SELLINDGE VILLAGE ROAD SAFETY ASSESSMENT

FOR SELLINDGE PARISH COUNCIL

SEPTEMBER 2024

CONTENTS

1.0 INTRODUCTION

Ethos Consultants Ltd (hereby referred to as Ethos) have been commissioned by Sellindge Parish Council to undertake a road safety assessment and preparation of a feasibility study to establish the current traffic issues with road safety. This will then enable the identification of the most suitable interventions that will be effective at reducing traffic speed and volume, along with improving road safety within the village of Sellindge, located in the Folkestone and Hythe district in Kent.

For the purpose of this project, the study area has been defined as the A20 (Ashford Road) that runs east to west initially before travelling south (Barrow Hill), along with key connector roads that include Swan Lane, and Stone Hill, and residential side roads. Figure 1 below illustrates the study area and includes the following key roads:

- A20 Ashford Road;
- A20 Barrow Hill;
- Harringe Lane;
- Moorstock Lane;
- St Katherine's Crescent;
- Stone Hill;
- Swan Lane;
- The Cygnets.

Figure 1 – Road safety assessment study extents Sellindge

This project has been commissioned as part of the Safer Roads Stronger Communities initiative, developed by Ethos. While the primary goal of the initiative is to identify and address road safety concerns, it is crucial to ensure that the most suitable methods are used. To support this approach, the focus is on implementing road safety measures that align with the rural environment and landscape of Kent. However, in some cases, it may not be feasible to do so. When this is the case, more intrusive traffic calming measures may be proposed, although further consultation with stakeholders would likely be needed.

Examples of more intrusive traffic calming measures include speed bumps, speed tables, and extensive use of coloured road surfacing. Some types of traffic calming require additional engineering infrastructure but can still be effectively integrated into rural settings. A priority give-way system, for instance, serves as both a traffic calming measure and a means to incorporate green infrastructure.

Upon completion of the feasibility study, this report will be submitted to Kent County Council, serving as the Local Highway Authority (LHA), for review and feedback. A meeting involving Kent County Council, Sellindge Parish Council, and Ethos will be convened to discuss the identified road safety issues and potential interventions in greater depth. This collaborative discussion will facilitate the development of a final list of interventions, which will then progress to the delivery phase. It is anticipated that Kent County Council will contribute to the funding of these interventions. Prior to the meeting, a community consultation will be conducted to gather feedback on the scheme that Sellindge Parish Council wishes to implement.

1.2 REPORT STRUCTURE

This road safety report provides a comprehensive assessment of the current conditions and a feasibility study evaluating the viability of the proposed measures. It encompasses the following key components:

- Assessment of the existing conditions;
- Feasibility design and evaluation;
- Recommendations for the next steps towards delivering the proposed scheme.

Following a comprehensive assessment of Sellindge village and a thorough analysis of the primary traffic and road safety concerns, the following road safety interventions have been identified as suitable for implementation. Further details regarding these interventions are provided in Chapter 5 of this report, while Chapter 8 outlines their potential inclusion in a works package. This section also examines the effectiveness of grouping interventions together, considering the available budget, both with and without contributions from the Local Highway Authority (LHA).

Gateway treatments at 30mph terminals on approaches to Sellindge

Improvement to traffic signage

Extension of 30mph speed limit along the A20 on both approaches

Implementation of 20mph limit or zone within village centre


School Safety Zone outside Sellindge Primary School

Installation of Speed Indicator Devices (SIDs)


Humped zebra crossing outside primary school


Continuous footways along A20 side roads


Priority give-ways along Ashford Road


Road narrowing & uncontrolled crossing point west of St Katherine's Crescent


Road enhancements along Ashford Road


Junction improvements Ashford Road Swan Lane

2.0 BACKGROUND

2.1 BACKGROUND TO SAFER ROADS STRONGER COMMUNITIES

Ethos is a transport consultancy specialising in road safety, with a broad range of experience working across the UK for various clients, including central government agencies, local authorities, Parish and Town Councils, and resident groups. This diverse expertise is essential when determining the most appropriate interventions for locations ranging from densely populated urban centres to rural villages.

Road safety remains the paramount concern within the transport industry. Inadequate infrastructure increases the likelihood of serious collisions and potential fatalities. While it is impossible to eliminate all safety risks on public highways, there are often opportunities to implement improvements in most cases. This responsibility falls to the Local Highway Authority (LHA), which employs a range of transport professionals, including road safety engineers and highway inspectors.

Historically, Town or Parish Councils could request road safety assessments by contacting the LHA. An engineer would conduct the assessment and provide feedback on potential concerns and opportunities for safety interventions. However, this process was revenue-funded until a project reached the "scheme" stage. Recently, the time available for addressing transport and road safety concerns in rural areas has significantly diminished. LHA staff are increasingly required to focus their revenue resources on preparing business cases and funding applications for external sources, which has become the primary method for securing the financial allocations necessary for large-scale transport projects.

This shift has created a disconnect between LHAs and Town or Parish Councils. LHAs are unlikely to allocate funds to capital projects without an evidence base confirming the existence of safety issues, which can only be established through revenue-funded assessments. Consequently, local road safety projects have seen a decline in investment, with Town and Parish Councils, as the closest level of government to local communities, bearing the brunt of these impacts.

In response, Ethos has taken a proactive approach to bridge this gap by introducing the Safer Roads Stronger Communities initiative. This initiative aims to create a partnership that unites Town and Parish Councils across the country into a central hub

managed by Ethos. This collective approach is likely to generate greater influence than individual councils could achieve independently.

By conducting road safety assessments, Ethos can provide LHAs with the necessary evidence base to demonstrate safety concerns in a town or village. While LHAs may dispute these findings, they would need to provide sufficient evidence to support their position. Failure to do so could expose the LHA to significant risk, particularly if a serious incident occurs that could have been prevented with appropriate intervention. In cases involving fatalities, this could even lead to charges of manslaughter.

2.2 BACKGROUND TO SELLINDGE VILLAGE

Sellindge is a village situated in the Folkestone and Hythe district of Kent, located to the east of Ashford, the nearest postal town. According to the 2021 Census, the village has a population of 1,748, reflecting an increase of approximately 147 residents since the 2011 Census (an 8% rise) and 392 residents since the 2001 Census (a 22% rise). Sellindge lies approximately nine miles west of Folkestone and five miles northwest of Hythe, the two main settlements within the local constituency.

The village is centred around the A20, the primary road running through its core. The A20 connects to the M20 motorway both to the east and west of the village, serving as a key distributor route. Despite its relatively small geographic size and population, Sellindge contains several trip generators located at various points throughout the village. These include:

- Church;
- Convenience store (Co-Op);
- Farm shop;
- Nursery;
- Primary school;
- Public House;
- Sports & social club;
- Surgery;
- Village hall.

As anticipated, the primary trip generators in Sellindge are concentrated in specific areas of the village, with most located near the village centre. The church is situated towards the western end of the village, while local businesses operate on its outskirts.

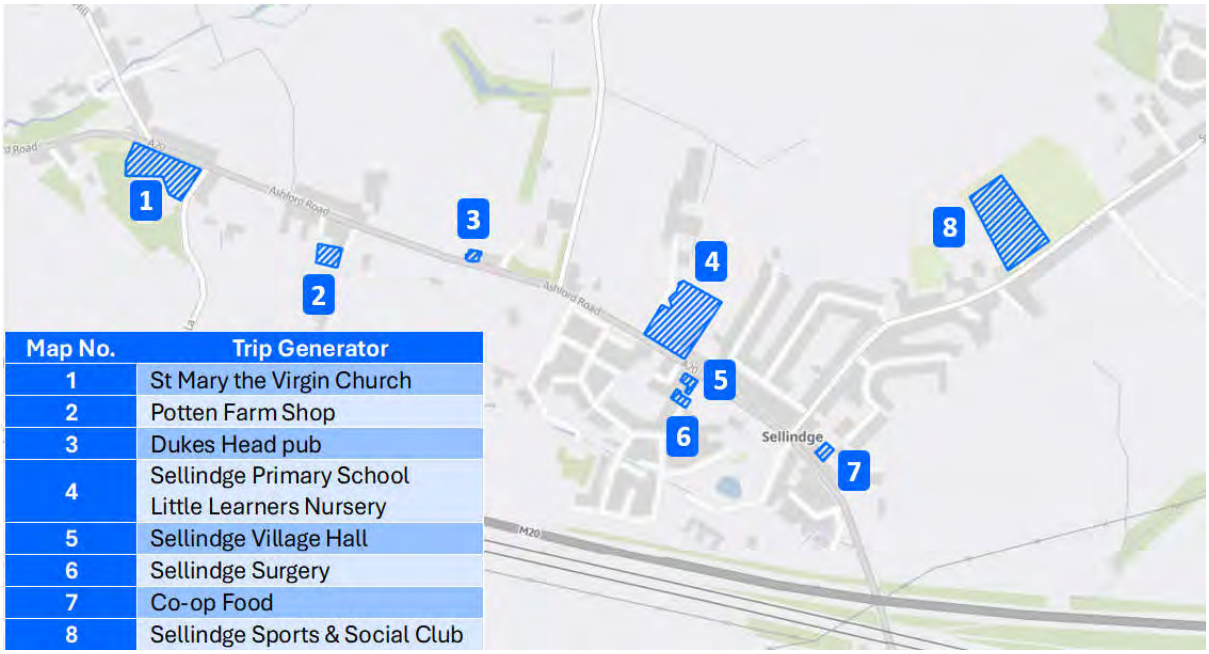
Sellindge is in close proximity to the Strategic Road Network (SRN). While the A20 serves as a key distributor road, the M20 motorway, which is part of the SRN, can be accessed from both the east and west of the village. Junction 10A of the M20 is located approximately 4.5 miles west of Sellindge, and Junction 11 is just over 3 miles east. Given this proximity, it is highly likely that traffic may use Sellindge as a cut-through during times of congestion on the M20, potentially increasing road safety risks.

The village does not have a railway station, with the nearest station located in Westenhanger, approximately 3 miles southeast. However, a local bus network serves Sellindge, with bus stops along key routes such as Ashford Road, Barrow Hill, Swan Lane, and Stone Hill, providing generally adequate coverage. Nevertheless, some areas, such as residential properties along Moorstock Lane, may be less well-served.

Sellindge has experienced substantial housing growth in recent years, with plans for further expansion. Taylor Wimpey has completed 250 homes on the southern side of Ashford Road, covering a significant portion of the village. Quinn Homes is currently constructing 128 homes at their Grove Park site in the southern area near the M20 bridge, and they are also proposing an additional 105 homes at Elm Tree Farm, located on the northern side of Ashford Road adjacent to Sellindge Primary School.

In addition, Gladman Developments Limited has submitted plans for 105 homes next to Potten Farm Shop, and a long-term proposal includes the construction of 170 homes along the south side of Ashford Road, with an initial phase of 55 homes planned around Grove House and Fieldhead. If these developments are approved, the village's size and population will increase significantly. Housing development is discussed further in section 3.2 of this assessment report.

Following a detailed review of the village, eight key areas have been identified as likely to attract various transport modes due to their proximity to trip generators and road positioning. These locations are illustrated in Figure 2. It is important to note that additional locations may also generate footfall. However, based on site observations and expected lower footfall, these areas have not been flagged as areas of concern.



Map No.	Trip Generator
1	St Mary the Virgin Church
2	Potten Farm Shop
3	Dukes Head pub
4	Sellindge Primary School Little Learners Nursery
5	Sellindge Village Hall
6	Sellindge Surgery
7	Co-op Food
8	Sellindge Sports & Social Club

Figure 2 - Key trip generators within Sellindge village

2.3 NEIGHBOURHOOD PLAN

One potential funding source for Parish Councils to finance local infrastructure projects is the Community Infrastructure Levy (CIL). The CIL is a charge that local authorities can impose on new developments to help fund the necessary infrastructure, such as schools, transportation networks, open spaces, and other community facilities. This funding can be particularly valuable for highway improvements, including the road safety measures proposed in this report.

Parish Councils are eligible to receive a portion of CIL receipts generated from developments in their area. By default, councils receive 15% of these receipts, which can be allocated to local infrastructure projects. However, councils with an adopted ('made') Neighbourhood Plan are entitled to a higher share, receiving 25% of the CIL receipts. In the case of Sellindge Parish, the absence of a Neighbourhood Plan limits access to only 15% of CIL receipts, lowering available funding for local projects. This also reduces the Parish's influence on development decisions and its ability to secure additional resources for critical infrastructure improvements.

3.0 EXISTING SITUATION

This chapter identifies the road safety concerns that have been identified during the site assessments undertaken throughout the village. These only include issues where it's felt that road safety interventions are required. There may be additional sites that have a perceived safety issue. These have either been assessed and the outcome is that the road safety issue isn't at a threshold where intervention is required, or it's likely that there will be marginal improvements through other interventions that will mitigate against the issue or reduce the issue to a point where intervention isn't required.

3.1 TRAFFIC SPEED INTO AND THROUGH SELLINDGE VILLAGE

As you approach the village from both the west and south along the A20, there is an existing 40mph speed limit before reaching the 30mph speed limit terminal signs. From the north, on Swan Lane, the approach to the village is subject to the national speed limit of 60mph. The 30mph speed limit terminal signs from the west are situated on Ashford Road, just west of the junction with Moorstock Lane. From the south, they are located on Barrow Hill at the junction with Meadow Grove. Along Swan Lane, the 30mph speed limit terminal signs are positioned approximately 190 meters north of the junction with Brook Lane.

After observing traffic behaviour entering Sellindge from the west and south along the A20, it is our assessment that the current 30mph speed limit does not extend far enough to encourage appropriate speeds through the village. Additionally, there are several residential properties located within the 40mph zones, which would warrant extending the 30mph limit further south and west. Although there is no 40mph buffer

zone on Swan Lane, the 30mph limit extends further from densely populated areas, a practice that should be mirrored in other parts of the village.

In village environments, drivers typically begin to reduce their speed only at the point where the speed limit changes, whereas in more urban settings, this reduction often occurs before reaching the change in speed limit. As a result, traffic may be entering the village at higher speeds than appropriate, although vehicles likely reduce speed by the time they reach the village centre. However, this reduction may still exceed 30mph, though the position of the speed limit gateways may not be a contributing factor, as driver behaviour plays a significant role.

Within the village centre, a network of street lighting columns meets the required standards for a 30mph speed limit, eliminating the need for 30mph repeater signs, as the lighting columns themselves indicate the speed limit. Along the approaches to the village within the 40mph speed limits, there are regular 40mph repeater signs, which are necessary to ensure the speed limit is legally enforceable.

There are a number of differences between a speed limit terminal sign, and a speed limit repeater sign. The most obvious difference is size. Based on the Traffic Signs Regulations and General Directions (TSRGD) guidance, a terminal speed limit sign should be 600mm in diameter when travelling from a national 60mph to 40mph. A repeater sign is restricted to 450mm in diameter, which makes the signs smaller. Both terminal signs and repeater signs can be obscured in rural locations due to overgrown vegetation and poor sight lines. Where visibility can become an issue, it is possible to erect the signs on a yellow backed board. This should be limited in use.

Based on the site visit observations throughout the day, it was apparent that traffic was frequently travelling well in excess of the 30mph speed limit. There are opportunities to reduce traffic speed through signage and road marking improvements, which are covered in chapter 5 of this study. Combining these with physical measures, a noticeable speed reduction can be achieved (upwards of 5-7mph through the village).

There is a SpeedWatch programme in place within Sellindge village that operate on a frequent basis. There have been 21 days across 2024 where SpeedWatch enforcement has been undertaken. This is a positive number, with many villages across the UK struggling to resource SpeedWatch programmes on a monthly basis. 21 days is comfortably above the average for rural villages.

The SpeedWatch programme is held in several locations within the village, which is always recommended. Locations used for the programme include the A20, Ashford Road (near the village hall), the A20, Ashford Road (entrance to field, by Wellington Cottage), the A20 Barrow Hill (outside Linton opposite The Mount), Swan Lane (near the junction with Chislet Close), and Swan Lane (opposite Numbers 68 and 70).

During the period of January 2024, and September 2024, there have been 132 vehicles recorded by Sellindge SpeedWatch travelling at 35mph or above within the 30mph speed limit, or above 40mph within the 40mph speed limit. 115 of the 132 vehicles recorded were within the 30mph speed limit, and 17 vehicles recorded were within the 40mph speed limit. 50 of the 132 vehicles recorded were captured along the A20 Ashford Road, 2 vehicles were recorded along the A20 Barrow Hill, and 80 vehicles were recorded along Swan Lane.

Within the 30mph speed limit, the highest speed recorded was 47mph, which was captured on 13th August 2024 at 07:38am. Concerningly, the location of this occurrence was near the village hall, which is a central area within the village. There are numerous examples of vehicles recording speeds in excess of 40mph. Within the 40mph speed limit, the highest speed recorded was 62mph, which was captured on 19th March at 17:41. The location of this occurrence was by Wellington Cottage.

Figure 3 provides a breakdown of the vehicle speeds captured during the SpeedWatch programme undertaken within Sellindge between January 2024 and September 2024

compared to the speed limit along the A20 Ashford Road. Figure 4 provides the same data for Swan Lane.

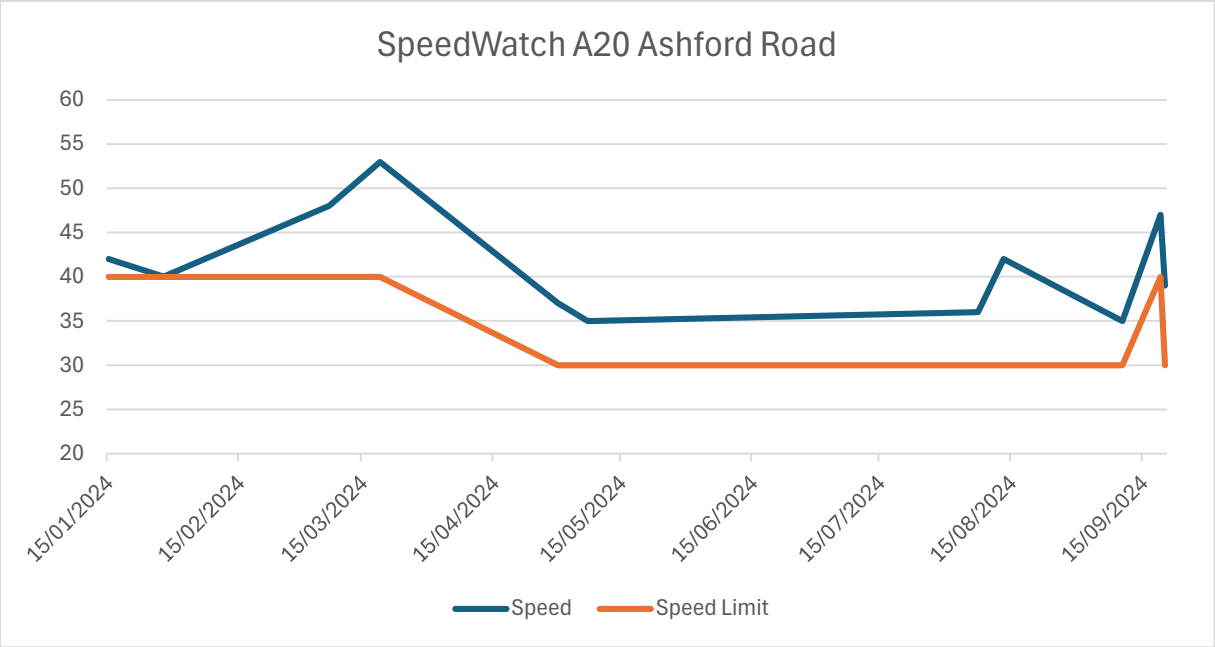


Figure 3 – SpeedWatch data 2024 along A20 Ashford Road

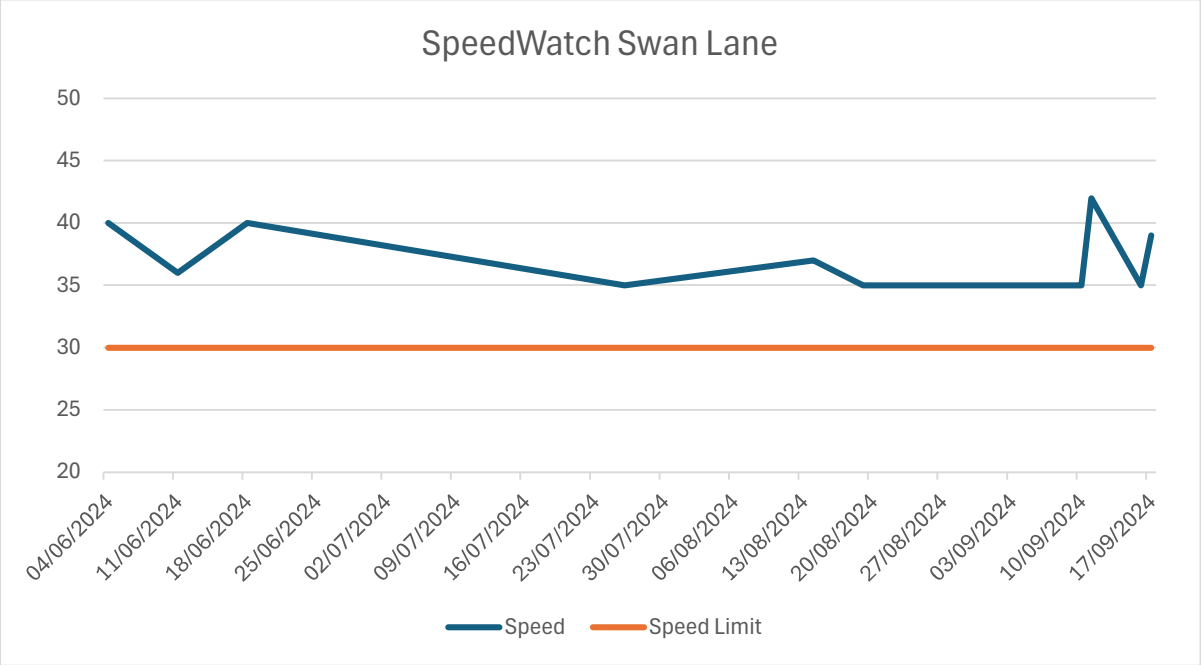


Figure 4 – SpeedWatch data 2024 along Swan Lane

3.2 NEW DEVELOPMENT SITES

As outlined in section 2.2 above, there is significant growth in homes within Sellindge. There are a further 370 homes proposed as part of recent planning applications within the village. This is on top of the 250 homes constructed by Taylor Wimpey within the centre of the village. Due to the new homes constructed, along with the current Grove Park development site that is under construction, and proposed development sites, there is a risk that the existing road network will struggle to cope with the additional capacity.

There are a number of potential issues that may arise in Sellindge with excessive development, without appropriate mitigating actions, which could include the following:

Increased Traffic Congestion - As new residential developments are established, the influx of residents inevitably leads to a dramatic increase in the volume of vehicles on local roads. This surge in traffic can have severe repercussions on the existing road network including regular congestion that has numerous issues including longer travel times, negative impacts on the environment, and a reduction in the quality of life.

Road Safety Concerns - The surge in traffic volume on roads not designed for such capacity can lead to a significant increase in collisions and safety hazards that could include a higher risk for pedestrians and cyclists. Increased congestion may cause drivers to behaviour more erratically, further endangering other road users.

Environmental Impact - The environmental consequences of increased vehicle usage in newly developed areas can be severe as higher traffic volumes can lead to increased emissions of harmful pollutants, the constant flow of traffic can create

significant noise disturbances, affecting residents' quality of life and potentially impacting property values, and the increase in greenhouse gas emissions from vehicles can contributes to the broader issue of climate change.

Strain on Existing Infrastructure - Older roads often struggle to cope with the increased traffic load brought about by new developments, which can lead to faster deterioration, leading to more frequent repairs and maintenance that can have a negative impact on budgets. It's also likely that existing infrastructure will not have been designed to handle the increased volume of traffic, resulting in further congestion.

It is therefore essential that any future development within the village integrates appropriate infrastructure improvements to the public highway. These improvements should not only address the immediate impacts of increased traffic but also ensure the long-term safety and efficiency of the road network. The road safety measures outlined in this assessment report should be given priority, as they are specifically designed to mitigate potential hazards and enhance safety for all road users, including pedestrians, cyclists, and drivers.

In addition to road safety interventions, it is equally important to prioritise enhancements that promote active travel and sustainable transport options. This includes the provision of improved walking and cycling routes, better connectivity to public transport, and the incorporation of traffic-calming measures that encourage slower speeds and safer streets. By focusing on both road safety and sustainable transport improvements, future development can support a healthier, safer, and more environmentally friendly community, reducing reliance on private vehicles and promoting a more active lifestyle for residents. These considerations should be embedded into the planning and design of all new developments to ensure they contribute positively to the overall infrastructure of the village.

3.3 EXISTING TRAFFIC SIGNAGE AND ROAD MARKINGS

The current signage throughout the village is generally adequate, but there is room for improvement that could enhance overall road safety. Several warning signs, directional signs, and road markings have become faded, reducing their visibility and effectiveness. Although none of these signs or markings require immediate replacement, there is a potential risk that, without timely action, further deterioration could pose a significant safety concern. In particular, speed limit signs may soon need to be replaced to ensure that reduced visibility does not impair the enforcement of speed limits.

In addition to the condition of the signs, there is a risk that overgrown vegetation could obscure critical traffic signs, such as warning signs, which may lead to confusion, especially for drivers unfamiliar with the area. The Parish Council should work with landowners where possible to address vegetation overhanging the public highway, to prevent it from obstructing traffic signs and creating potential road safety hazards.

In addition to several signs being in poor condition, there are also locations where signage is absent but could be beneficial, such as the installation of advance warning signs. Strategically placing these signs in appropriate areas may help regulate vehicle speeds as they approach the village centre, contributing to enhanced traffic control and safety.

There are specific areas within the village where the introduction or enhancement of road markings would be advantageous, and conversely, some areas where the removal of certain markings would be beneficial. Implementing or improving edge-of-carriageway lines, for instance, would help to visually narrow the perceived width of the roadway, thereby encouraging drivers to reduce their speed. While this intervention on its own may result in only marginal improvements, when incorporated into a broader package of traffic calming measures, it would contribute to achieving a more significant and sustainable reduction in vehicle speeds.

3.4 CROSSING FACILITIES

There are currently two controlled pedestrian crossing facilities in Sellindge, both situated along Ashford Road. The first is a zebra crossing located directly outside Sellindge Primary School in the village centre, and the second is positioned southeast of the Co-Op convenience store, towards the southern end of the village. These locations are well-chosen, as both the school and the Co-Op are likely among the most frequented destinations within the village, making controlled crossings essential for pedestrian safety in these areas.

Additionally, there is what appears to be a newly constructed uncontrolled crossing point near the Grove Park development, which is delivering 128 new homes. This development is expected to generate significant pedestrian traffic, making the crossing point a prudent and effective safety measure for residents and visitors in that area.

While the existing pedestrian crossing facilities in Sellindge are generally adequate, there are opportunities to improve safety by considering additional crossing points. Notably, there are no pedestrian crossing facilities to the west of Sellindge Primary School, which may pose a safety risk as pedestrians are likely to cross the road at various unmarked locations. Although current pedestrian demand may not justify the installation of an additional controlled crossing, the introduction of an uncontrolled crossing in this area would be beneficial. A potential location for such a crossing could

be between the Dukes Head public house and Potten Farm shop, providing a safer and more defined route for pedestrians in that part of the village.

Consideration should also be given to pedestrian traffic originating from Swan Lane, particularly those seeking to access key community facilities such as the village hall or the medical surgery. There are several residential properties along Swan Lane, which may warrant the installation of a pedestrian crossing. Expecting pedestrians to take a longer route to use one of the existing zebra crossings and then backtrack is impractical. Consequently, pedestrians are likely to cross the road near the junction of Ashford Road and Swan Lane, a frequently used and busy junction. This increases the potential risk of collisions between vehicles and pedestrians, highlighting the need for an appropriate crossing solution to enhance safety in this area.

In addition to the potential for additional crossing facilities within the village, several side roads off Ashford Road currently require pedestrians to give-way to vehicular traffic. While these junctions generally have adequate accessibility features, such as dropped kerbs and tactile paving, the relatively low volume of traffic at some of these

junctions presents an opportunity to enhance pedestrian safety. Introducing continuous footways at these locations could give pedestrians priority over vehicles entering or exiting side roads, improving pedestrian flow and safety.

However, continuous footways may not be appropriate for side roads with higher traffic volumes, such as Swan Lane, Moorstock Lane, and Stone Hill. That said, there are several side roads where this approach could be considered, including Bull Lane, St Katherine's Crescent, The Cygnets, and Siegfried Close. The implementation of continuous footways is explored further in section 5.9 of this assessment report.

3.5 PEDESTRIAN ACCESSIBILITY

While the pedestrian accessibility facilities along Ashford Road in the village centre are generally sufficient, there are several locations where these facilities do not meet the required standards to ensure inclusivity for all pedestrians, particularly those with mobility impairments. Key accessibility issues identified include footways lacking dropped kerbs, footways without tactile paving, and situations where dropped kerbs on either side of the road are not properly aligned. These misalignments can pose significant challenges for visually impaired pedestrians, who rely on consistent tactile and visual cues to navigate safely.

The accessibility challenges are most pronounced at junctions off Swan Lane, in the northern areas of the village, and along Barrow Hill in the southeastern part of the village. Specific junctions that fail to meet accessibility standards include Downs Way, Whitehall Way, Swan Gardens, and Brook Lane along Swan Lane, as well as Meadow Grove along Barrow Hill. These locations have been identified as areas with more severe accessibility deficits compared to other parts of the village, and improvements

are necessary to bring them in line with best practices for inclusive pedestrian infrastructure.

Although improving accessibility may not traditionally be classified as a direct road safety intervention, it plays an integral role in enhancing overall pedestrian safety and inclusivity. Addressing these deficiencies would contribute to a safer and more navigable environment for all road users, including those with disabilities, parents with pushchairs, and the elderly. These enhancements should, therefore, be considered as part of the broader strategy to improve road safety in the village.

One of the key advantages of accessibility improvements is their relatively low cost compared to other infrastructure upgrades. In many cases, the installation of dropped kerbs and tactile paving at key locations would be sufficient to resolve most accessibility issues. These cost-effective measures can significantly enhance pedestrian safety and mobility, making the village more accessible and user-friendly for all residents and visitors.

4.0 COLLISION DATA

As part of this feasibility study, a thorough investigation of collision data has been conducted. A review of the *Crashmap* website over a five-year period from 2018 to 2022 has revealed that eight reported collisions occurred within the village boundaries. It is important to note that this data only reflects incidents that involved the response of emergency services, and there may have been additional minor collisions, or "prangs," which were resolved at the scene without formal reporting or record-keeping.

Between 2018 and 2022, two serious collisions were recorded, as represented by the red icons on the map in figure 5. The first serious collision took place in April 2018 along Ashford Road, just south of the Co-Op convenience store, and involved two vehicles, resulting in one casualty. The second serious collision occurred in September 2020 along Swan Lane, south of the Brook Lane junction, also involving two vehicles and resulting in one casualty.

During the same period, six slight collisions were reported, denoted by amber icons on the map. Three of these incidents occurred along Ashford Road: one west of the Potten Farm Shop access, one at the Swan Lane junction, and one south of the Co-Op convenience store. Additionally, one slight collision was reported along Barrow Hill, north of the Grove Bridge junction. The remaining two slight collisions took place on Swan Lane, one south of the Chislett Close junction and the other near Sellindge Bowls Club.

Figure 5 provides a visual representation of the collision locations and their severity. The icons within the red box represent collisions that occurred on the M20 motorway and are not within the village of Sellindge. This data underscores the importance of addressing road safety issues within the village, particularly in high-traffic areas such as Ashford Road and Swan Lane, to reduce the likelihood of future incidents.

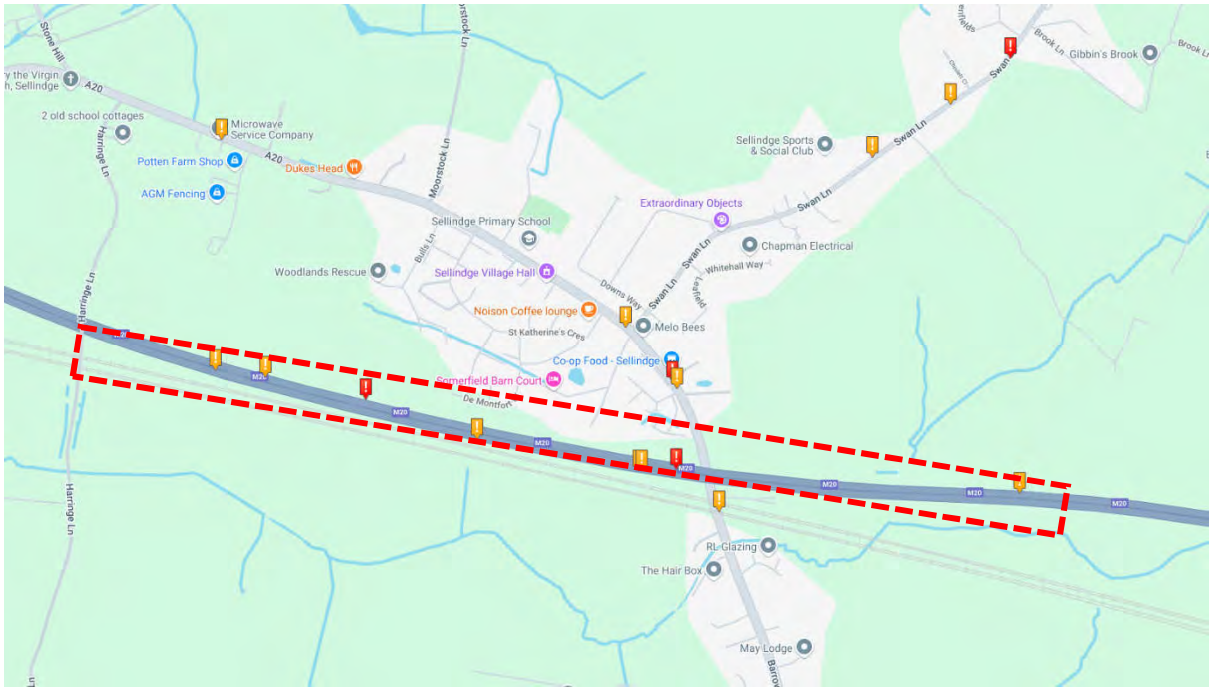


Figure 5 – Image detailing collisions that have occurred in Sellindge village

A summary of the collisions is shown below:

SERIOUS COLLISIONS

Date: 07/04/2018

Location: Ashford Road, south of the Co-Op convenience store

Number of vehicles involved: 2; **Number of casualties involved:** 1.

Date: 19/09/2020

Location: Swan Lane, south of the junction with Brook Lane

Number of vehicles involved: 2; **Number of casualties involved:** 1.

SLIGHT COLLISIONS

Date: 16/08/2019

Location: Ashford Road, west of the access for Potten Farm Shop

Number of vehicles involved: 3; **Number of casualties involved:** 1.

Date: 11/01/2019

Location: Ashford Road, junction with Swan Lane

Number of vehicles involved: 2; **Number of casualties involved:** 2.

Date: 03/04/2021

Location: Ashford Road, south of the Co-Op convenience store

Number of vehicles involved: 2; **Number of casualties involved:** 1.

Date: 08/07/2018

Location: Barrow Hill, north of the junction with Grove Bridge

Number of vehicles involved: 2; **Number of casualties involved:** 1.

Date: 17/03/2018

Location: Swan Lane, south of the junction with Chislett Close

Number of vehicles involved: 3; **Number of casualties involved:** 2.

Date: 08/04/2022

Location: Swan Lane outside the Sellindge Bowls Club

Number of vehicles involved: 1; **Number of casualties involved:** 1.

After reviewing the collision data, no clear pattern emerges. While three of the eight collisions occurred in April, they were spread across different years, making it difficult to establish a consistent trend. Additionally, two collisions happened near one another, just south of the Co-Op convenience store. However, given that this area experiences high traffic volumes and frequent vehicle manoeuvres, this isn't particularly surprising.

It is recommended that Kent County Council, as the highway authority, conduct a more detailed analysis of this collision data. This should include a review of the Stat 19 forms, which provide detailed information on each incident. A closer examination of these forms may help determine if speed or other factors contributed to the collisions. Such an in-depth review would provide valuable insights that could inform targeted interventions to improve road safety in the village.

5.0 FEASIBILITY DESIGN

5.1 INTRODUCTION

This section outlines the interventions evaluated by Ethos for potential implementation in Sellindge village. It provides an assessment of their likely impact, an effectiveness score out of 10, and an associated cost estimate. The effectiveness score takes into account the projected reduction in traffic speed and improvements to road safety, balanced against the potential cost of each intervention. For example, a low-cost intervention with significant benefits will receive a high score, whereas a high-cost intervention with minimal impact on safety or traffic speed will score lower.

The effectiveness score for each intervention is based on four specific criteria, which are weighted to give an overall score:

- Road safety;
- Traffic speed;
- Traffic volume;
- Impact on the road network.

The road safety criterion evaluates the intervention's ability to improve safety for all road users, including vehicles, pedestrians, and cyclists. To receive a high score, the intervention must demonstrate significant road safety benefits, either at a specific site or across a wider area. If the intervention offers only minor or no safety improvements, it will receive a lower score. Poorly designed interventions that could introduce new safety concerns will receive no score.

In most village environments, traffic speed is a common issue, especially on main roads such as Ashford Road (A20), Barrow Hill (A20), Swan Lane, and Stone Hill in Sellindge. Road safety interventions should aim to reduce traffic speeds, particularly for vehicular traffic. The traffic speed criterion is divided into categories based on the anticipated reduction in average speed. Interventions expected to reduce speeds by 6 mph or more will score highly, while those with lesser reductions (3-5 mph, 1-2 mph) will score moderately. Interventions that are unlikely to impact speed or could encourage higher speeds will receive no score.

Reducing non-residential traffic within a village is often the most challenging outcome to achieve. While road safety and traffic speed reductions can be accomplished with relatively low-cost measures, significant reductions in traffic volume generally require large-scale investments, such as upgrades to the Strategic Road Network, which can cost hundreds of millions. Therefore, achieving a high score for traffic volume reduction is uncommon. Nonetheless, any intervention that successfully reduces traffic within the village will be given a positive score.

The final criterion assesses the overall impact of the intervention on the site. Interventions that create substantial positive changes will receive a high score. Those with noticeable or slight improvements will earn a moderate score, while interventions with minimal or no impact will score low. If an intervention has a negative effect on the site, it will receive no score. The scoring for this criterion is influenced by the other factors mentioned above.

Table 1 provides a summary of the scoring system used in this study to evaluate the effectiveness of the proposed interventions for Sellindge, as described above. This structured approach ensures that each intervention is assessed comprehensively, taking into account its cost, benefits, and potential challenges.

Effectiveness				
Score	Safety	Speed	Volume	Impact
10	Substantial improvements to road safety	Average speed reduction over 6mph	Substantial reduction in non-residential traffic flow	Substantial impact at the site
9				
8	Noticeable safety improvements likely	Average speed reduction between 3-5mph	Noticeable reduction in non-residential traffic flow	Noticeable impact at the site
7				
6	Safety Improvements likely	Average speed reduction between 1-2mph	Reduction in non-residential traffic flow	Impact at the site
5				
4	Minor or no safety improvements likely	No speed reduction	Minor or no reduction in non-residential traffic flow	Minor or no impact at the site
3				
2	Intervention likely to cause additional safety concerns	Intervention may encourage excessive speed	Intervention may attract additional traffic	Intervention may cause negative impact at the site
1				

Table 1 – Intervention effectiveness assessment criteria

In addition to evaluating the effectiveness of each intervention, it is crucial to also consider the associated costs. In many cases, higher-cost interventions tend to be the most effective; however, assessing interventions without factoring in their delivery costs would provide an incomplete picture. If only the effectiveness were considered,

high-cost interventions would likely receive the highest scores, but their implementation could face significant challenges due to budget constraints.

To ensure a balanced approach, the assessment criteria incorporate not only the potential effectiveness but also the estimated costs of the interventions. This includes not only the direct costs of implementation but also any additional expenses, such as statutory process costs and regulatory requirements. By including cost considerations, the assessment offers a more realistic evaluation of each intervention's feasibility and its potential for practical implementation within available financial resources.

Table 2 outlines the criteria used to assign scores based on the estimated cost range of each intervention, ensuring that cost-efficiency is appropriately weighed alongside effectiveness in the overall evaluation process.

Score	Cost Range
10	£0 - £5,000
9	£5,000 - £10,000
8	£10,000 - £20,000
7	£20,000 - £40,000
6	£40,000 - £75,000
5	£75,000 - £100,000
4	£100,000 - £150,000
3	£150,000 - £200,000
2	£200,000 - £250,000
1	£250,000+

Table 2 – Cost Assessment for interventions

As part of this feasibility study, 12 interventions have been considered potentially suitable for Sellindge and are outlined below. These interventions include measures that primarily focus on traffic i.e. speed limit extensions, and signage, and measures that primarily focus on pedestrians i.e. widened footpaths, and accessibility improvements. However, most interventions are linked. For example, widening a footpath may result in a narrowing of the carriageway, which will reduce traffic speed.

One intervention not included in this feasibility study is the installation of speed humps or speed cushions. This option was not pursued due to several negative impacts associated with such measures. First, speed humps can significantly affect local traffic flow, causing disruptions for both residents and through-traffic. They can also detract from the aesthetic character of the village, which is a key consideration for a rural community like Sellindge. These types of traffic calming measures are often seen as more suited to urban environments and are not considered appropriate for the rural landscape and visual identity of the village.

Moreover, vertical traffic calming interventions such as speed humps are generally not recommended for A-Class roads due to their potential to cause discomfort to drivers, particularly those in larger vehicles, and the risk of increased vehicle noise. Given that Sellindge is situated along an A-class road, implementing speed humps could exacerbate these issues, making them unsuitable for the village's context. As a result, this intervention was excluded from further consideration in this study, except for the proposed humped zebra crossing (section 5.8), due to the proximity of the school.

5.2 GATEWAY TREATMENTS AT 30MPH TERMINALS

The speed of vehicles entering Sellindge, particularly from the west via Ashford Road and from the south along Barrow Hill, appears to frequently exceed the speed limit. This is not entirely unexpected given the characteristics of these roads and the volume of traffic passing through the village. The data suggests that the current 30mph speed limit terminal signs may not be sufficiently effective, as they are likely being overlooked by drivers.

To address this issue, it may be beneficial to redesign the existing 30mph gateway terminal signs to create a more prominent and visually impactful gateway at the village entrances. Enhancing the visibility and prominence of these signs on the approach to the village from both directions could serve as a stronger visual cue for drivers to reduce their speed, thereby improving compliance with the speed limit and enhancing road safety within the village. Such improvements could include additional visual elements, such as road surface markings or village nameplates, to reinforce the speed limit and signal the transition into a more populated area.

A well-designed, formalised gateway can significantly contribute to both placemaking and road safety. By incorporating signage and speed limit indicators, such gateways provide clear visual cues to drivers that they are entering a new area or settlement, prompting them to adjust their speed accordingly. A typical gateway might include village name signs and speed roundels, combined with surface treatments such as road markings and "slow" carriageway reminders. When implemented together, these interventions can lead to a reduction in vehicle speeds, enhancing overall road safety.

The design of a gateway treatment can vary, but studies have shown that such treatments can reduce average vehicle speeds by approximately 3-4 miles per hour as vehicles enter the village. In some cases, speed reductions of up to 5-6 miles per hour can be observed within the first 20 meters of the gateway, which means that vehicles are slowing down before fully entering the village, rather than reducing speed only after entering the populated area.

To illustrate the effectiveness of controlling entry speeds, Ethos previously conducted a study in a rural village, comparing traffic speeds when vehicles entered from a stationary position versus continuous movement. Temporary traffic signals were installed at the village entrance to simulate stopping conditions. The study found that the mean speed through the village centre was 28mph when traffic flowed uninterrupted, but it dropped to under 24mph when vehicles entered from a stationary position. The traffic survey was positioned approximately 700 meters from the temporary signals to ensure that traffic speeds had stabilised for comparison.

This study highlights the critical importance of controlling entry speeds at the village gateway. Without adequate measures in place at the entry point, vehicles are more

likely to maintain higher speeds through the village centre. While the results of the study are influenced by the fact that traffic was slowed by a stationary start, they nonetheless demonstrate a significant difference in speed between the two scenarios. In theory, properly designed village gateway signs can achieve similar results by encouraging earlier speed reductions as vehicles approach the village.

Figure 6 illustrates the mean traffic speed data captured as part of the study.

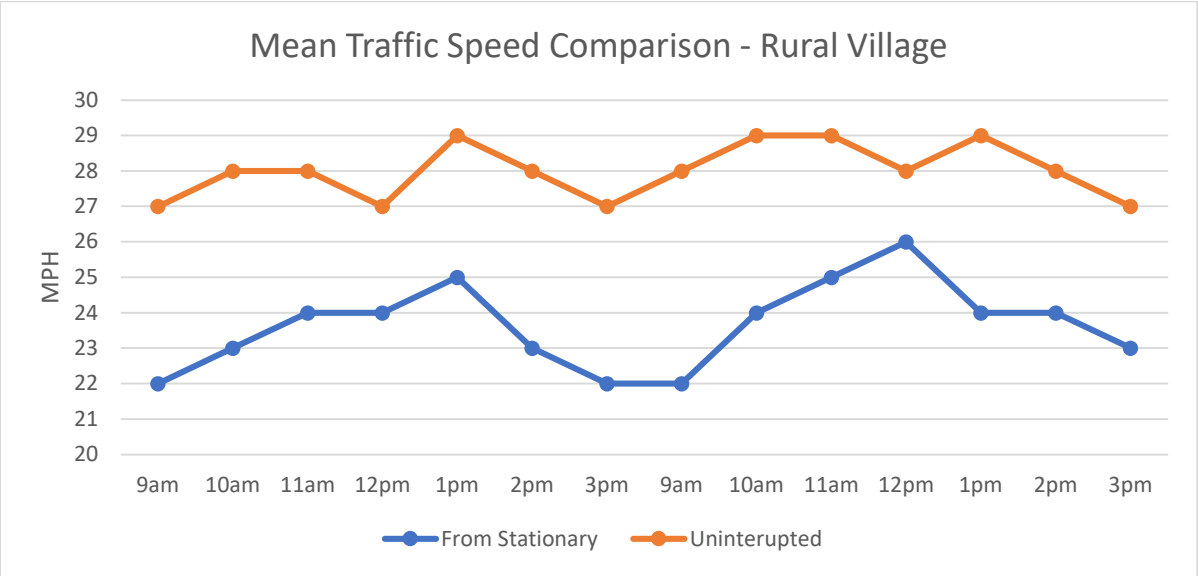


Figure 6 – Comparison of traffic speed through village based on entry speed

There are no specific design requirements of gateway treatments providing the 30mph signs are clear and the correct dimensions (600mm in size and at least 2.1 metres above the ground).

A village gateway will be one of the most effective interventions that do not involve physical traffic calming. Figure 7 provides an example of such a type of design.

Figure 7 – Example of gateway with speed limit and name plate

The cost of implementing gateway treatments can vary significantly depending on the type of treatment chosen. The most commonly used gateway design involves the installation of a gate arrangement, typically white or in a natural colour, to contrast with the surrounding grass verge. Each gate installation is estimated to cost approximately £2,000. Therefore, providing gateway treatments at both entry points along the A20, as well as along Swan Lane, would cost around **£12,000**, as it is important to have gateways installed on both sides of the carriageway for maximum visibility and impact. The overall cost can increase depending on the materials used, the specific design, and the sourcing of the equipment and labour.

In addition to the physical gate structures, road markings can be applied to reinforce the new speed limit and enhance the gateway's effectiveness. Red-coloured surfacing, for example, can make speed limit roundels much more visible by overlaying them on the contrasting road surface. White road markings can be used to create a virtual narrowing effect, which gives drivers the impression that the road is narrower than it actually is, encouraging them to slow down. This visual narrowing effect can contribute to an additional 1-3mph reduction in average speed beyond what the gateway treatment alone might achieve.

The installation of coloured surfacing and additional road markings would likely add around **£7,000** to the total cost of the gateway treatment.

By combining gateway treatments with supporting road surfacing and markings on the key approaches to Sellindge village, significant speed reductions can be achieved. It is anticipated that vehicle speeds will decrease by approximately 5-7 miles per hour on approach to the village when these treatments are implemented together, contributing to improved road safety and enhanced traffic management through the village.

Intervention	Safety	Speed	Volume	Impact	Total	Cost
Gateway treatments at 30mph terminals on approaches to Sellindge	6/10	7/10	3/10	8/10	24/40	9/10

Figure 8 below provides some examples of gateway treatments.

Figure 8 – Examples of speed limit gateway treatments

5.3 IMPROVEMENTS TO TRAFFIC SIGNAGE

Traffic signs are essential for providing road users with important information, instructions, and guidance. They are typically positioned along the carriageway and serve a wide range of purposes, from displaying speed limits to indicating points of interest such as leisure or tourism destinations. The placement of these signs and the clarity of the information displayed are crucial. Signs must be situated in visible, well-

defined locations, and their proximity to the point or area of relevance is important to ensure drivers have sufficient time to react to the information provided.

In Sellindge, several traffic signs have become worn or obscured by overgrown vegetation or nearby infrastructure. This can reduce their visibility and effectiveness, potentially creating safety hazards, especially when the signs convey critical information, such as warnings about upcoming bends or areas with high pedestrian activity. Ensuring that all signs are clearly visible and in good condition is vital to maintaining road safety and ensuring that drivers are properly informed as they navigate the village. Regular maintenance and the removal of visual obstructions are necessary to keep traffic signs functional and effective.

There are 300mm 40mph repeater signs positioned at regular intervals on the approaches to Sellindge village centre, particularly in areas where there are no street lighting columns. In the absence of such signs, a road without street lighting would be presumed to have a national speed limit for a single carriageway. However, many of the existing repeater signs are not sufficiently conspicuous due to their small size and suboptimal placement. In several instances, vegetation obstructs the signs, and the overall condition of many of them is poor, further diminishing their visibility.

As a result, drivers may not receive the necessary and consistent reminders of the speed limit as they approach the village. This lack of clear signage can lead to confusion and increase the likelihood of speeding, especially in areas where traffic calming measures rely on proper speed limit enforcement. Addressing the visibility and condition of these repeater signs by trimming vegetation, relocating them for better

visibility, and upgrading or replacing deteriorated signs would improve compliance with the speed limit and enhance road safety.

Implementing a traffic signage improvement programme across the village would be a cost-effective and beneficial intervention. Responsibility for signage falls under the jurisdiction of Kent County Council (KCC), and any such improvements would therefore be carried out by KCC. Priority should be given to signs that are most critical for road safety and those that are in the poorest condition. The cost of upgrading traffic signage is relatively low, primarily covering the manufacturing and installation of new signs. It is estimated that the total cost for improving signage throughout the village would range from **£4,000 to £5,000**.

This intervention, though modest in cost, could contribute to a slight reduction in vehicle speeds due to improved visibility of key warning signs. The anticipated speed reduction is estimated to be in the range of 1-2mph. More importantly, enhanced signage would likely reduce the risk of collisions, particularly at critical locations such as junctions and sharp bends. Further analysis, potentially through a review of Stat 19 collision data, could provide additional support for this assumption, confirming the positive impact of better signage on overall road safety.

Intervention	Safety	Speed	Volume	Impact	Total	Cost
Improvements to traffic signage	4/10	5/10	3/10	5/10	17/40	9/10

5.4 EXTENSION OF 30MPH SPEED LIMIT ALONG THE A20

The approach to Sellindge from both the west (Ashford Road) and the south (Barrow Hill) along the A20 is currently regulated by a 40mph speed limit. Prior to this, Ashford

Road to the west has a national speed limit of 60mph, while Barrow Hill to the south is subject to a 50mph limit. When implemented correctly, an intermediate 40mph speed limit is an effective means of gradually reducing vehicle speeds as traffic approaches a village.

In rural areas, it is often unrealistic to expect drivers to immediately reduce their speed from 60mph or 50mph to 30mph using terminal signs alone, particularly on the outskirts of the village where the population density is lower, and visibility may be better. The introduction of a 40mph limit on both approaches to Sellindge is intended to encourage drivers to make a two-stage reduction in speed—first slowing to 40mph and then to 30mph as they enter the village.

While this approach can be effective in slowing traffic entering rural villages, in the case of Sellindge, the current configuration has proven less successful. This is largely due to the proximity of the 30mph speed limit to the village centre, especially for traffic approaching from the west along Ashford Road. The existing 30mph/40mph terminal signs are positioned just west of the junction with Moorstock Lane, which is approximately 225 meters from Sellindge Primary School and 275 meters from the village hall, both central locations in the village. The placement of these terminal signs so close to key areas of pedestrian activity reduces the effectiveness of the intermediate 40mph limit, as drivers may not have sufficient time or motivation to adequately reduce their speed before entering these populated areas.

While the 30mph speed limit extents further south from the centre of the village along Barrow Hill, the existing 30mph/40mph terminal signs are located within an area with densely populated housing, which provides justification for extending the 30mph

speed limit further south. Extending the 30mph speed limit will then require the 40mph speed limit to be extended prior to the 50mph speed limit to ensure the 40mph sped limit remains effective at reducing traffic speed prior to the 30mph speed limit.

It is therefore recommended to extend the existing 30mph speed limit along both Ashford Road and Barrow Hill to increase the likelihood of vehicles entering Sellindge village at reduced speeds. However, it is crucial that this extension is not excessive, as imposing a 30mph limit too far from a built-up area may lead to lower compliance rates. Drivers are less likely to adhere to a lower speed limit in rural areas where such limits may feel unnecessary or uncomfortable.

Additionally, a separate proposal is under consideration to introduce either a 20mph speed limit or a 20mph zone in the core village centre, as outlined in section 5.5 of this report. While this proposal would impact the overall speed management strategy, the need to extend the 30mph limit remains relevant, whether or not the 20mph zone is implemented.

Figure 9 below illustrates a potential layout for the revised speed limit network on the approaches to, and through, Sellindge. This figure highlights the proposed extension of the 30mph limit, the corresponding extension of the 40mph limit that would be required due to the 30mph adjustment, and the points at which the national 60mph and 50mph limits would begin. It is important to note that this plan is based on the current situation and does not yet incorporate the potential introduction of a 20mph speed limit or zone, which is discussed further in section 5.5 of this report.

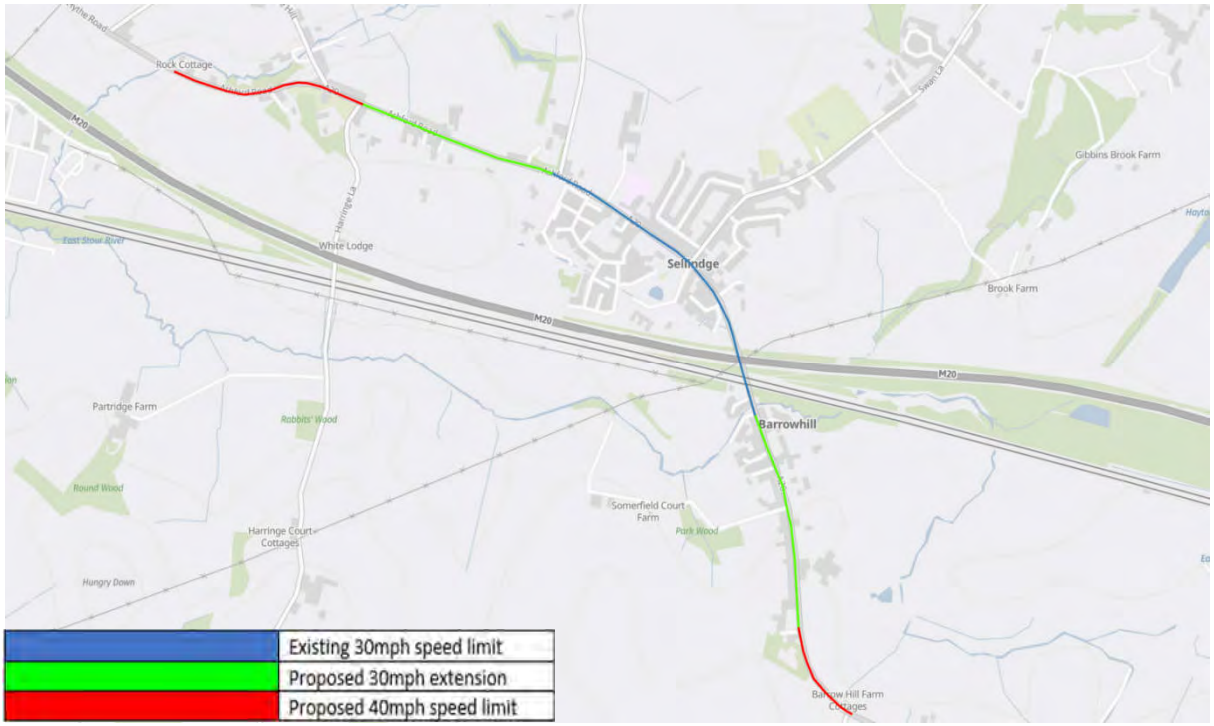


Figure 9 – Proposed intermediate 40mph speed limit on the approaches to the village

To implement this intervention, precise measurements will need to be taken to determine the most suitable location for extending the 30mph speed limit. This will also establish where the 40mph limit should begin. It is recommended that the extended 40mph speed limit should be at least 300-400 meters in length to achieve the desired effect. The distance of the 40mph extension should mirror that of the 30mph extension to ensure that the intermediate speed limit remains effective as a gradual transition.

This proposal is anticipated to reduce vehicle speeds by approximately 4-6 miles per hour as drivers enter the village. By maintaining an intermediate 40mph limit before reaching the village centre, drivers are more likely to sustain lower speeds throughout the village, knowing that the 40mph limit continues after they exit the 30mph limit.

The costs associated with extending the 30mph and 40mph speed limits are relatively low. The primary expenses involve the supply and installation of terminal and repeater signs. However, the more significant costs relate to the design, public consultation, and the legal process required to advertise the new speed limit through a Traffic Regulation Order (TRO). The overall cost of carrying out this intervention, from design through to implementation, is estimated to be between **£8,000 and £10,000**.

Intervention	Safety	Speed	Volume	Impact	Total	Cost
Extension of 30mph speed limit along the A20	8/10	7/10	3/10	8/10	**26/40**	9/10

5.5 IMPLEMENTATION OF 20MPH LIMIT/ZONE WITHIN VILLAGE CENTRE

A 20mph speed limit involves reducing the maximum permitted speed on a road or network of roads to 20mph, enforced solely through traffic signage and road markings. These speed limits are designed to be self-regulating, meaning that the average speed on the road should not exceed 24mph. If the average speed is higher than this, it is unlikely that simply reducing the limit through signs and markings will be sufficient to bring speeds down to the desired level.

The 20mph speed limits are often attractive for villages as they provide an effective method of enhancing safety and reducing speeds without the need for physical traffic calming measures such as speed bumps or chicanes. Aside from the gateway signs at the entry and exit points of the 20mph zone, the only additional infrastructure required are 300mm repeater signs at regular intervals along the route.

However, in many village environments, especially on the main roads, it is often challenging to achieve the necessary conditions for a 20mph limit to be effective. Average speeds on these key routes frequently exceed the 24mph threshold required for the 20mph limit to self-enforce. Some smaller, quieter residential roads may naturally have lower traffic speeds that fall within the required range, although these roads typically experience lower volumes of traffic. Consequently, while 20mph limits may be appropriate for select areas within a village, they are less likely to be effective on main thoroughfares without additional speed-reducing measures.

A 20mph zone differs from a 20mph speed limit in that it requires additional traffic calming measures to ensure compliance. These measures can include physical features, such as road narrowings, or non-physical elements like repeater speed limit signs and roundel road markings placed at regular intervals, ensuring that no point within the zone is more than 70 meters from such a feature.

The design of a 20mph zone may incorporate both physical and non-physical traffic calming interventions. Zones that include physical traffic calming features, such as speed humps, raised crossings, or chicanes, tend to be significantly more effective at reducing vehicle speeds. These physical features create a direct influence on driver behaviour, making the speed reduction more reliable and consistent.

The cost of implementing a 20mph zone can vary depending on the type of measures used. Low-cost options include speed limit signage, carriageway roundels, and edge-of-carriageway markings, which provide visual cues to slow down. In contrast, high-cost measures, such as road surface treatments, speed tables, and road realignments, require more extensive construction and resources. The choice between low-cost and high-cost interventions should be based on the specific needs and traffic conditions within the area to maximise the effectiveness of the 20mph zone.

A logical location for implementing a 20mph speed limit or zone in Sellindge is along Ashford Road, covering the area around the primary school and the village hall. This section of the road functions as the village centre and experiences heavy foot traffic, particularly during school drop-off and pick-up times. Ensuring the safety of schoolchildren, parents, carers, and local residents should be a top priority. The road's

straight alignment and good visibility in this area may encourage drivers to exceed the speed limit, making speed reduction measures necessary.

In addition to the primary school and village hall, the busiest junction in the village, Ashford Road/Swan Lane, is situated just east of this location. Enhancing safety at this junction is crucial due to the complex traffic movements and the presence of vulnerable road users, including pedestrians and cyclists. Reducing vehicle speeds at this junction would significantly improve safety, and therefore, a 20mph limit or zone is proposed to extend to this area.

Consideration should also be given to extending the 20mph speed limit along the southern section of Swan Lane. Site observations indicated that many pupils from Sellindge Primary School walk along Swan Lane, particularly from the residential areas such as Swan Gardens. The existing layout of Swan Lane, with its narrow lanes and on-street parking, would support a 20mph speed limit, naturally encouraging lower speeds.

The decision between implementing a 20mph speed limit or a 20mph zone will largely depend on the current average speed of traffic. At present, no speed data is available, and it is recommended that an Automatic Traffic Count (ATC) survey be conducted for a seven-day period during school term time to establish average speeds and the 85th percentile of traffic. If the average speed is found to be no greater than 24mph, a 20mph speed limit would be appropriate, especially when combined with the supplementary interventions proposed in this assessment, which could further reduce traffic speeds to or below 20mph.

To support the proposal, two ATC surveys are recommended. The first should be positioned along Ashford Road, near the primary school, and the second should be located along Swan Lane, midway between the junctions with Ashford Road and Swan Gardens. If average speeds exceed 24mph, additional measures will be necessary, which would prioritise the implementation of a 20mph zone. These measures do not necessarily need to be physical, though physical interventions tend to be more effective. Other proposed interventions, such as a school safety zone and the installation of a humped zebra crossing, would further support the effectiveness of a 20mph zone. These measures are detailed in subsequent sections.

The proposed 20mph zone would cover a length of approximately 350 meters. To optimise cost-effectiveness while ensuring high impact, a combination of high-cost and low-cost infrastructure is recommended. Low-cost measures include speed limit signage and road markings, while higher-cost options could involve surface treatments or road realignment. Given the classification of Ashford Road, it is advised to consider surface colour treatments or changes in surface material as an alternative to traditional traffic calming measures.

To manage costs, it is not recommended to apply road enhancement treatments along the entire length of the 20mph zone. Instead, these treatments should be concentrated in the vicinity of the primary school, with signage and road markings defining the full extent of the zone. The specific boundaries and details of the 20mph zone should be agreed upon through discussions between Kent County Council and the Parish Council during the implementation phase.

Improving the environment around the school is likely to encourage more pedestrian traffic, contributing to a modal shift toward walking and cycling. Figure 9 below provides an illustration of how a surface colour treatment can enhance a village environment, offering a cost-effective alternative to changes in surface materials.

Figure 9 – Example of changing the surface colour to enhance the environment

A key difference between the proposal for a 20mph speed limit, and a 20mph zone will be the size of the scheme. A 20mph zone would only cover the identified extents of Ashford Road, whereas a 20mph limit would enable the side roads located within the extents of Ashford Road to be included as well. Whilst these side roads are relatively small, it provides further reassurance to residents that safety is a priority in the village.

The side roads that could be included in the 20mph speed limit scheme include:

- Colemans Row
- De Montfort Drive
- Downs Way
- Dukes Close
- Forge Close
- Godfrey Lane
- Herringe Farm Close
- Leafield
- Lees Grove
- Potten Close
- St Katherine's Crescent
- St Marys Road
- Swan Gardens
- The Cygnets
- Whitehall Way

Figure 10 illustrates the proposed extents of the 20mph speed limit, whereas figure 11 illustrates the proposed extents of the 20mph zone.

Figure 10 – Proposed 20mph treatment areas for Queen Street

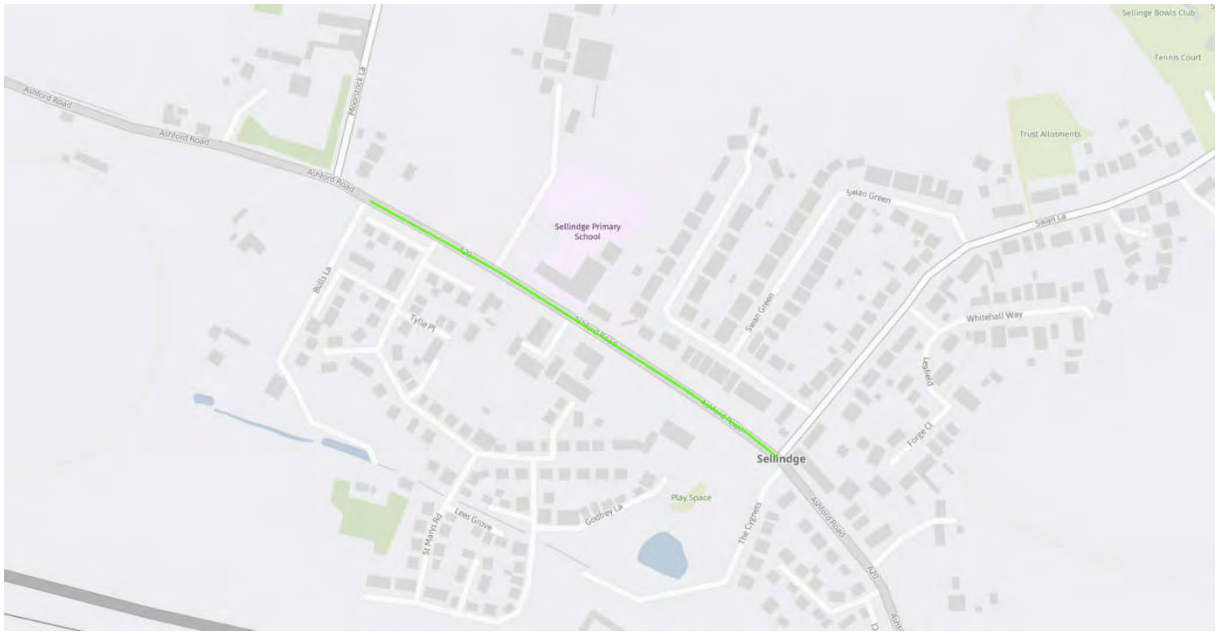


Figure 11 – Proposed 20mph treatment areas for Queen Street

Statistically, 20mph zones that incorporate physical traffic calming measures demonstrate significantly greater speed reductions, typically around 7mph, compared to zones without such measures, where reductions tend to be between 1-3mph depending on the characteristics of the road. This makes 20mph zones with physical interventions one of the most effective options for reducing traffic speeds within the village.

The cost of implementing a 20mph speed limit scheme in Sellindge is considered a low-cost intervention. The primary expense associated with this scheme would be the statutory process, including the preparation of a Traffic Regulation Order (TRO) and the required public consultation. The estimated cost for implementing a 20mph speed limit across the identified roads is approximately **£10,000-£12,000**. This cost includes the production and installation of statutory traffic signs and road markings necessary to enforce the speed limit. Minor adjustments, such as the inclusion or removal of additional streets, would have little impact on the overall cost.

On the other hand, the cost of a 20mph zone can vary significantly due to several factors, including the length of the road, the number and type of traffic calming features, the location, and the level of public consultation required. Estimating the total cost at this stage is challenging. However, the signage and road markings for a 20mph zone are relatively low-cost, with an estimated expenditure of around £5,000 for this aspect. For the purposes of this study, implementing a 20mph zone along Ashford

Road is projected to cost between **£60,000 and £80,000**. This estimate accounts for the inclusion of higher-cost road enhancements in the core village area, along with lower-cost measures to ensure effectiveness across the zone.

Intervention	Safety	Speed	Volume	Impact	Total	Cost
Implementation of 20mph limit within village centre	7/10	7/10	5/10	9/10	**28/40**	9/10
Implementation of 20mph zone along Ashford Road	8/10	8/10	7/10	8/10	**31/40**	6/10

5.6 SCHOOL SAFETY ZONE OUTSIDE PRIMARY SCHOOL

After a thorough assessment of the village, Ethos has identified the area around Sellindge Primary School as the most critical for addressing road safety concerns. Schools are often focal points for enhanced road safety measures due to the high number of children walking, cycling, or using mobility aids to travel to and from school. In many cases, schools are located in cul-de-sacs or quiet residential streets, making them ideal candidates for implementing a School Streets scheme.

A School Streets scheme is a community-led initiative that restricts traffic on streets surrounding schools during key times, such as drop-off and pick-up periods. The primary objectives of the scheme are to reduce traffic congestion and parking issues near schools, improve air quality, enhance safety for pedestrians and cyclists, and encourage more active and healthy lifestyles for students. Additionally, these schemes aim to instil positive travel habits from a young age, promoting walking or cycling as safer and more environmentally friendly options.

School Streets typically operate Monday to Friday during school terms, with traffic restrictions lasting between 45 to 60 minutes, and sometimes longer during the afternoon. By reducing vehicular access during these periods, the scheme helps create a safer, more welcoming environment for children and their families, contributing to broader road safety goals in the village.

Unfortunately, a School Streets scheme is not feasible for Sellindge Primary School due to its location along the A20, a key distributor route that cannot be subjected to restricted access. However, although a School Streets scheme is not an option, there are alternative interventions that can provide similar benefits without limiting traffic flow. It is therefore proposed to implement a School Safety Zone, which can prioritise measures to enhance road safety and encourage active lifestyles for students and their families.

A School Safety Zone is a flexible concept that can encompass a range of interventions, from simple signage and road markings to more comprehensive engineering solutions, such as traffic calming measures or the reallocation of road space. Due to the classification of Ashford Road as a major route, traditional traffic calming measures have not been considered appropriate.

Currently, the footway extending east from the school toward Swan Lane is designated as a shared-use path for both pedestrians and cyclists. Although its width falls below the standard recommended in the Local Transport Note (LTN) 1/20, this path remains a positive feature, encouraging walking and cycling to and from the school. There are, however, pinch points along the route, including two vehicle laybys, which could be infilled to create a wider, more accessible footway on the western side of the school. This enhancement would further improve pedestrian and cyclist safety while maintaining the flow of traffic on Ashford Road.

There is ample space to enhance the public realm by installing seating and creating a more welcoming environment. This will make the area more attractive and further encourage active travel by providing parents and carers with comfortable spaces to wait for pupils. Incorporating green infrastructure, such as tree planting and rain gardens, will not only improve air quality and boost biodiversity but also create a natural barrier between the road and footway, enhancing safety.

In addition, the provision of secure cycle parking facilities will encourage more pupils to cycle to school, ensuring they have a safe place to store their bikes.

One innovative measure to consider is the installation of colourful road artwork outside the school. This can be an effective way of raising driver awareness, signalling that they are approaching a school zone on Ashford Road, and encouraging them to reduce their speed.

These interventions, which align with the principles of a School Streets scheme, can be incorporated into the School Safety Zone. They aim to improve safety, promote active travel, and create a more pleasant and functional space around the school. An example of these types of interventions is illustrated below.

A School Safety Zone can be effectively integrated with either a 20mph speed limit or a 20mph zone, further enhancing road safety in the area. The introduction of a lower speed limit will provide additional protection, allowing the focus to shift more towards improving the public realm. While both interventions; School Safety Zone and 20mph limit/zone can function effectively as standalone measures, our recommendation is to combine them for maximum impact.

The cost of implementing a School Safety Zone will depend on the specific measures included. The proposed interventions, such as those outlined above, are relatively low-cost individually, but their combined implementation will naturally increase the overall expense. The highest-cost measure is likely to be infilling the existing layby, which is estimated to cost between **£15,000 and £20,000**. Installing artwork on the carriageway will vary based on the design and the size of the area, with an estimated cost between **£5,000 and £10,000**.

Other elements, such as planting, seating, and cycle parking, are more affordable, ranging from **£2,000 to £5,000**. Based on these estimates, a budget of **£35,000 to £40,000** would be needed to incorporate all the proposed interventions. However, a more focused budget of **£15,000 to £20,000** could still deliver an effective School Safety Zone that would significantly improve the environment around the school.

A School Safety Zone is expected to reduce average vehicle speeds by approximately 4-6 miles per hour, making it an effective solution for enhancing safety. While this speed reduction will be concentrated around the school, there will likely be a

continued, though smaller, reduction in speeds outside the immediate vicinity, particularly for eastbound traffic. In these areas, the average speed reduction is anticipated to be around 2-3 miles per hour, supported by the additional interventions included in the broader scheme.

Intervention	Safety	Speed	Volume	Impact	Total	Cost
School Safety Zone outside Sellindge Primary School	7/10	7/10	4/10	7/10	**25/40**	8/10

5.7 INSTALLATION OF SPEED INDICATOR DEVICES

Speed Indicator Devices (SIDs) are among the most effective non-physical measures for reducing traffic speeds in specific locations. There are various types of SIDs available, each offering different levels of effectiveness and cost. These devices are considered an enhancement over traditional Vehicle Activated Signs (VAS), which typically flash a "Slow Down" message and result in average speed reductions of around 1-2 mph.

SIDs that display the actual speed at which vehicles are traveling tend to be more effective, often achieving average speed reductions of 3-4 mph. However, the impact of these signs is typically strongest within the first two to three weeks of installation, as drivers are often initially surprised by the illuminated display and adjust their speed accordingly. This effect is particularly noticeable with SIDs that display the vehicle's speed in real-time as drivers pass by.

Figure 12 illustrates a basic VAS, while Figure 13 shows a more advanced and higher-cost SID that displays vehicle speeds. These devices, when strategically placed, can contribute significantly to reducing vehicle speeds and enhancing road safety, especially in areas where speeding is a persistent issue.

Figure 12 – Example of basic VAS displaying speed limit

Figure 13 – Example of more expensive SID displaying vehicle speed

An alternative to fixed SID, is to utilise mobile VAS. These are signs that can be operated in any location due to the sign sitting on a stand. These signs are most commonly found as part of SpeedWatch programmes. This is an option that Sellindge Parish Council could consider, as this would enable the sign to be rotated through the village, which is likely to increase the effectiveness.

Figure 14 provides an example of a mobile VAS that displays vehicle speeds.

Figure 14 – Example of mobile VAS displaying vehicle speed

It is recommended that if the Parish Council chooses to pursue the installation of these signs, a Speed Indicator Device (SID) should be selected for permanent locations, while a Vehicle Activated Sign (VAS) would be more appropriate for a mobile setup that can be relocated throughout the village. Although SIDs are most effective in reducing speeds during the initial two to three weeks after installation, they continue to provide ongoing speed reduction benefits. Based on site observations along Ashford Road and Barrow Hill, traffic speeds are sufficiently high to justify one permanent SID in each direction. However, the number of SIDs should be limited, regardless of the village size, to avoid diminishing their effectiveness, which can occur with the installation of multiple devices.

From the observations, it appears that eastbound traffic on Ashford Road is traveling at higher speeds compared to north-westbound traffic on Barrow Hill before reaching Ashford Road. Choosing the most effective location for a SID requires careful consideration. The optimal placement is likely to be midway between the 30mph speed limit gateway and the village centre, which Ethos has identified as the area near the primary school and village hall. For eastbound traffic on Ashford Road, a suitable location would be between the junctions of Bulls Lane and St. Katherine's Crescent. For north-westbound traffic on Barrow Hill, an ideal location would be between the Grove Park development and the Co-Op.

Should a 20mph zone be introduced along Ashford Road, the use of a SID could serve as a complementary traffic-calming measure at a lower cost. In this case, installing at

least one SID within the 20mph zone, particularly near the school, would provide greater benefits by reinforcing the reduced speed limit and enhancing road safety.

Figure 15 provides a plan that illustrates the suggested locations of the two SIDs.

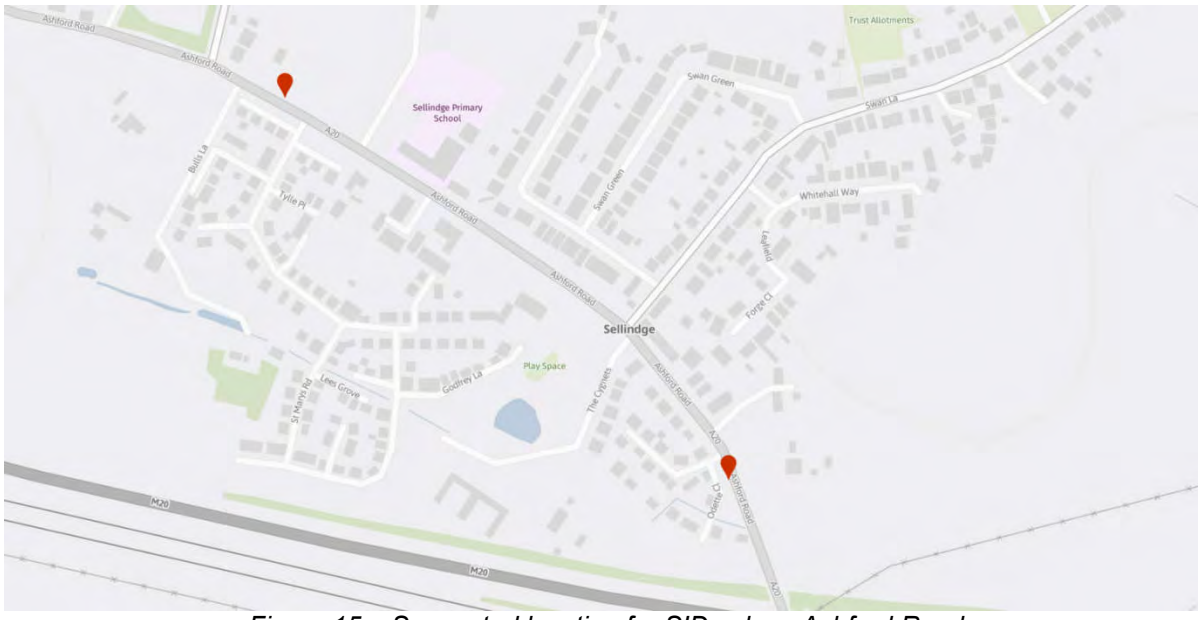


Figure 15 – Suggested location for SIDs along Ashford Road

The cost is dependent on the type of sign purchased. Due to the rural environment, and the amount of traffic travelling through the village, which may encourage speed, it's recommended to purchase the higher cost, greater effectiveness SID. This can either be fixed position signs, or mobile signs that can be rotated through the village. SIDs can be installed with solar panels, which can increase the lifespan of the battery.

These signs are likely to cost in the region of **£3,000-£5,000** per sign. Therefore, two signs will cost approximately **£6,000-£10,000.**

Intervention	Safety	Speed	Volume	Impact	Total	Cost
Installation of Speed Indicator Devices (SIDs)	7/10	8/10	4/10	8/10	**27/40**	9/10

5.8 HUMPED ZEBRA CROSSING OUTSIDE PRIMARY SCHOOL

A zebra crossing currently exists along Ashford Road, situated outside Sellindge Primary School, providing a safe crossing facility for pedestrians. In addition to improving pedestrian safety, the presence of a zebra crossing typically contributes to a reduction in traffic speed. Most drivers tend to slow down when approaching a zebra

crossing, regardless of whether pedestrians are actively waiting to cross, as they anticipate the possibility of someone approaching the crossing. This natural caution encourages vehicles to reduce speed before passing through the area, thereby enhancing overall road safety in proximity to the school.

While a zebra crossing typically reduces traffic speed, further reductions can be achieved by converting it into a humped crossing. A humped crossing elevates the carriageway to the same level as the footway, creating a level surface that not only improves accessibility for pedestrians but also slows traffic due to the raised hump. This ensures that vehicles reduce their speed both on approach and while passing through the crossing, regardless of whether pedestrians are present.

In addition to traffic calming, a humped crossing can offer other benefits, such as improving drainage design and addressing challenges posed by the placement of dropped kerbs and nearby driveways. Alternatively, raised tables could be installed on either side of the crossing to further slow vehicles before they reach the crossing itself. A humped crossing also tends to be more visually prominent, making it more noticeable to drivers and further enhancing road safety.

Figure 16 provides an example of a humped crossing for effective traffic calming.

Figure 16 – Example of humped crossing

Ashford Road is an A-classified road, which limits the types of traffic calming measures that can be implemented. While speed tables, humps, and cushions are generally discouraged on such roads, there is no guidance that prohibits the installation of a humped zebra crossing. However, opting for a humped crossing would eliminate the possibility of installing raised tables on either side of the existing crossing, as these could negatively impact traffic flow. A humped zebra crossing would provide the necessary traffic calming support for a 20mph zone and would also be an effective addition to a 20mph speed limit strategy.

Converting a zebra crossing to a humped crossing is considered a medium-cost intervention, though additional factors may influence the total expense. The estimated cost for this conversion is approximately **£20,000**. Additional expenses, potentially around **£10,000**, may be required to address kerbing, drainage, and runoff channels. There is also a small chance that utility infrastructure may be impacted, which could further increase the costs.

A standard zebra crossing typically results in an average speed reduction of around 2-3 miles per hour, with speeds decreasing by up to 5mph in the immediate vicinity as drivers slow down in anticipation of pedestrians crossing. A humped zebra crossing, however, is expected to achieve a more significant speed reduction, as vehicles will be required to slow down regardless of pedestrian presence. The anticipated average speed reduction for a humped crossing is in the range of 5-6 miles per hour, making it a more effective measure for controlling traffic speeds.

Intervention	Safety	Speed	Volume	Impact	Total	Cost
Humped zebra crossing outside primary school	8/10	8/10	4/10	8/10	**28/40**	7/10

5.9 CONTINUOUS FOOTWAYS ALONG A20 SIDE ROADS

A continuous footway extends the pedestrian pathway across a junction, thereby altering priorities and requiring vehicles to give way to pedestrians. This design enhances pedestrian safety and encourages greater use by making the footway more appealing and accessible. A continuous footway fosters user confidence, reinforces a sense of place, and establishes pedestrian priority at junctions, making it a highly effective method for improving walkability. While traditionally more common in urban areas, continuous footways are increasingly being considered for appropriate rural locations, such as cul-de-sacs or residential roads.

The design of a continuous footway can be adapted to meet the specific needs of Sellindge. The essential feature is the use of consistent materials or surface colours across the junction to create a seamless continuation of the footway. This visual continuity clearly signals to drivers that they must yield to pedestrians, emphasising pedestrian priority. In addition to improving safety, the installation of a continuous footway can enhance the overall appearance of the area, contributing positively to the public realm and making the footway more inviting for users.

An example of a continuous footway is shown in figure 17 below.

Figure 17 – Example of a continuous footway

The current design of many side road junctions off the A20 features a conventional layout, where the footway ends at the junction to give way to traffic entering or exiting the side roads. Although several of these junctions are equipped with dropped kerbs and tactile paving, the layout still prioritises vehicle movement over pedestrian safety. There are, however, several side road junctions within the village where a continuous footway could be implemented to enhance pedestrian priority.

Introducing continuous footways at multiple junctions simultaneously would not only promote a shift in behaviour towards prioritising pedestrian movement, but also result in lower overall costs due to economies of scale. By constructing these footways as part of a coordinated project, the village can achieve both improved pedestrian safety and more efficient use of resources. The following side road junctions are potential candidates for inclusion in this proposal:

- Ashford Road junction with Bulls Lane;
- Ashford Road junction with St Katherine's Crescent (both junctions);
- Ashford Road junction with village hall / surgery entrance;
- Ashford Road junction with The Cygnets;
- Ashford Road junction with Siegfried Close.

Continuous footways shouldn't be considered at junctions that experience high traffic volume as this can have a negative impact on road safety. Based on this, Swan Lane, and Stone Hill are two locations that should be avoided.

The cost of a continuous footway is expected to be in the region of **£20,000-£25,000** per junction, making this a medium cost proposal. This is dependent on the size of the junction, and the type of materials / surface utilised. Although economies of scale will

make this intervention more efficient to deliver in combination, due to the cos, it is recommended that one or two sites is constructed and monitored first before progressing additional sites. The prioritised sites should be those with the higher volumes of pedestrian footfall, especially during school drop-off and pick-up times.

As it appears that there is more pedestrian footfall travelling from the south-eastern extents of the village, our initial suggestion is to prioritise the junctions of Ashford Road and St Katherine's Crescent (eastern junction) and Ashford Road / The Cygnets.

Intervention	Safety	Speed	Volume	Impact	Total	Cost
Continuous footways along A20 side roads	6/10	4/10	3/10	6/10	**19/40**	7/10

5.10 PRIORITY GIVE WAYS ALONG ASHFORD ROAD

Given the scenic environment of Sellindge and the costs associated with more intrusive traffic calming measures, Ethos has prioritised alternative interventions where possible to achieve both road safety improvements and speed reduction. However, it is essential that these interventions are applied consistently throughout the village to foster long-term behaviour change regarding road safety.

Improving road safety and reducing traffic speed at the outer edges of the village presents a greater challenge without implementing more substantial physical traffic calming measures. This is largely due to the different characteristics of these areas, which are less populated and more open conditions that tend to encourage higher speeds. Ashford Road, in particular, is a relatively straight stretch with good visibility, which can further contribute to excessive vehicle speeds. Given these factors, it may be necessary to consider physical traffic calming measures in these areas to enhance safety and effectively reduce traffic speeds.

Figures 18 and 19 illustrate the alignment and visibility along Ashford Road, with figure 18 showing the approach to the village centre from the west, and figure 19 depicting the approach from the southeast. These visuals highlight the challenges posed by the road's design and visibility, reinforcing the need for targeted interventions in these areas.

Figure 18 – Road alignment and visibility along New Street approaching the village centre

Figure 19 – Road alignment and visibility along Laxfield Road approaching the village centre

During the site visit, it was observed that implementing a priority give-way system along Ashford Road could be a viable intervention to enhance safety and promote speed reduction. This would involve constructing a carriageway build-out with give-way markings, conditioning drivers to recognise they are entering a village area with increased potential for conflicts and interactions with pedestrians and cyclists.

A priority give-way restricts two-way traffic, requiring one direction of traffic to yield while the other has priority. It is important to carefully determine the direction that will be given priority to ensure optimal traffic flow. Given that Ashford Road is an A-Class route, there are limitations on the use of certain physical traffic calming measures. Therefore, while this intervention is considered effective, it should not be pursued further if Kent County Council (KCC) does not support the proposal.

To mitigate potential opposition from KCC, integrating the priority give-way into a proposed 20mph zone could provide a solution. Introducing a 20mph zone requires signage to mark the beginning and end of the zone, which could be incorporated into the build-out. Framing the intervention as part of a broader 20mph zone would likely alleviate concerns about its implementation. Additionally, the proximity of Sellindge Primary School provides a further rationale for the intervention, as it would enhance safety near a high-traffic area for pedestrians.

In this scenario, traffic traveling eastbound along Ashford Road would be required to give way to westbound traffic at the western edge of the village, while traffic traveling northwest along Barrow Hill would yield to southeast-bound vehicles at the southeastern entrance to the village. This system would slow traffic approaching the village centre from both directions at key points, creating a consistent reduction in speed before vehicles enter the heart of the village. When combined with other road safety interventions leading into and within the village centre, this approach would result in a steady, continued reduction in vehicle speeds.

This priority give-way system would also be effective in mitigating tidal traffic flow during peak morning and evening hours when Ashford Road is used as a through route. Requiring vehicles to give way upon entering the village may discourage drivers from using the route during busy periods, while also ensuring a reduction in speed at critical entry points.

Figure 20 below provides an example of a priority give-way system in operation.

Figure 20 – Example of a priority give-way system

A priority give-way system is considered a medium-cost traffic calming measure, with an estimated budget of approximately **£20,000 to £25,000** to cover design, implementation, and any associated works. While it is not essential to install priority give-way systems on both approaches to the village, having them on either side of the village centre would significantly enhance their effectiveness. The total cost for implementing systems at both ends would range from **£40,000 to £50,000**.

For optimal functionality, priority give-way systems typically include a bypass for cyclists, allowing them to avoid the narrowed carriageway. The estimated costs also account for the necessary signage and road markings, including priority and give-way signs.

Priority give-way systems are one of the most effective forms of traffic calming, particularly for slowing vehicles consistently as they approach a village. Unlike speed ramps or cushions, which have not been considered appropriate for this village, priority give-ways require traffic to slow or stop regularly. This can lead to an average speed reduction of up to 8 miles per hour in the immediate area surrounding the give-way, with a broader reduction of 4-5 miles per hour across the wider village. When combined with other road safety interventions, these reductions could be even more significant, helping to maintain consistent traffic speeds throughout the village.

Intervention	Safety	Speed	Volume	Impact	Total	Cost
Priority give-ways along Ashford Road	7/10	8/10	6/10	6/10	**27/40**	6/10

5.11 ROAD NARROWING & UNCONTROLLED CROSSING POINT WEST OF ST KATHERINE'S CRESCENT

As outlined in section 3.4, while there are two existing controlled crossing points within Sellindge village, which is a positive, a clear pedestrian desire line exists between Swan Lane and the village hall/surgery located on the southern side of Ashford Road. Neither of the existing controlled crossings is in close proximity to this desire line, resulting in pedestrians frequently crossing Ashford Road at various points between Swan Lane and the access to the village hall and surgery.

It is acknowledged that an uncontrolled crossing point is currently situated west of the junction with St Katherine's Crescent (eastern entrance), providing assistance to more

vulnerable pedestrians, such as the visually impaired and elderly. However, given the high volume of traffic and the frequent occurrence of excessive speeds along this stretch of road, further interventions should be considered to improve safety at this crossing point. The introduction of a 20mph speed limit or zone would enhance safety in this area and may reduce or eliminate the need for additional interventions at the crossing, depending on the effectiveness of the speed reduction.

To support safety of the uncontrolled crossing point, consideration should be given to the implementation of a road narrowing that would cover the extents of the uncontrolled crossing. A road narrowing differs from a priority give-way system as outlined above. A priority give-way reduces the carriageway width on one side to prevent two-way traffic passing, which requires a direction of travel to give-way, whereas with a road narrowing the carriageway is narrowed on both sides for a small distance (usually no more than approximately 5 metres).

Whilst the carriageway is narrowed, it still enables two-way traffic to pass, based on standard motor vehicles. However, it creates apprehension that two-way traffic cannot pass, and as a result a driver will slow down as they pass through the narrowing.

To achieve a road narrowing, a new kerbline should be constructed into the carriageway on both sides. Dropped kerbs and tactile paving can then be installed within the road narrowing, resulting in less time for pedestrians to cross the carriageway. As pedestrians will be waiting further into the road, visibility is improved, and often vehicles will stop and give-way to pedestrians wating to cross. To ensure good visibility, bollards should be installed to provide retro reflectivity or similar.

Figure 21 provides an example of a road narrowing that incorporates a crossing point.

Figure 21 – Example of a road narrowing with pedestrian crossing facilities

A road narrowing would be a low-medium cost measure and is likely to require a budget of approximately **£10,000-£15,000** to implement with design costs and any associated works. The costs include the relevant signage and road markings needed. Based on the existing location of the uncontrolled crossing point where it is proposed to install the road narrowing, there is sufficient street lighting to avoid further illumination.

An uncontrolled crossing point may have a small impact on traffic speed, as vehicles are more likely to reduce speed when pedestrians are waiting to cross, and some drivers may stop and give-way. However, the speed reduction will increase through the road narrowing. A road narrowing that strikes the appropriate balance of narrowing the carriageway noticeably, while enabling the majority of traffic to pass unrestricted is likely to result in average speed reductions of approximately 2-3mph.

Intervention	Safety	Speed	Volume	Impact	Total	Cost
Road narrowing & uncontrolled crossing point west of St Katherine's Crescent	6/10	6/10	6/10	5/10	**23/40**	8/10

5.12 ROAD ENHANCEMENTS ALONG ASHFORD ROAD

One of the most effective ways to reduce traffic speeds without introducing physical traffic calming measures such as speed humps or priority give-way systems is by significantly altering the surrounding environment. Changes to the road surface or the nearby buildings and landscape can create a visual cue that prompts drivers to slow down, even if they are not consciously aware of it. For example, drivers tend to reduce

their speed when they pass schools or encounter areas with children, as the environment suggests the need for increased caution.

In rural villages, however, altering the landscape is often not a practical solution for reducing speed due to lower footfall and fewer facilities, which are typical of smaller communities. This is one of the main reasons why speeding issues are more prevalent in rural areas. Nevertheless, rural villages do offer the opportunity to modify the road surface to create the perception of a changed environment. One of the most common and effective methods for achieving this is by changing the road surface colour, such as using a buff-coloured surface.

The visual contrast between a traditional tarmacked surface and a new buff-coloured surface can cause drivers to instinctively reduce their speed, especially when combined with other interventions like a shared-use environment or a 20mph zone. To maximise the effectiveness of this measure, it is important to limit the area of surface treatment. If the entire road through the village were resurfaced, the impact would be significantly diminished. Additionally, surface treatments tend to come with higher maintenance requirements, which the local highway authority may be hesitant to accept.

In Sellindge, this type of intervention should be focused on the most critical areas. The ideal location for implementing a surface colour change would be along Ashford Road within the extents of the proposed 20mph zone, specifically, from St. Katherine's Crescent (western access) to Swan Lane. This would result in a surface colour change over a distance of approximately 360 meters, providing a visual cue to drivers to slow down as they pass through the village's core area.

Figure 22 below provides an example of the impact a surface colour treatment can have within a village environment. This is the approach recommended at this site.

Figure 22 – Example of changing the surface colour to enhance the environment

An alternative to changing the road surface colour is to change the surface material itself, which could also incorporate a colour change, such as sand-coloured block paving. A variety of materials can be considered for this purpose, ranging from high-end options like granite setts and Yorkstone paving to more affordable alternatives such as natural stone and concrete blocks.

The selection of surface material should be based on several factors. Some materials are available in specific colours, which may need to complement the surrounding environment, including existing materials and architectural features. As expected, premium materials like granite setts and Yorkstone paving come with higher costs, both in terms of initial purchase and installation, as well as ongoing maintenance.

Due to these higher costs, the use of these materials is typically limited compared to more affordable options like tarmac. Outside of major urban regeneration projects, which are often reserved for city and town centres, the extensive use of high-end materials is uncommon. Instead, they are often used selectively, in combination with lower-cost materials such as tarmac. A strategic approach could involve using high-quality materials in key areas, complemented by coloured road surfacing, which would create a visually enhanced environment at a fraction of the cost of using premium materials throughout.

Figure 23 provides an example of a surface treatment using different materials to change the environment, which would be as effective as changing the surface colour.

Figure 23 – Example of changing the surface material to enhance the environment

The cost of implementing a surface enhancement intervention is high. There is a large amount of work required to implement this proposal. This includes design work, work around drainage provision, and the commuted sums involved as a result of delivering a higher quality surface treatment. To implement the intervention within the vicinity of the above-mentioned area is likely to cost in the region of approximately **£75,000 - £80,000**. Proceeding with the surface material would likely be a higher cost intervention and would cost in the region of **£100,000-£120,000** for the same area.

Intervention	Safety	Speed	Volume	Impact	Total	Cost
Road enhancements along Ashford Road	5/10	6/10	3/10	9/10	**23/40**	5/10

5.13 JUNCTION IMPROVEMENTS ASHFORD ROAD / SWAN LANE

As highlighted in this study report, concerns have been raised with the safety of the Ashford Road and Swan Lane junction. This appears to be the busiest junction in the village, and there is a high volume of junction movement with traffic turning into and out of Swan Lane on a frequent basis throughout the day. There have seven recorded collisions at the junction, two of which were classified as serious. The two serious collisions occurred in 2015 and 2017. Several of the slight collisions are more historic with all but one happening before 2012.

It is likely that many additional minor collisions have occurred at the Ashford Road and Swan Lane junction that were resolved at the scene without the involvement of emergency services. Improving road safety at this junction should be a priority, and several of the proposed interventions in this study, such as reducing vehicle speeds would positively impact safety at this location.

One potential intervention that could be effective at this junction is the introduction of a mini roundabout. Mini roundabouts are most effective when traffic movements are relatively balanced in all directions. However, if there are significantly heavier traffic flows in one direction, the roundabout can become less effective and even pose a safety risk. Based on site observations, while there is a much heavier flow of traffic traveling east-west along Ashford Road, there is also regular traffic entering and exiting Swan Lane.

That said, there are several constraints that make the installation of a mini roundabout at this junction an impractical option. Although mini roundabouts can be highly effective at slowing traffic and improving safety, they require proper deflection to ensure vehicles reduce speed as they pass through. Without adequate deflection, vehicles may navigate the roundabout at excessive speeds, increasing the likelihood of collisions. Figure 24 illustrates how incorporating deflection into a mini roundabout would influence traffic movement, ensuring that vehicles proceed through the junction at safer, reduced speeds.

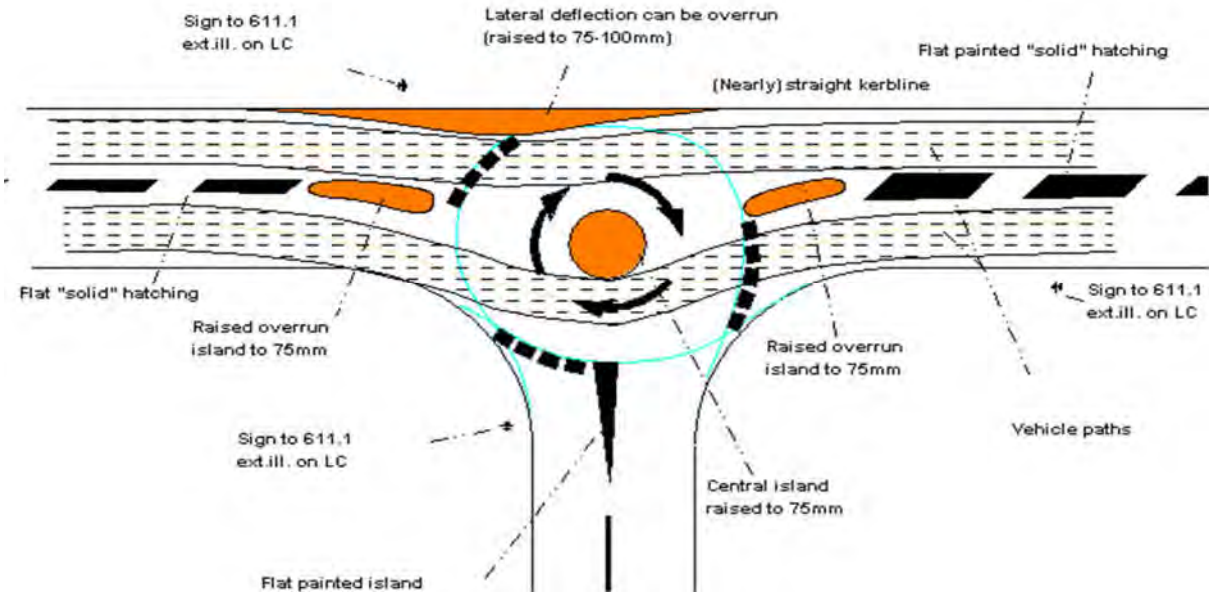


Figure 24 – Illustration of traffic movement through junction with deflection

To build in sufficient deflection at the junction of Ashford Road and Swan Lane, there would be a requirement to realign the carriageway, resulting in the narrowing of the new footway that exists opposite Swan Lane. There are a number of service covers located in the footway, which would increase the cost significantly. Based on this, a mini roundabout isn't considered a viable option to improve road safety at this junction.

The junction has a relatively wide bell mouth, which results in pedestrians crossing the carriageway for a longer period of time. The longer it takes for a pedestrian to cross the carriageway, the greater the risk of collisions occurring with vehicular traffic. Installing a pedestrian refuge island in the centre of the junction would provide a safe space for pedestrians to wait, meaning it would be possible to cross the carriageway

in two phases. This reduces the need to check multiple directions for traffic prior to crossing. This also reduces the available space for traffic to turn in and out of the junction, which often means vehicles are required to manoeuvre through the junction at slower speeds. This can assist in road safety.

An example of a pedestrian refuge island in the centre of a junction is shown below.

Figure 25 – Example of a pedestrian refuge island

After reviewing the available width at the Ashford Road and Swan Lane junction, it has been determined that there is insufficient space to accommodate a pedestrian refuge island. The risk that larger vehicles could overrun the island poses a significant safety concern, as this could result in damage to the island or, more seriously, endanger pedestrians using it. An alternative option would be to create an island using road markings only, which might help manage vehicle conflicts. However, this solution would not improve pedestrian safety, as it would not provide a midpoint for them to wait safely while crossing. Moreover, it is unlikely to reduce traffic speeds, as vehicles would simply overrun the markings.

A third option explored for this junction is to reduce its width by expanding the footway, thereby creating a more confined junction. This would result in a narrower carriageway, reducing the time pedestrians spend crossing the road. Additionally, narrowing the junction would force vehicles to access or exit the junction at slower speeds, thereby improving safety. However, this measure may impact larger vehicles, potentially restricting access for the largest vehicles, such as heavy goods vehicles (HGVs).

Upon reviewing the local road network, it appears that alternative routes exist for HGVs to access the area from the strategic road network. For example, the B2068, accessible from M20 Junction 11, could serve as an alternative route for HGVs. The proposed restriction would only affect HGVs attempting to use Swan Lane and would not impact vehicles traveling along Ashford Road. It is important to note that Swan Lane is also a bus route, so any narrowing of the junction would need to accommodate bus movements. A swept path analysis would be necessary to determine the extent of the possible narrowing while ensuring that buses can safely navigate the junction. An example of a junction narrowing is illustrated below in figure 26.

Figure 26 – Example of a narrowed junction

Therefore, it's recommended that narrowing the Ashford Road / Swan Lane junction through widening the footway is the option that is prioritised, if Sellindge Parish Council wish to proceed with a road safety intervention at the junction. The cost for this intervention will be impacted by the width of the narrowing. The greater the narrowing, the more materials needed, which will increase cost. Based on initial observations, it's felt that a narrowing of between 0.5-1.0 metre either side of the junction will be sufficient. Therefore, the approximate cost would be in the region of **£30,000-£40,000**.

The junction could be enhanced further to provide further safety benefits. Although it has been recommended to avoid raised tables, and speed humps, the junction could be incorporated into a raised junction. This would involve a ramp on all three approaches to the junction, with the junction itself level to the existing footway.

Whilst a speed humps and cushions can be very uncomfortable due to the immediate up and down, a raised junction has a much longer tabletop, which means travelling up

and then down is less impactful. However, they are just as effective at reducing traffic speed, as the impact becomes much greater based on the speed of traffic.

Introducing a raised junction provides a number of additional benefits, including the opportunity to integrate the intervention with others. For example, the tabletop could become the surface area where alternative colours or materials are implemented, which will create a better environment. It will also make it more accessible for pedestrians due to the level surface with the footway.

Figure 27 provides an example of an extended raised junction that incorporates attractive surface materials into the design to increase the feeling of place.

Figure 27 – Example of attractive raised junction with surface materials

Introducing a raised junction in conjunction with narrowing the junction would increase the cost. A further **£10,000-£12,000** would be required to create the raised junction in addition to the **£30,000-£40,000** required to narrow the junction. This would be using a standard tarmac surface. Using a more attractive surface, such as the one shown in the example above, would cost in the region of **£20,000-£25,000**. This means that improving the junction would cost in the range of **£30,000-£65,000** to deliver.

This intervention would be addressing safety at a specific location and would have a limited impact on average speed. However, it would reduce speed of traffic manoeuvring through the junction, which would bring obvious safety benefits.

Intervention	Safety	Speed	Volume	Impact	Total	Cost
Junction improvements Ashford Road Swan Lane	7/10	6/10	5/10	6/10	**24/40**	7/10

6.0 THE PROPOSALS

Table 3 presents a list of the 12 proposed interventions, along with their overall cost-effectiveness scores. These scores were calculated by combining the effectiveness score, which evaluates safety, speed, volume, and impact, to create an overall effectiveness score. The total effectiveness score is then averaged by dividing it by four to generate an average effectiveness score.

This effectiveness score is then combined with the cost score to produce an overall score out of 20. For example, the proposal to introduce a 20mph zone along Ashford Road near the primary school received an effectiveness score of 8/10 for safety and speed, 7/10 for volume, and 8/10 for impact. This results in a total effectiveness score of 31/40 and an average score of 7.8/10. When combined with the cost score of 6/10, the overall score for this intervention is 13.8/20.

Combining the effectiveness and cost scores ensures that high-cost interventions do not automatically become the highest-priority solutions. Without this balanced approach, more expensive interventions, while beneficial, could dominate due to their potential impact. For instance, the study identifies eight opportunities involving physical interventions in the public highway, which may score higher for effectiveness but also come with significantly higher costs compared to non-physical measures that aim to influence driver behaviour more subtly.

The highest-rated road safety intervention for Sellindge village achieved an overall score of 16.0, which is the implementation of a 20mph limit within the village centre. This intervention is classified as low-cost, with a cost score of 9/10. The second highest-rated intervention was the installation of Speed Indicator Devices (SIDs), which scored 15.8 and is also a low-cost measure (9/10 cost score).

The third, and fourth-ranked interventions, extending the 30mph speed limit along the A20, and implementing gateway treatments at the 30mph terminals were also low-cost interventions, each scoring 9/10 for cost and achieving overall scores of 15.5 and 15.0, respectively. Following these, the School Safety Zone outside Sellindge Primary School was the next highest-scoring intervention, with an overall score of 14.3. This was the highest-rated intervention with a cost score of less than 9 (it scored 8).

The 20mph zone along Ashford Road near the primary school was the highest-scoring higher-cost intervention, receiving a cost score of 6/10 and an overall score of 13.8, making it the seventh highest-rated intervention in the study.

The lowest-scoring intervention was road surface enhancements along Ashford Road, which received an overall score of 10.8 and a cost score of 5/10. Although this intervention would likely provide effective road safety improvements for Sellindge, it is the most expensive intervention considered in the study. As a result, despite its potential benefits, it is unlikely to deliver substantially greater improvements than the lower-cost alternatives. A value engineering assessment could potentially increase the overall score for this intervention.

Table 3 provides all 12 interventions, and the overall intervention score out of 20.

Ref	Intervention	Safety	Speed	Volume	Impact	Total	Cost	Overall Score
1	Gateway treatments at 30mph terminals on approaches to Sellindge	6	7	3	8	24	9	**15.0**
2	Improvements to traffic signage	4	5	3	5	17	9	**13.3**
3	Extension of 30mph speed limit along the A20	7	7	3	8	25	9	**15.5**
4	Implementation of 20mph limit within village centre	7	7	5	9	28	9	**16.0**
	Implementation of 20mph zone along Ashford Road	8	8	7	8	31	6	**13.8**
5	School Safety Zone outside Sellindge Primary School	7	7	4	7	25	8	**14.3**
6	Installation of Speed Indicator Devices (SIDs)	7	8	4	8	27	9	**15.8**
7	Humped zebra crossing outside primary school	8	8	4	8	28	7	**14.0**
8	Continuous footways along A20 side roads	6	4	3	6	19	7	**11.8**
9	Priority give-ways along Ashford Road	7	8	6	6	27	6	**12.8**
10	Road narrowing & uncontrolled crossing point west of St Katherine's Crescent	6	6	6	5	23	8	**13.8**
11	Road enhancements along Ashford Road	5	6	3	9	23	5	**10.8**
12	Junction improvements Ashford Road Swan Lane	7	6	5	6	24	7	**13.0**

Table 3 – Prioritised proposals for Sellindge

Figure 28 presents a plan that illustrates the proposed locations for each of the interventions, using the reference numbers provided in Table 3 above. For example, reference number 1 identifies the location for the proposed 30mph gateway treatments.

Please note that references 2 and 8 are not included in this plan, as these interventions are designed to apply throughout the entire village rather than at specific locations, as indicated for the other interventions shown below. These village-wide measures cannot be pinpointed to distinct areas in the same manner as the localised interventions.

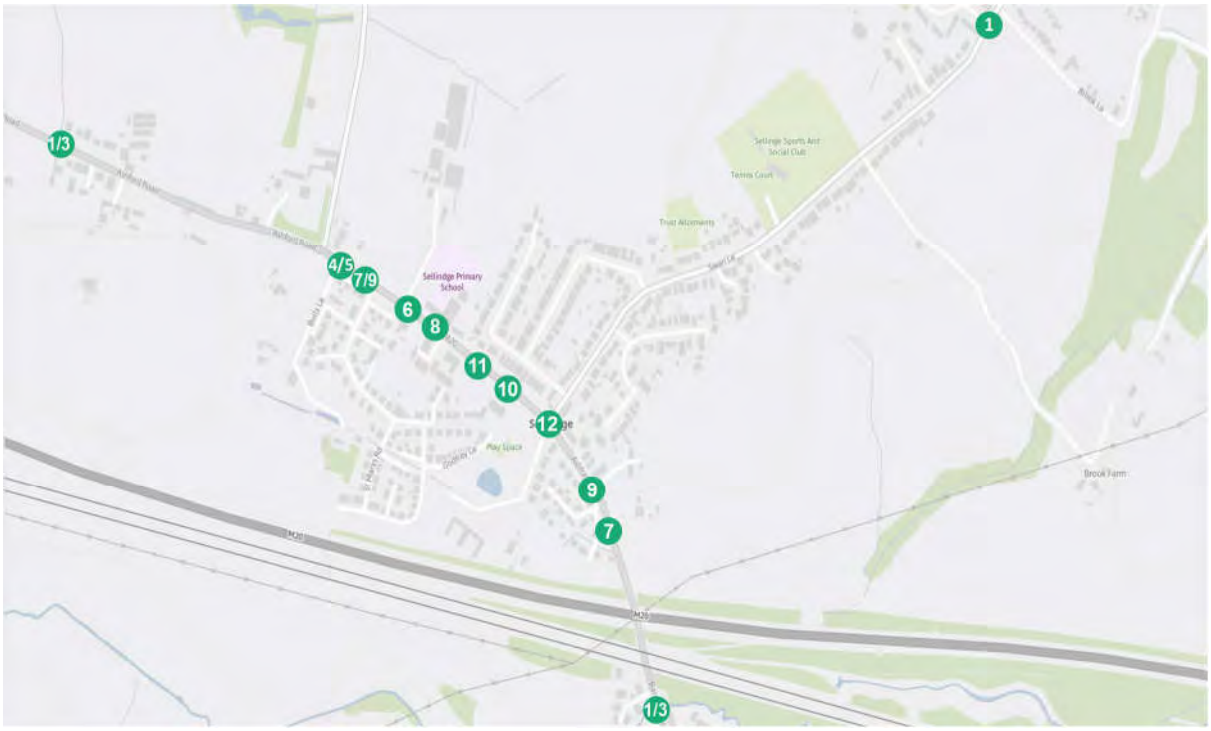


Figure 28 – Location plan for interventions

7.0 VISUALISATIONS

To complement the recommendations on the most suitable and effective road safety interventions for Sellindge, Ethos has developed a series of visualisations to demonstrate how these interventions might appear once implemented. For certain measures, such as accessibility improvements and signage upgrades, a visual representation may not add significant value.

As a result, the interventions chosen for visualisation are those that may not be fully understood by stakeholders, such as road narrowing, or those likely to generate more interest, such as the implementation of a 20mph speed limit. These visualisations are intended to clearly illustrate the nature of the intervention and how it would be integrated into the village environment, providing stakeholders with a better understanding of its impact.

Based on this, six interventions have been designed as part of this commission. These include:

- Implementation of 20mph limit within village centre (figure 29)
- Continuous footways along A20 side roads (figure 30);
- Priority give-ways along Ashford Road (figure 31);
- Road narrowing & uncontrolled crossing point west of St Katherine's Crescent (figure 32);
- Road enhancements along Ashford Road (figure 33);
- Junction improvements Ashford Road Swan Lane (figure 34).

Figure 29 – Visualisation of proposed 20mph limit within village centre

Figure 30 – Visualisation of proposed continuous footway along Queen Street industrial site

Figure 31 – Visualisation of proposed road narrowing outside Pool and Fitness Centre Wilby Road

Figure 32 – Visualisation of proposed road enhancements along Church Street

Figure 33 – Visualisation of proposed priority give way along New Street

Figure 34 – Visualisation of proposed pedestrian crossing Church Street & Queen Street junction

8.0 PACKAGE OF MEASURES

Each of the interventions outlined in section 5 is designed to achieve either a reduction in traffic speed or volume, along with improvements in road safety throughout Sellindge. Some interventions will deliver greater reductions in speed and volume, as well as more significant safety improvements, compared to others. Generally, the effectiveness of an intervention correlates with its cost. The most impactful approach would be to implement a combination of measures, as a package of interventions working together can produce a greater overall reduction in speed and a more substantial improvement in safety.

For example, implementing improvements to the village gateways in conjunction with priority build-outs would result in more significant speed reductions and enhanced safety compared to applying a single intervention in isolation. The more complementary measures that are combined, the greater the overall impact on road safety is likely to be.

Certain interventions work better in combination than others, making it crucial to group measures that reinforce each other. For instance, installing 30mph gateway treatments, extending the 30mph speed limit further from the village centre, and deploying Speed Indicator Devices (SIDs) would work synergistically. Together, these measures would provide a consistent message to drivers as they approach the village, ensuring that traffic speeds are reduced before reaching the more populated areas. Coupled with a 20mph speed limit or zone, this approach would further reinforce to drivers that they are entering a sensitive area where speed reduction is essential.

Therefore, the goal for Sellindge Parish Council should be to implement a work package comprising several complementary interventions. The selection of the package should be largely based on the available budget, with a focus on overall effectiveness rather than cost alone. For example, if the available budget is £50,000, it would not be advisable to proceed with a road enhancement intervention that would consume the entire budget, leaving no resources for additional measures.

To assist the Parish Council in identifying the most suitable work packages based on budget constraints, Ethos has developed three example packages for low, medium, and high-cost budgets.

It is important to note that the approximate costs listed in Tables 4-7 are based on likely averages, but some interventions allow flexibility depending on available funds. For instance, a road enhancement scheme could be delivered for £70,000 but may also cost up to £90,000 depending on the specific measures chosen.

While securing £100,000 or more in funding may seem ambitious, the Parish Council should aim to seek match funding from Kent County Council (KCC). Since road safety interventions within the public highway fall under the responsibility of KCC as the highway authority, Sellindge Parish Council is within its rights to request 100% funding. However, by demonstrating a commitment to addressing road safety issues through an offer to fund 50% of the project, the Parish Council increases the likelihood of securing the remaining 50% from KCC, thus enhancing the chances of project approval and implementation.

Table 4 illustrates a works package based on an available budget of £25,000.

Measure	Approximate Cost
Gateway treatments at 30mph terminals on approaches to Sellindge village (based on two village approaches)	£8,000
Extension of 30mph speed limit along the A20 & Implementation of 20mph limit within village centre	£10,000
Installation of 2x Speed Indicator Devices	£7,000
TOTAL COST	**£25,000**

Table 4 – Example works package with budget of £25,000

Table 5 illustrates a works package based on an available budget of £50,000.

Measure	Approximate Cost
Gateway treatments at 30mph terminals on approaches to Sellindge village (based on two village approaches)	£8,000
Extension of 30mph speed limit along the A20 & Implementation of 20mph limit within village centre	£10,000
Installation of 2x Speed Indicator Devices	£7,000
School Safety Zone outside Sellindge Primary School	£15,000
Road narrowing & uncontrolled crossing point west of St Katherine's Crescent	£10,000
TOTAL COST	**£50,000**

Table 5 – Example works package with budget of £50,000

Table 6 illustrates a works package based on an available budget of £75,000.

Measure	Approximate Cost
Gateway treatments at 30mph terminals on approaches to Sellindge village (based on three village approaches)	£12,000
Extension of 30mph speed limit along the A20 & Implementation of 20mph limit within village centre	£10,000
Installation of 2x Speed Indicator Devices (higher quality signs)	£10,000
School Safety Zone outside Sellindge Primary School	£15,000
Humped zebra crossing outside primary school	£25,000
Improvements to traffic signage	£3,000
TOTAL COST	**£75,000**

Table 6 – Example works package with budget of £75,000

Table 7 illustrates a works package based on an available budget of £100,000+.

Measure	Approximate Cost
Gateway treatments at 30mph terminals on approaches to Sellindge village (based on three village approaches)	£12,000
Extension of 30mph speed limit along the A20 & Implementation of 20mph limit within village centre	£10,000
Installation of 2x Speed Indicator Devices (higher quality signs)	£10,000
School Safety Zone outside Sellindge Primary School	£15,000
Priority give-ways along Ashford Road	£40,000
Junction improvements Ashford Road Swan Lane	£25,000
TOTAL COST	**£112,000**

Table 7 – Example works package with budget of £100,000+

Tables 4-7 illustrate that three interventions have been included across all four work package examples. These interventions were selected because they are cost-effective, well-suited to the rural environment of Kent, and deliver measurable results regardless of the available budget. Given their lower costs and proven effectiveness, Ethos strongly recommends prioritising these interventions.

The tables also highlight interventions where a reduced-cost version of the scheme is possible. These interventions can be value-engineered to fit within a more limited budget. For instance, the proposed junction improvements at Ashford Road and Swan Lane are estimated to cost between £30,000 and £40,000. However, the design can be modified to deliver the improvements for a lower budget, approximately £25,000, without compromising key safety outcomes.

Additionally, the work package examples demonstrate the flexibility to adjust proposals based on the available budget. For instance, while extending the 30mph speed limit and implementing a 20mph zone are listed as separate interventions, they could be combined under the same Traffic Regulation Order (TRO). This would minimise costs by streamlining the statutory process, allowing both interventions to be delivered at a reduced overall expense.

This flexibility in the design and delivery of the interventions ensures that even with budgetary constraints, impactful road safety improvements can be achieved.

9.0 NEXT STEPS

As part of the feasibility report, Sellindge Parish Council has the opportunity to review and provide feedback, including any recommendations they are particularly eager to see prioritised. These comments will be documented below once the Council has had the chance to thoroughly discuss the report.

Following this review, the Parish Council should escalate the report's findings to Kent County Council (KCC), the local highway authority. It is advisable that, prior to engaging with KCC, the Parish Council undertakes community engagement within the village to build support for the proposals. This engagement is particularly important if some or all of the funding may need to come from the Parish Council, as community backing will strengthen the case for the interventions.

The Parish Council has a budget that could be used to fund or contribute toward the implementation of a works package. Having this budget in place may simplify the process of gaining approval from KCC, as it reduces the burden on the county authority to fund the interventions entirely. However, it is recommended that the Parish Council seek financial contributions from KCC, as road safety interventions within the public highway fall under their remit as the local highway authority. Securing additional funding from KCC would enable more interventions to be delivered. For example, if KCC were to provide £50,000 and the Parish Council matched this with £50,000, the combined budget of £100,000 would allow for a more comprehensive set of interventions.

This feasibility study has identified several potential interventions aimed at improving road safety within Sellindge village. To advance these findings and explore funding opportunities, it is recommended that Sellindge Parish Council consider developing some or all of the proposed interventions. Doing so would provide greater assurance regarding deliverability and community support while facilitating dialogue with KCC.

Based on this approach, there are three key steps the Parish Council can take to support the process:

- **Consultation**: Conduct an informal consultation with local stakeholders, including residents and businesses. The feedback gathered can either reinforce the existing recommendations or suggest alternative actions based on local experience or prior research. To avoid conflicting views, the consultation should focus on the specific works package the Parish Council intends to pursue rather than all potential interventions.
- **Surveys**: Additional surveys can be commissioned to gather supporting data and insights into the improvements needed in the village. Active travel surveys and targeted discussions with specific groups can help align the interventions with the village's overall goals.
- **ATC Survey**: Although the Parish Council already has two sets of traffic data collected by Kent County Council from this calendar year, further data could strengthen the case for the proposed interventions. Commissioning additional Automatic Traffic Count (ATC) surveys at key locations such as Ashford Road, Barrow Hill, and Swan Lane would supplement the existing data and allow for more detailed origin and destination analysis.

By following these steps, Sellindge Parish Council can build a stronger case for the interventions, ensuring both community support and the necessary funding to move forward with the proposed improvements.

Ethos Consultants Limited

Basepoint Business Centre
Andersons Road
Southampton
Hampshire

Ethos Consultants Limited

Tenacity House
7 Stanley Street
Aberdeen
AB10 6US

0203 912 1852

info@ethosconsultants.co.uk

www.ethosconsultants.co.uk

ACTIVE TRAVEL & SUSTAINABLE TRANSPORT

TRAFFIC ENGINEERING

PARKING CONSULTANCY

TRANSPORT PLANNING

ROAD SAFETY

HIGHWAY DESIGN

PUBLIC REALM

STAKEHOLDER ENGAGEMENT

RESOURCE & TRAINING