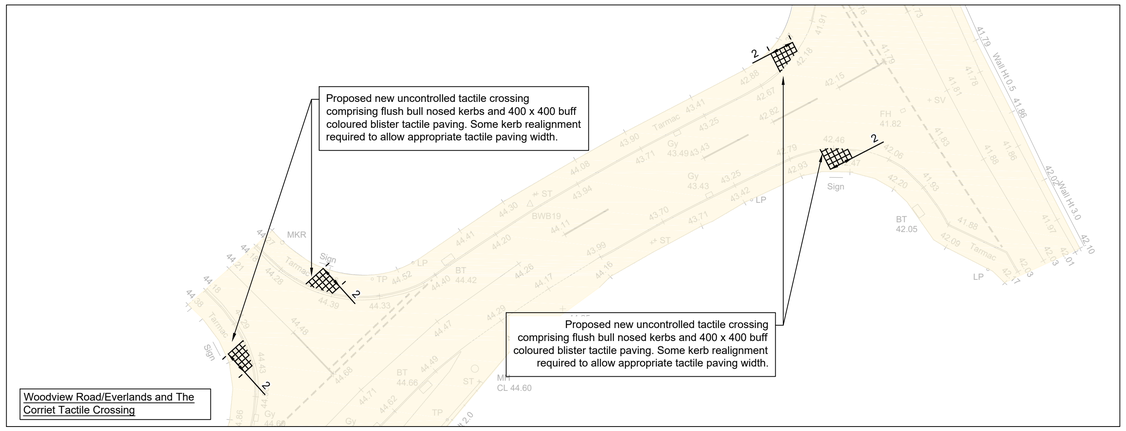
Photograph 12

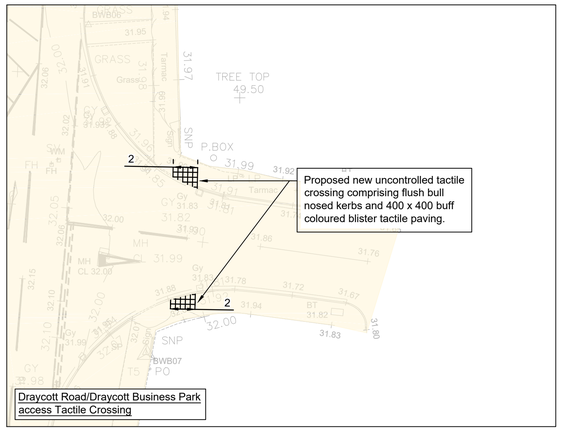
APPENDIX B

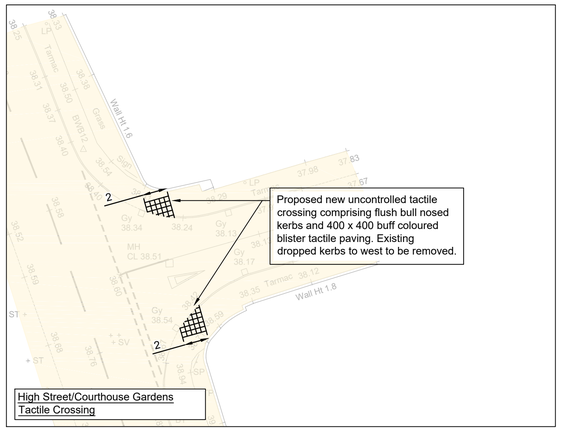
Consented Footway Improvements

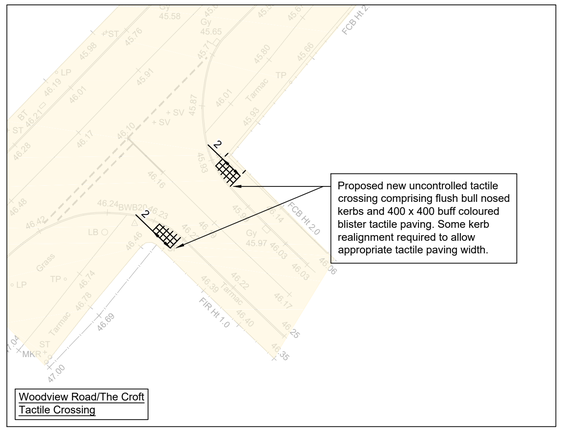


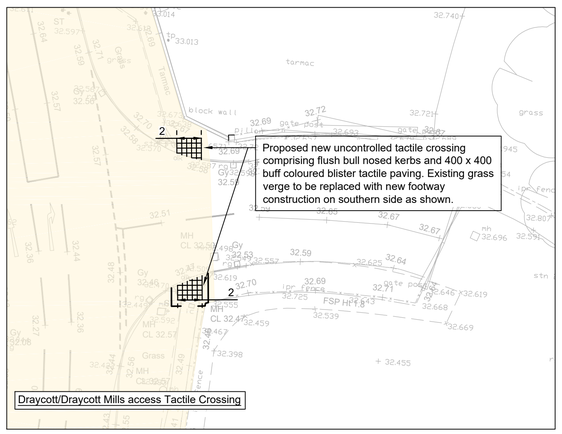


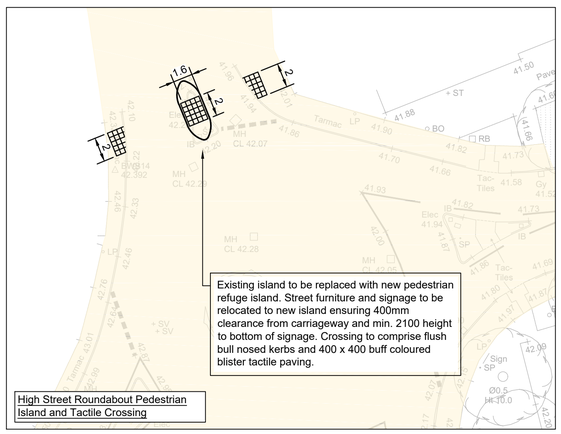


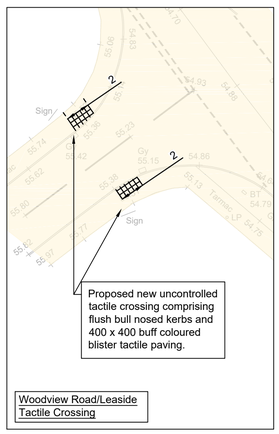


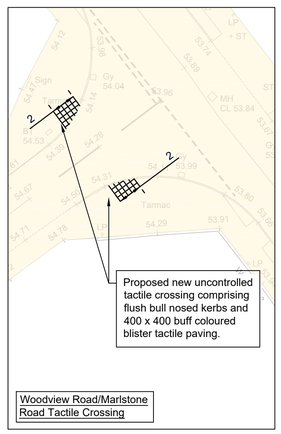


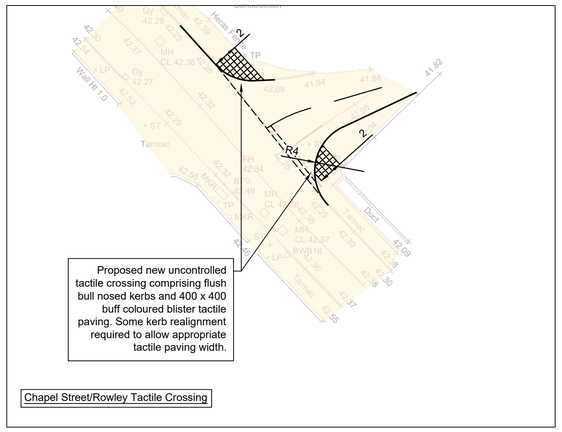


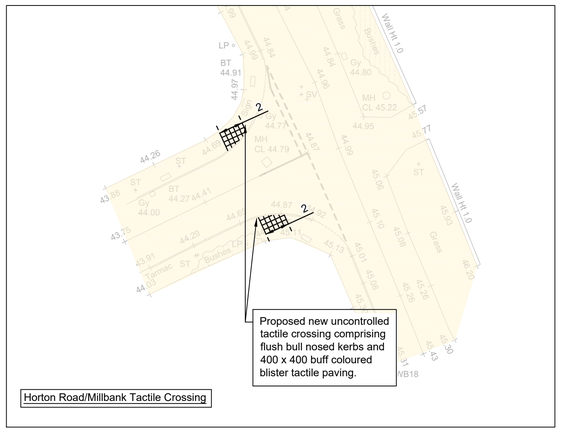


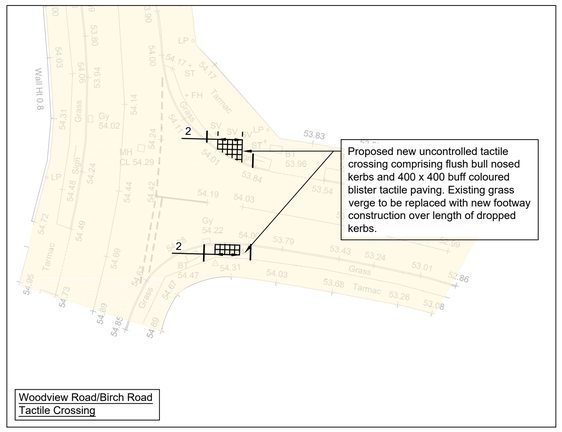












Notes:

Extent of highway maintainable at public expense.

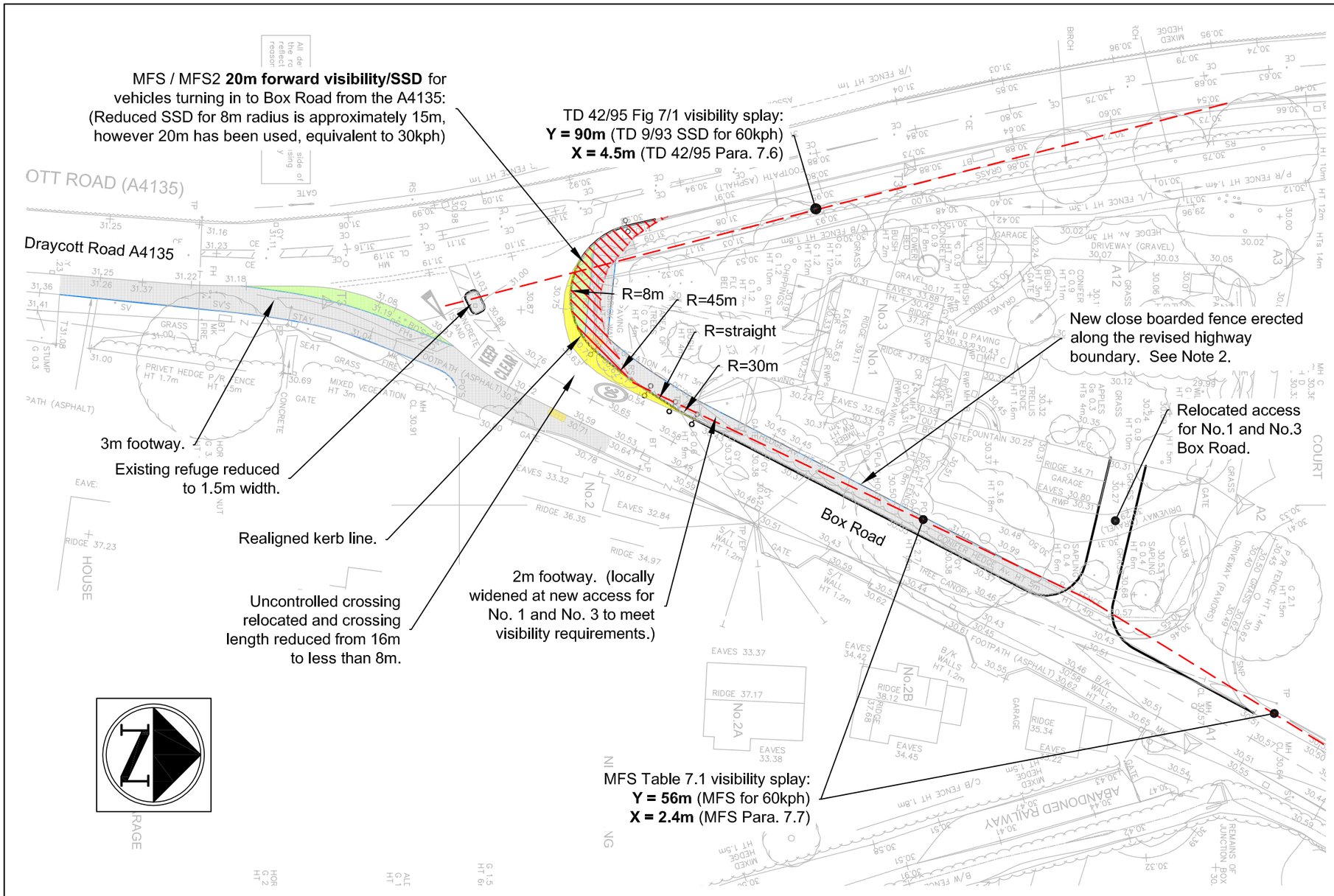
COTSWOLD TRANSPORT PLANNING

Cotswold Transport Planning Ltd
121 Promenade
Cheltenham Tel: 01242 370283
Gloucestershire cheltenham@cotswoldtp.co.uk
GL50 1NW www.cotswoldtp.co.uk

Drawing Title: 19.10.17	
Client: Bathurst Ltd	
Project: Millfields, Cam	
Drawing No: SK01	Revision: E
Date Drawn: 27.04.17	Issue Date: 16.11.17
Drawn by: LG	Checked by: MG
Project Code: CTP-17-176	Scale at A1: 1:250
Drawing Status: INFORMATION	

APPENDIX C

Potential Improvements at A4135 / Box Road



Notes:

1. All dimensions are in metres unless indicated otherwise.
2. It is assumed that a close boarded fence will be erected along the new highway boundary, however some local regrading or construction of a low retaining wall with a close boarded fence erected on top may be required where levels dictate.
3. A design speed of 30mph (60kph) has been assumed for this scheme. This would require an amendment to the existing TRO and the existing 30/40 terminal signs to move north on the A4135 to a point approximately 100m north of the Box Road junction, so that the complete junction falls with in the 30mph limit.

Legend

- Flexible carriageway construction
- Flexible footway construction
- Topsoilled and grassed verge
- Tactile blister warning surface

DRAFT

Rev	By	Chkd	Apprvd	Date	Description

Client

Bathurst Ltd.

Planning & Traffic Engineering Consultants
Ian Cooper C Eng MICE
Crossways Eastcombe GL6 7EA
Telephone 07813213178
Email iancooper@yahoo.co.uk

Project

Millfields Development

Drawing

Box Road Junction General Arrangement

Drawn by:	BEX Highway Design	Date:	17.02.2017
Checked by:	BEX Highway Design	Date:	17.02.2017
Approved by:	Ian Cooper	Date:	17.02.2017

Drawing No.	Revision
0217 / 02	-

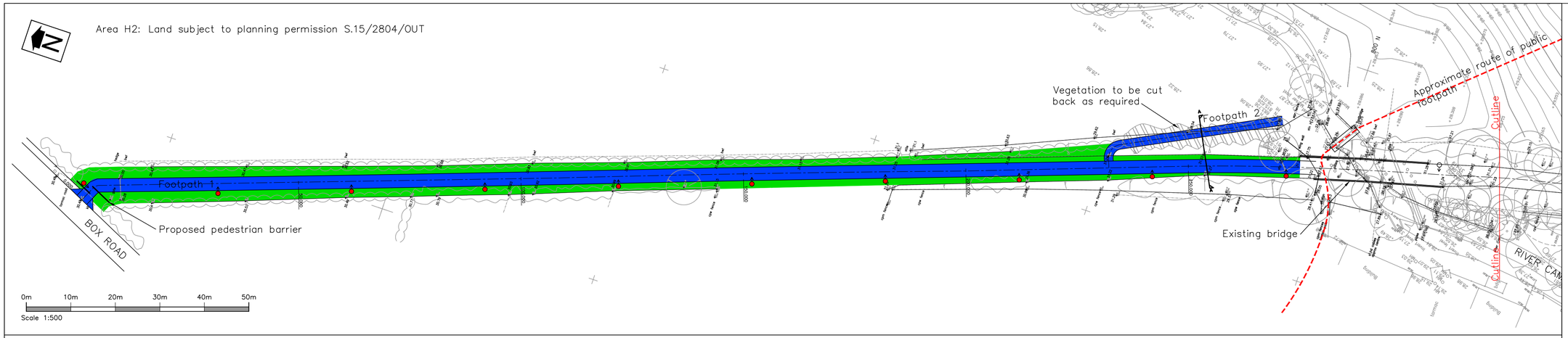
Drawing Scale: 1:500 at A3

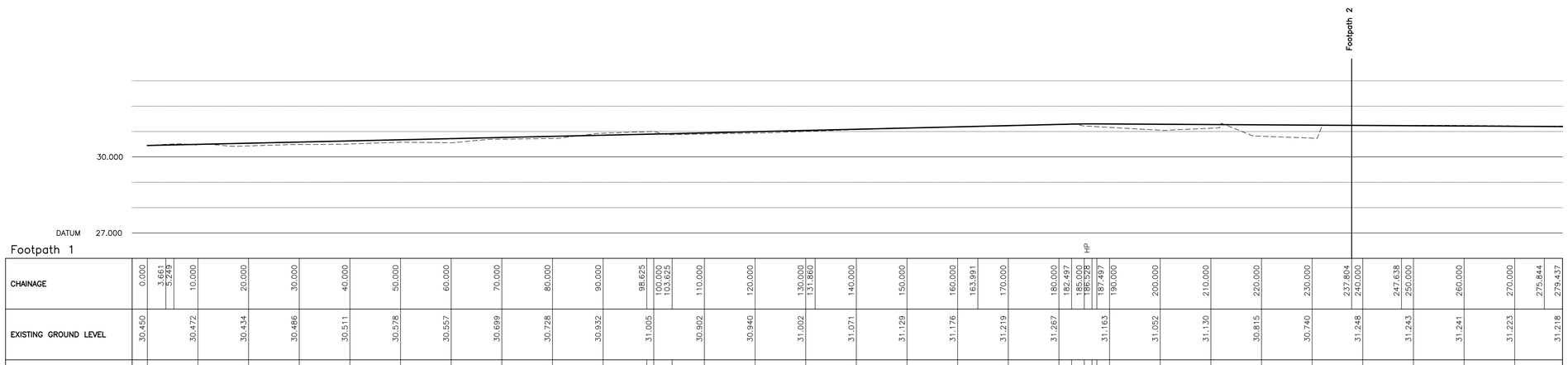
A3 frame

APPENDIX D

Consented Pedestrian / Cycle Route (Greenway)

Area H2: Land subject to planning permission S.15/2804/OUT

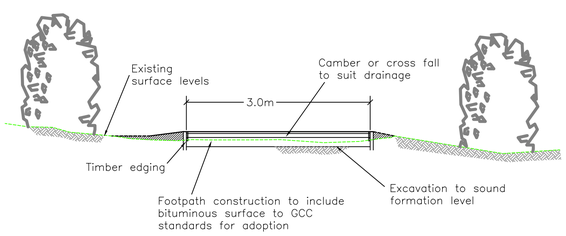




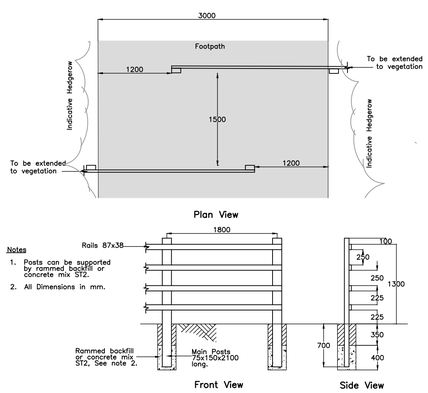
Footpath 1

CHAINAGE	0.000	3.661	5.249	10.000	20.000	30.000	40.000	50.000	60.000	70.000	80.000	90.000	98.625	100.000	103.625	110.000	120.000	130.000	131.860	140.000	150.000	160.000	163.991	170.000	180.000	182.497	185.000	186.328	187.497	190.000	200.000	210.000	220.000	230.000	237.804	240.000	247.638	250.000	260.000	270.000	275.844	279.437
EXISTING GROUND LEVEL	30.450			30.472	30.434	30.486	30.511	30.578	30.557	30.699	30.728	30.932	31.005			30.902	30.940	31.002	31.071	31.129	31.176	31.219	31.267				31.163		31.052	31.130	30.815	30.740	31.248	31.243	31.241	31.223	31.218
ALIGNMENT LEVEL	30.450	30.495	30.540	30.585	30.630	30.675	30.720	30.765	30.810	30.855	30.894	30.900	30.917	30.947	30.995	31.042	31.090	31.137	31.185	31.233	31.280	31.292	31.300	31.302	31.301	31.298	31.287	31.275	31.264	31.252	31.241	31.230	31.218	31.207	31.196							
VERTICAL ALIGNMENT	G= 0.450% 1: 222.2												KF= 196.82148 L= 5.000			G= 0.476% 1: 210.3									L= 5.000 KF= −8.47655						G= −0.114% 1: −874.5											

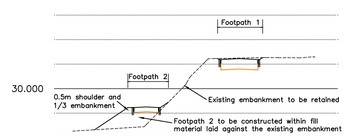
Footpath 1 Longitudinal Section (Scale: H=1/500 , V=1/100)



Typical Footpath 1 Cross Section
Scale 1:50

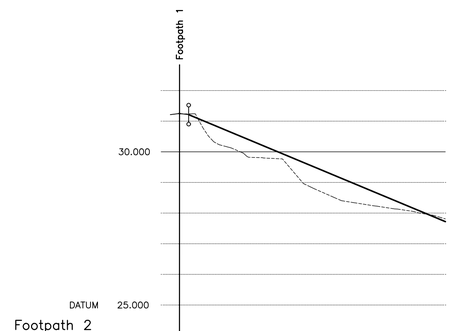


Post and 4 Rail Fence
Scale 1:50



OFFSET			1.000	0.000	1.000			6.083	7.598	9.113		
GROUND LEVEL	28.268		28.421	28.531	29.038			31.232	31.248	31.264		31.272
FEATURE LEVEL			29.229	29.254	29.229			31.188	31.225	31.187		

Cross Section A–A



Footpath 2

CHAINAGE	0.000	0.000	2.137	6.473	10.000	20.000	30.000	40.000	43.397
EXISTING GROUND LEVEL	31.235			29.992	29.017	28.292	27.974	27.810	
ALIGNMENT LEVEL	31.212			30.504	29.671	28.837	28.004	27.721	
VERTICAL ALIGNMENT	G= −8.333% 1: −12.0								

Footpath 2 Longitudinal Section
Scale: H=1/500 , V=1/100

PFA consulting

Stratton Park House, Wanborough Road
Swindon, SN3 4HG

Telephone
01793 828000

Website
www.pfaplc.com

For Planning
This drawing is produced for the purposes of supporting a planning application and should not be relied upon for tender, pricing, or construction purposes.

NOTES

- Footway to be adopted
- Verge to be adopted
- Street lighting column – 5m mid-hinged column with post top mounted Urbis Ampera Mini luminare at 0° tilt

Rev	Date	Description	Drawn	Check
#	12/11/19	First Issue.	WDN	PF

Status
FOR PLANNING

Client
Bathhurst Ltd

Project
Millfields
Land North East of Cam
Gloucestershire

Drawing Title
Proposed Footway/Cycleway along Former Railway Line

Drawing No.
B719/08

Date: November 2019 | Scale: As Shown @ A1

E-Mail: pf@pfaplc.com

APPENDIX E

Consented Traffic Signals at Draycott Mills

PFA consulting

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For Planning
These drawings are produced for the purposes of supporting a planning application and should not be relied upon for tender, pricing, or construction purposes.

Key:

- Extents of Highway Link
- New or improved Carriageway.
- New or improved Footpath
- Grass verge/Areas
- Junction intervisibility splays to paragraph 2.16 of TD 50/04
- Junction Visibility splays to MfS2, X = 2.4m, Y = 56m.

NOTES:

1. This drawing is based on Bathurst Business Centre, Draycott, Cam New Junction & Access Road General Layout Plan, drawing No.B392/51 Rev. F, Issued 28/04/2018

2. Proposed surface course to be of high PSV to achieve anti-skid properties and re-surfacing to be extended a minimum of 80m in advance of stop line on A4135 South bound.

3. All proposed pedestrian crossing dropped kerbs upstand to be 0mm to 6mm.

4. Temporary Traffic Signs to Diag 7014 'New Traffic Signals Ahead' to be erected a minimum of 45m in advance of proposed junction, final position to be agreed by highway engineer.

5. Based on Topographical Survey By Nick Hodges Land Surveyor Dated September February 2006. Grid & levels based on River Can Survey dated August 2003, arbitrary grid system.

6. Additional survey undertaken by MK Surveys dated February 2015. MK Survey based on Ordnance Datum but has been merged with the Nick Hodges Survey and therefore currently placed to the arbitrary grid system.

7. Composite Topographical Survey merged in 2006 and 2015.

Rev	Date	Description	Drawn	Check
C	04.04.19	Red Line boundary extents altered.	MH	
B	05.03.19	Red Line Boundary added to extents of Highway Link. Bellmouth nr. to CH170-180 moved 1.38m east to suit masterplan.	MH	
A	27.02.19	Alteration to presentation of layout with associated Key updated. Notes added.	MH	PF
#	14.12.18	First Issue.	MRD	PF

FOR PLANNING

Client

Bathurst Ltd

Project

Millfields
Land North East of Cam
Gloucestershire

Drawing Title

Layout Plan of Junction and Access Road
Sheet 1 of 2

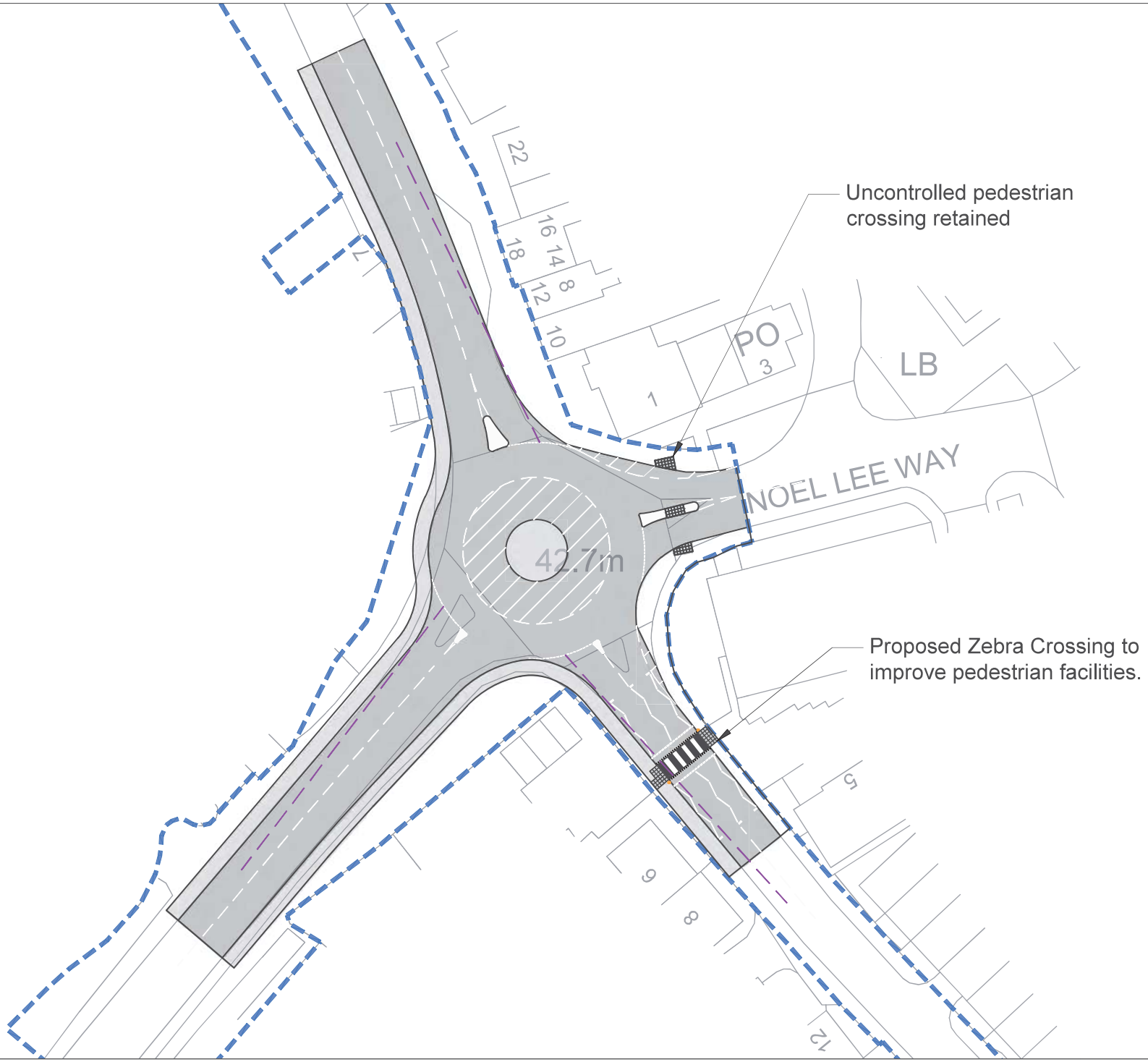
Drawing No. **B719/01** Rev. C

Date: December 2018 | Scale: 1:500 @ A1

E-Mail: pfinlayson@pfaplc.com

APPENDIX F

Potential Roundabout at High Street / Noel Lee Way



Key

- Proposed Footway
- Proposed Carriageway Layout
- Extent of Highways Land
- Forward Visibility (43m)

Rev	Date	Description	By	Apvd
P1	14.01.21	Preliminary issue	NP	JD

PROJECT:
CAM WEST OF DRAYCOTT

TITLE:
LOWER CAM ROUNDABOUT IMPROVEMENTS

CLIENT:
PERSIMMON HOMES AND ROBERT HITCHINS

SCALE@A3:
1:500

PROJECT REF:
20158

DRAWING No: 010

REV: P1

Revision Referencing
P = Preliminary A = Approval T = Tender C = Construction

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APPENDIX G

Potential 'Shared Space' at High Street / Noel Lee Way

Raised table upon approach to Lower Cam Roundabout.

This will encourage motorists to slow down and improve the pedestrian environment heading into Lower Cam Centre.

Proposed edging in carriageway to make the road appear narrower thus encouraging slower speeds.

Plate 3*

Resurface footway with block paving to maximise pedestrian area and improve appearance of the public realm for pedestrians.

Plate 1*

Proposed uncontrolled level-crossing to replace signalised pedestrian crossing. This will encourage a natural flow between vehicles and pedestrians (shown in Plate 1).

Plate 4*

Change in colour of surface to distinguish between pedestrian areas and vehicular areas.

Plate 2*

Central reserve to improve pedestrian environment (as shown in Plate 2).

This could also be used to relocate some of the street clutter on the footway such as; lamposts and telephone posts.

Plate 5*

Proposed uncontrolled level-crossing points at each arm of the roundabout with dropped kerbs and tactile paving (shown in Plate 5.

Shared surface roundel (shown in Plate 6)

Plate 6*

*Image Source: Google Maps

Key

- Proposed Pedestrian Areas
- Proposed Carriageway
- Proposed Junction Overrun Area
- Adopted Highway Boundary

Rev	Date	Description	By	Apvd
P2	12.01.21	Adopted Highway Boundary	NP	JD
P1	20.11.20	Preliminary issue	NP	JD

PROJECT:
CAM WEST OF DRAYCOTT

TITLE:
LOWER CAM ROUNDABOUT - SHARED SPACE SCHEME

CLIENT:
PERSIMMON HOMES AND ROBERT HITCHINS

SCALE@A3:
1:500

PROJECT REF:
20158

DRAWING No: 009

REV: P2

Revision Referencing
P = Preliminary A = Approval T = Tender C = Construction

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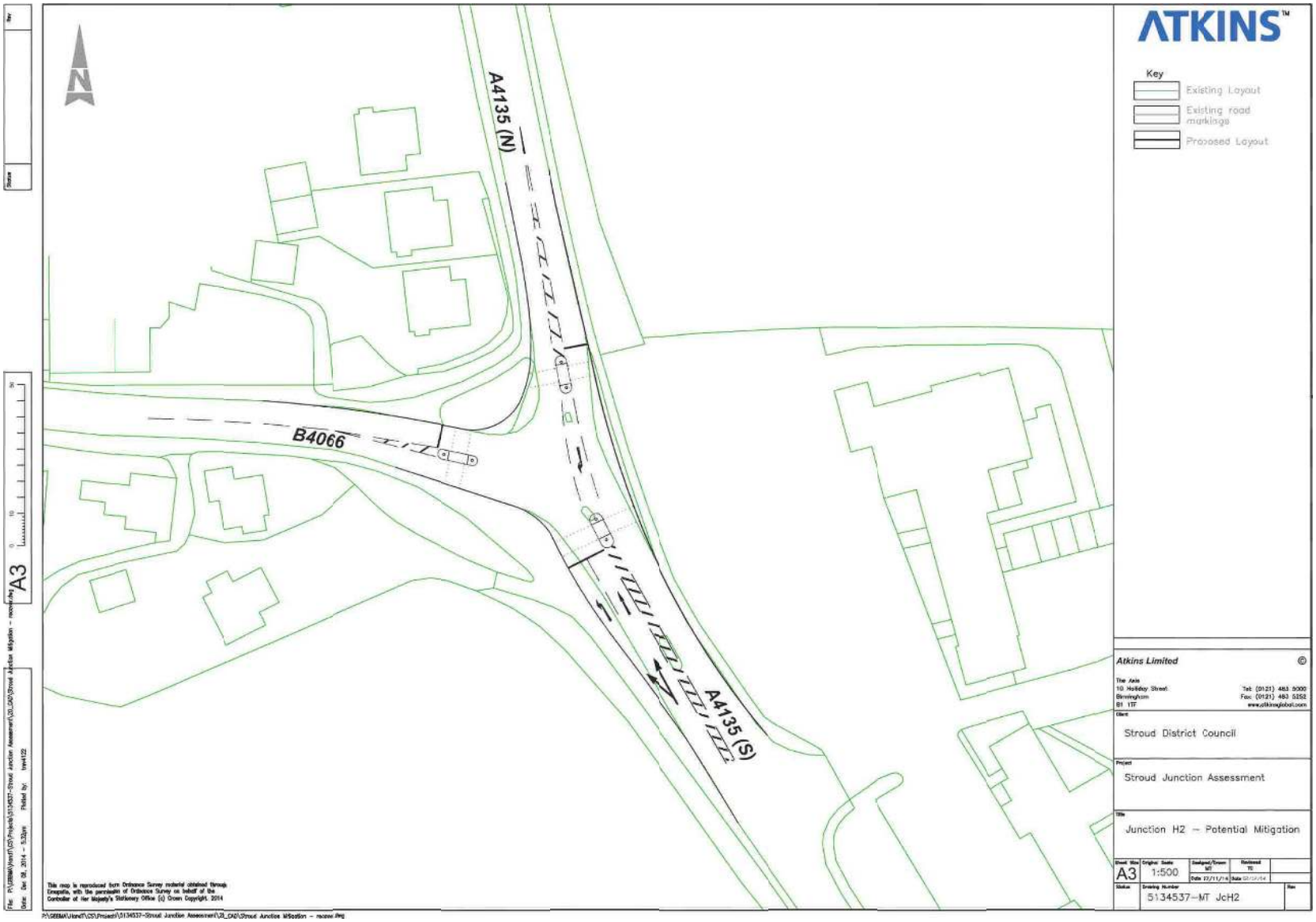
APPENDIX H

Consented Traffic Signals at A4135 Tilsdown / Dursley Road



Contains Ordance Survey data @ Crown copyright and database right (2014)

Drawing Title: Tilsdown/Dursley Road/Kingshill Road mini-roundabout - Mitigated layout	Client: Bathurst Ltd Job Title: Proposed mixed-use development, Millfields, Cam	asbritransport Suite 4 'J' Shed Kings Road Swansea Sa1 8PL T 01792 480535	Scale: NTS Designed by: HP Drawn by: HP Ckd/Appd: PO'C 1st Issued: Dec 2015 Job No: T15.141	File Extension: Drg No: Figure 6.16

APPENDIX I

Consented Roundabout at A4135 Cam Pitch / Woodfield Road

Contains Ordance Survey data @ Crown copyright and database right (2014)

Drawing Title: Woodfield Rd/Tilsdown/Cam Pitch mini-roundabout Mitigated layout	Client: Bathurst Ltd	asbritransport	Scale: NTS	File Extension:
	Job Title: Proposed mixed-use development, Millfields, Cam	Suite 4 'J' Shed, Kings Road, Swansea, Sa1 8PL, T 01792 480535	Designed by: HP	
			Drawn by: HP	
			Ckd/Appd: PO'C	
			1st Issued: Dec 2015	Drg No: Figure 6.10
			Job No: T15.141	