Turners Hill – Traffic Scheme Design Statement

March 2013

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CONTENTS

Appendices:

Report Reference	Issue	Description	Originator	Checked	Authorised
UKD-105	02	Draft	R Harper March 2013		

1.0 Introduction

1.1 A traffic scheme is being developed by Turners Hill Parish Council to improve safety, access and use of the 'Green' in the centre of the village.

1.2 This report has been prepared on behalf of Turners Hill Parish Council as a design statement on this scheme. The report includes details of the consultation carried out, a traffic impact assessment of the proposed mini-roundabouts and details of a stage 1 road safety audit.

2.0 Background

2.1 West Sussex County Council in response to road safety good practice systematically assesses the casualty rate on the strategic route network and junctions each year. The performance of the B2028 and B2110 junction has been a concern of the Highway Authority in the past. From an engineering perspective this junction is sub-standard and it is unsurprising that there remains a collision history. In response the County Council has carried out minor signing and surfacing improvements and evidence suggests these have helped to maintain a lower collision rate (Road Safety Foundation 2011).

2.2 The UK Governments long-term vision is to ensure Britain remains a world leader on road safety (Department for Transport [DfT] 2011). West Sussex County Council has worked hard with Road Safety Partners over the past decade to achieve a reduction in casualties on the highway network but to achieve a further step reduction will require more than just signing alone.

2.3 The Parish Council commissioned Consultants to develop ways of improving this junction. An outline proposal was drawn up involving:

- closure of the southern arm of the B2110 south of the Green outside the Crown Inn;
- provision of mini-roundabout at the B2110 Church Road / B2028 Junction and
- localised widening to facilitate a right turn lane into the northern arm of the B2110 (north of the Green).

2.4 'Safety improvements, at the Turners Hill junction B2110/ B2028 (North Street, East Street, Selsfield Road, Church Road)' based on the outline in section 2.3 was approved in the Infrastructure Plan for the North Mid Sussex County Local Committee (CLC) (WSCC, 2011). The purpose of the Infrastructure Plan is to ensure that County Council resources (staff and funds) are targeted at delivering local priorities. The plans would support Localism and the Big Society Agenda, ensuring that locally identified highways and transport improvements are prioritised. Improvements are regarded as additional physical infrastructure assets that offer new

community benefits, beyond that typically associated with maintenance works.

2.5 With the support of the Local County Councillor this scheme has been further developed by the Parish Council as part of the Village Neighbourhood Plan. This development has included consultation with villagers in September 2012. This scheme has been revised following consultation and now includes a mini-roundabout at the northern arm of the B2110/ B2028 junction, a wider 20mph zone for Turners Hill and provision of additional engineering features on the approach and at the terminal points of the zone. The current design proposals are attached in Appendix 1.

3.0 Current Layout and issues

3.1 The attractive village of Turners Hill stands on a steep ridge line at one of the highest points, (600 feet above sea level), of the Sussex Weald where two historically important routes, the B2110 and B2028, cross. There are impressive views from the centre of the village to both the North and South Downs. In the centre is the village green which, together with the shops and the Crown Hotel, form the focal point. The older parts of the village, and in particular Lion Lane, have retained a character and charm of their own. Many buildings date from the 17th and 18th centuries and a number have been Listed by the Department of the Environment. The village centre has been designated as a conservation area (Mid Sussex District Council, 2013).

3.2 The Village Green is situated at the crossroads of the B2028 and the B2110. The B2028 is the traditional historical route from London to Brighton which is still used for the annual London to Brighton Cycle Ride. The central focus of Turners Hill is the 'Village Green' and is a key part of the village's 'sense of place'. If Turners Hill is to be improved for future generations then a critical part of a successful scheme will be to improve the area around the 'Green'.

3.3 The main junction at the core of the Village is a staggered 'cross-roads' on a steep gradient which does not conform to current design standards (See Figure 1 & 2). One of the current criticisms of the current layout is the isolation of the green for people to use as it is surrounded by carriageway and has no clear or safe pedestrian access points. Sections of the Green have also been damaged by large vehicles turning at the junction and overrunning the edges.

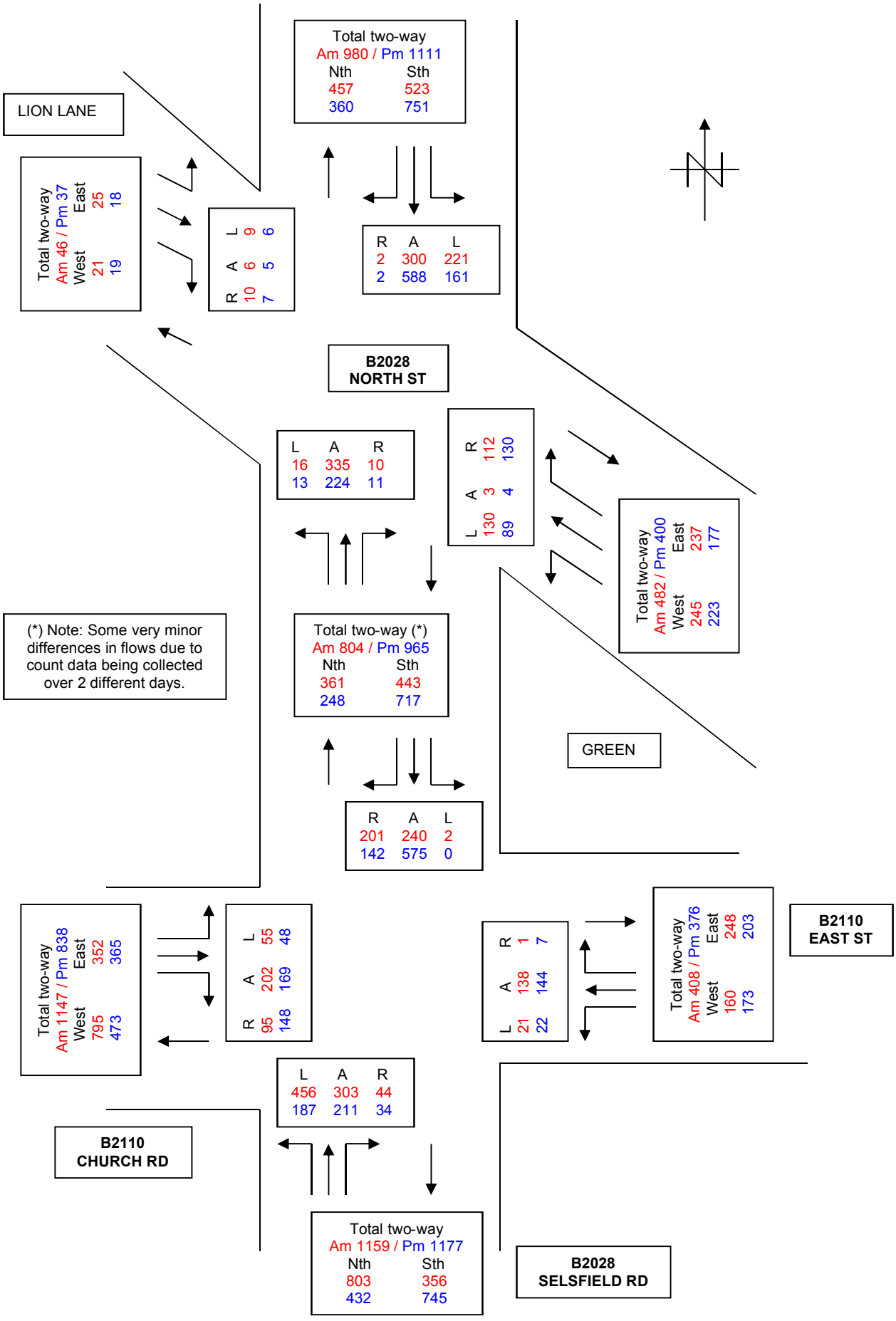
3.4 One of the key aspects of good urban design is that 'Places are for People' and need to connect with their surroundings, particularly by foot (Homes and Communities Agency, 2000). The current layout around the Green fails to achieve this.

Figure 1: Snapshot from video survey of B2028/ B2110 Junction, Turners Hill - Northern Arm [Feb 2012]

3.5 Traffic flows through the junction were surveyed in February 2012 and are summarised in Figure 3 (Benchmark DC Ltd, 2012). Both the B2110 and B2028 are crucial access routes in the northern part of Mid Sussex and any design changes need to take this into account.

Figure 2: Snapshot from video survey of B2028/ B2110 Junction, Turners Hill - Southern Arm [Feb 2012]

Figure 3: Diagram summarising peak hour traffic counts at B2028/B2110 junction [8-9am (in red) & 5-6pm (in blue) Feb 2012.]



4.0 Initial Objectives and Proposals

4.1 The objectives of the scheme have evolved and can be summarised as follows:

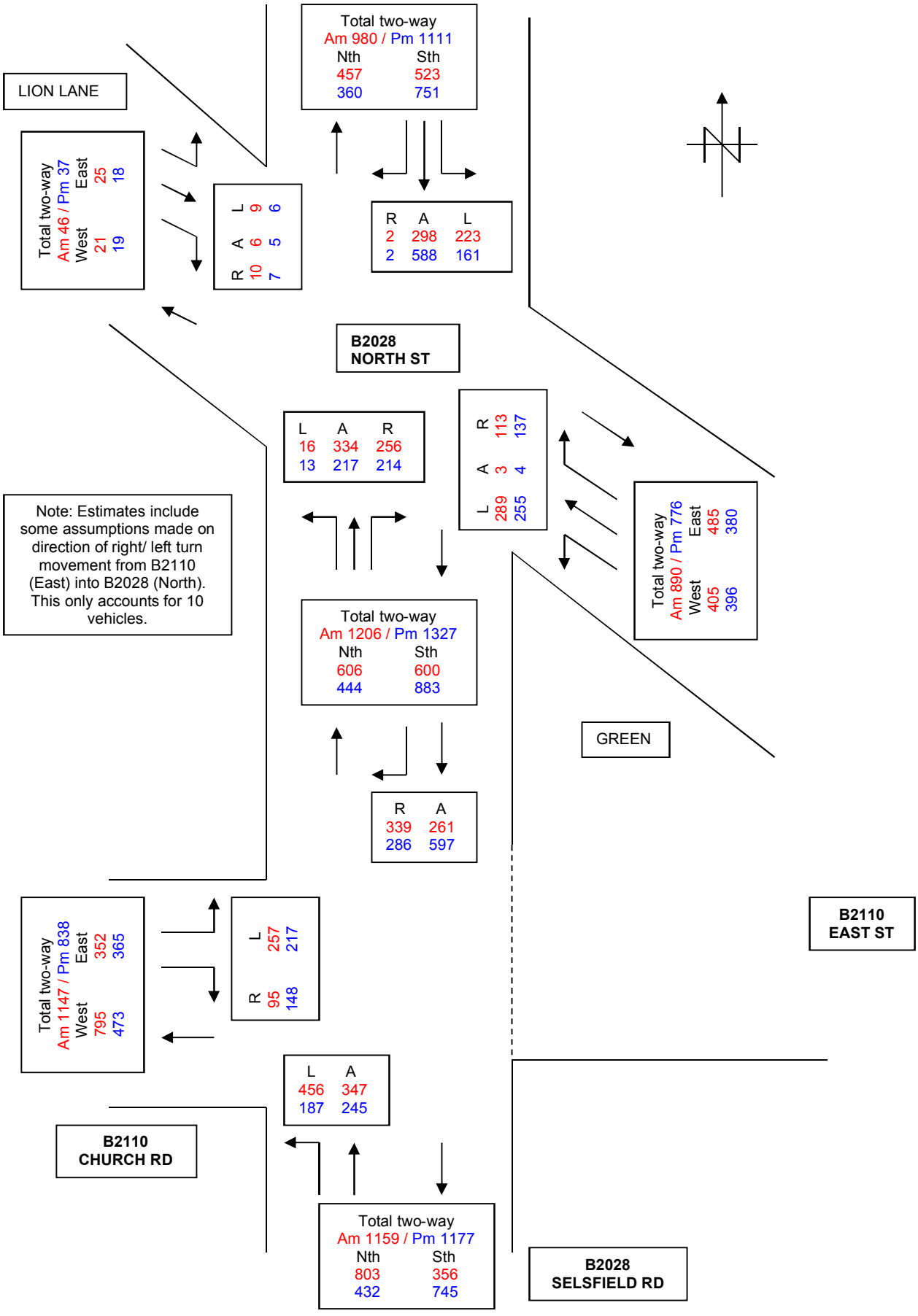
- Enhance 'Village Green' to improve Turners Hill 'Sense of Place', giving priority to access on foot in the roads surrounding the 'Green';
- Improve the management and road safety of vehicle movements around the 'Green'.
- Compliment other measures associated with other initiatives being carried out in the Village.

4.2 Every street represents a balance between movement (the capacity to accommodate through traffic) and a sense of place (the quality which makes a street somewhere to visit and spend time in, rather than to pass through) (DfT, 2011). To enhance the centre of the Villages' sense of place and improve access to the 'Green' on foot and links to adjoining premises, a closure of the carriageway on one side of the 'Green' offers the best solution. If you consider the 'Green' as a triangle the preferred carriageway to be closed is the section opposite the Crown Public House as this connects with one of the main historical buildings in Turners Hill. The section of carriageway adjoins a forecourt already used by patrons for socialising and provides opportunity to expand this use. Figure 4 summarises the changes to traffic flows through the B2028/ B2110 junction if this was to be closed.

4.3 The advantage of this closure is that it provides an opportunity to convert a sub-standard staggered crossroads to a three arm junction. The three arm junction can be converted to a mini-roundabout to improve vehicle movement. This change will reduce collision risk (DfT/CSS, 2006).

4.4 Vehicle traffic flows around the remaining carriageway legs surrounding the 'Green' will need to be managed and this means widening the carriageway to accommodate vehicle movements through the junction, particularly for HGV's. The original proposal was to create a sub-standard right turn lane and widening of the northern junction with the B2028/ B2110. However following consultation with residents this was subject to further changes as outlined in Section 7.3.

Figure 4: Diagram summarising estimated changes to peak hour traffic flows after changes to B2028/B2110 road layout around 'Green' [8-9am (in red) & 5-6pm (in blue).]



4.5 Although pedestrian movement is improved with the carriageway closure, pedestrian movements across many of the junctions around the 'Green' will continue and almost impossible to formalise in a sympathetic way. Therefore it was decided to develop the proposals in conjunction with a 20mph zone (not limit). The zone area closely follows the boundary of the village conservation area. Such a zone can also compliment the school safety zone recently initiated by WSCC on the B2110 Church Road. It would also include areas of the village with either very narrow or no footways.

4.6 A characteristic of a 20mph zone is that it requires additional engineering features to maintain lower speeds. The features developed for Turners Hill include:

- Signed gateway on all approaches. The zone sign can include a Turners Hill motif to reinforce its 'sense of place' (DfT, 2007,2011). See Figure 5.
- The provision of a table junction covering the area around the 'Green'.
- A narrowing feature on the B2110 East Street, together with improvements to the bus stop by Mount Close. This will help passengers cross the road to an improved bus stop area.
- A mini-roundabout at the junction of the B2110 Paddockhurst Rd/ Turners Hill Rd. This feature was originally on the WSCC minor works scheme list many years ago in the early 1990's.
- Further measures are under consideration on the B2028 North Street north of the village centre as part of possible redevelopment of land to the north west of this site. This is not discussed in this report but the 20mph zone will compliment any proposed measures for this development.

Figure 5: Illustration showing 20mph zone with Turners Hill Motif.

5.0 Impact on bus stops

5.1 There are currently two bus services provided by Metrobus that serve Turners Hill, route numbers 82 and 84. Details of these services can be found on 'Metrobus' website but for ease have been copied in Appendix 2. The current proposals will involve removing the bus stops outside the Crown and is the main disadvantage of the scheme.

5.2 To help mitigate the impact for users of route 84 the bus stops by Mount Close can be enhanced as a replacement to the stops by 'The Crown'. This work has been combined with the proposed feature by Mount Close and is shown on the drawing in Appendix 1. A solution to address the loss of the central stops for route 82 will still need to be explored with the bus company. However the current thinking is to request that the service extends along East St and turns round at Turners Hill Park as it does at present with route 84. This would mean that the main drop off and pick up point would also be by Mount Close.

6.0 Swept Path Analysis

6.1 To assess the performance of the twin mini-roundabout for large vehicles turning a swept path analysis has been carried out for a 16.5 metre articulated vehicle. These are shown on the drawings attached in Appendix 3.

6.2 The main change in response to this analysis is to change the proposed refuge islands in B2110 Church Road arm with an over-run area instead of an island. The crossing point still remains within a raised table plateau which will remain an improvement for pedestrians (DfT, 2007).

7.0 Consultation

7.1 Any successful scheme requires involvement with the wider community (DfT 2006). Consultation on the measures was undertaken with villagers by the Parish Council as part of development of the Village Plan. The consultation involved posting a questionnaire throughout the village. The proposals subject to consultation are shown on the plan attached in Appendix 4. The questions and overall response to the questionnaire are summarised in Table 1. The detailed comments received and responses are summarised in Appendix 5.

7.2 The responses indicate a high level of support (82%) for the 20mph zone. There is also majority support (61%) for the measures presented. However from the responses the following issues remained a concern:

- Although 49% support for the junction there are a number of concerns about the changes at B2028/ B2110 East St.
- The lack of pedestrian crossing facilities close to 'The Crown' car park entrance.
- Parking in the vicinity of the local shop.
- The one-way priority system at Mount Lane does not deter eastbound traffic speeds.

7.3 Following discussions with the Parish Council the following revisions have been made to the scheme:

- The B2028/ B2110 East St junction has been changed to a mini-roundabout rather than a sub-standard right turn lane.
- The area in front of the local shop has been modified to try to regulate the on-street parking and provide a better crossing arrangement for pedestrians.
- The table junction has been expanded to include the entire area to create a greater 'shared space' feel to the environment around the 'Green'. This means a defined crossing point can now be accommodated close to 'The Crown' car park entrance.
- The one-way priority system at Mount Lane revised to a road narrowing feature to slow east bound traffic speeds.

7.4 The revised proposals have been incorporated in the scheme drawings shown in Appendix 1.

Table 1: Summary of questions and responses to questionnaire (September 2012 – 33 replies)

	Questions:	**Yes %age (Nos)**	**No %age (Nos)**	**Other / No reply**
1.	Do you support the closure to vehicular traffic of one side of the road adjacent to The Crown to improve access and safety?	61% (20)	30% (10)	9% (3)
2.	If '**NO'** would you prefer to see a different type of scheme and if so what would it look like? *10 responses detailed in Appendix 5*			
3.	If **'YES'** to (1) are you happy with the proposed mini-roundabout and widening at Selsfield Road/North Street junction to accommodate the change in traffic movement around the green (**Yes/No**)? (If '**YES**' please go to question 5)	49% (16)	21% (7)	30% (10)
4.	If '**NO'** to (Q.3) what alternative would you prefer? *9 responses detailed in Appendix 5*			
5.	Do you support the approach to promote a 20mph zone together with traffic calming features (**Yes/No**)?	82% (27)	15% (5)	3% (1)
6.	If '**NO'** to (5) would you still like to see alternative measures to improve pedestrian safety (**Yes/No**). If **'YES'** what do you think they could be? *6 responses detailed in Appendix 5*	9% (3)	N/A	N/A
7.	If '**YES'** to (5) do you agree with: The mini-roundabout at Church Road/ Paddockhurst Road in support of the 20mph zone (**Yes/No**) and if '**NO**' what are your concerns? *7 responses detailed in Appendix 5*	66% (22)	18% (6)	15% (5)
8.	If '**YES'** to (5) do you agree with: The give-way priority at Mount Lane in support of the 20mph zone (**Yes/No**) and if '**NO**' what are your concerns? *3 responses detailed in Appendix 5*	61% (20)	27% (4)	6% (9)
9.	Please outline any further reservations/ concerns about the proposals presented? *23 responses detailed in Appendix 5*			

8.0 Traffic Impact Assessment

8.1 An assessment has been made of the impact of the proposed junction changes by comparing the results of the existing priority junctions using PICADY and the results of an assessment of the proposed mini-roundabouts using ARCADY for morning 'am' and evening 'pm' peak periods taken as 8am-9am and 5pm-6pm.

8.2 PICADY [acronym for Priority Intersection Capacity And DelaY] is based on three decades of research and development by TRL (www.trl.co.uk) and is used for predicting capacities, queues, delays (both queuing and geometric) at non-signalised major/minor priority junctions. ARCADY [acronym for Assessment of Roundabout Capacity And DelaY] is the world's leading software for the assessment of roundabout capacity, delay and safety. It is an essential aid to intersection design, allowing an accurate assessment of roundabout performance.

8.3 The results are presented as a ratio of flow to capacity (RFC); and queues (measured in 'vehicles'). A roundabout with an RFC of '1.00' means that it is operating at its maximum theoretical capacity. Therefore RFC values, ideally, should not exceed 0.85 as this allows spare capacity within the roundabout for further traffic growth or fluctuations in daily traffic flows. Printouts of the assessments are copied in Appendix 6.

8.4 To assess the change in impact the junctions of the B2028 with the B2110 Church Road and B2110 East Street have been treated both separately and as a double mini-roundabout. The results of the B2028/ B2110 Church Road junction are summarised in Table 2 & 3. The results of the B2028/ B2110 East Street are summarised in Table 4 & 5. The assessment of the double mini-roundabout is summarised in Table 6 and discussed in section 8.7.

Table 2: B2028 Selsfield Rd / B2110 Church Road Junction – Existing Performance of Priority Junction

		AM Peak		PM Peak	
Arm	Name	RFC	Max Queue	RFC	Max Queue
B-ACD	B2110 (East) Church Road	0.66	1.8	0.62	1.5
A-D	B2028 North Street (North)	0.61	1.5	0.46	0.8
D-AB	B2110 (West) Church Road – North & East	0.91	6.3	0.73	2.3
D-BC	B2110 (West) Church Road – South & East	0.88	4.8	0.76	2.6
C-B	B2028 Selsfield Rd (South)	0.13	0.1	0.13	0.1

Table 3: B2028 Selsfield Rd / B2110 Church Road Junction – Proposed Mini-Roundabout

		AM Peak		PM Peak	
Arm	Name	RFC	Max Queue	RFC	Max Queue
1	B2028 North Street (North)	0.18	0.22	0.22	0.28
2	B2028 Selsfield Rd (South).	0.32	0.46	0.20	0.25
3	B2110 Church Road.	0.13	0.15	0.12	0.14

8.5 The comparison between the results of Table 2 & 3 indicates:-

- Eastbound movement will be significantly improved [Movement D-AB/ D-BC & Arm 3];
- Southbound flows will be improved [Movement A-D & Arm 1];
- There will be noticeable delay in northbound flows but better than current east/west queues [Movement C-B & Arm 2].

These results indicate a positive improvement in vehicle movement through the change to a mini-roundabout. Although the northbound queues will be noticeable they highlight sufficient capacity for future growth over and above the existing arrangement.

Table 4: B2028 North Street / B2110 East Street/ Lion Lane Junction – Existing Performance of Priority Junction

		AM Peak		PM Peak	
Movement	Name	RFC	Max Queue	RFC	Max Queue
B-CD	North Street - B2028 North Street (South)/Lion Lane	0.35	0.5	0.22	0.3
B-AD	North Street - B2028 North Street (North)/Lion Lane	0.33	0.5	0.38	0.6
A-D	B2028 North Street (North) - Lion Lane	0.02	0.0	0.01	0.0
D-AB	Lion Lane - B2028 North Street (North)/North Street	0.04	0.0	0.03	0.0
D-BC	Lion Lane - North Street/B2028 North Street (South)	0.04	0.0	0.06	0.1
C-B	B2028 North Street (South) - North Street	0.03	0.0	0.05	0.0

Table 5: B2028 North Street / B2110 East Street Junction – Proposed Mini-Roundabout

		AM Peak		PM Peak	
Arm	Name	RFC	Max Queue	RFC	Max Queue
1	B2028 North Street (North)	0.21	0.26	0.25	0.32
2	B2110 East Street	0.12	0.14	0.12	0.14
3	B2028 North Street (South)	0.07	0.08	0.07	0.08

8.6 No direct comparison can realistically be made for flows from Lion Lane as the flows are very low (see figure 3) and is treated as a minor access road. The comparisons between the results of Table 4 & 5 for the main roads indicate:-

- Westbound movement will be improved [Movement B-CD/ B-AD & Arm 2];
- Northbound queues will be created to a similar level as the existing westbound queues on B2110 East Street (current northern arm) [Movement C-B & Arm 3].
- Southbound queues will be created to a similar level as the existing westbound queues on B2110 East Street (current northern arm) [Movement A-D & Arm 1];

These results indicate noticeable delays to North/ South Movement than currently experienced but a positive improvement in westbound movement. Although these queues will be noticeable they highlight sufficient capacity for future growth over and above the existing arrangement.

Table 6: B2028 North Street / B2110 East Street/ B2110 Church Rd Junction – Performance of twin mini-roundabout

			AM Peak		PM Peak	
Jtn	Arm	Name	RFC	Max Queue	RFC	Max Queue
1	1	B2028 North Street	0.18	0.22	0.23	0.3
1	2	B2028 Selsfield Rd	0.32	0.47	0.20	0.25
1	3	B2110 Church Rd	0.13	0.15	0.12	0.14
2	1	B2028 North Street (North)	0.26	0.35	0.26	0.35
2	2	B2110 East St	0.14	0.16	0.13	0.15
2	3	B2028 North Street (South)	0.13	0.15	0.11	0.13

8.7 The latest ARCADY is also able to assess the combined change to twin mini-roundabouts. Table 6 summarises the results of this assessment and indicates slight differences between the modelling as separate junctions.

8.8 The results indicate that the changes offer a noticeable improvement to east/ west movement and a noticeable delay in north/ south movement. Although there will be a delay in north/south movement the changes offer improvement in overall capacity in comparison to the existing arrangement. The double mini-roundabout is considered to support the outline objective in section 4.1 to "Improve the management of vehicle movements around the 'Green'".

Figure 6: Diagram summarising peak hour traffic counts B2110/ Turners Hill Rd Junction [8-9am (in red) & 5-6pm (in blue) June 2012.]

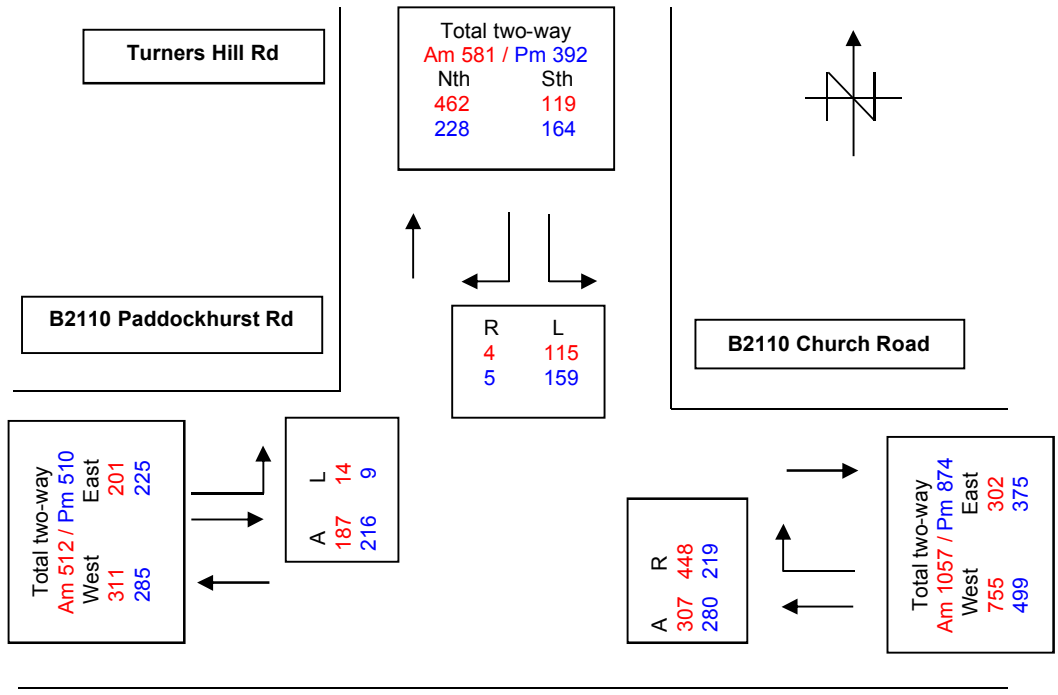


Table 7: B2110 Church Road/ Turners Hill Road Junction – Existing Performance of Priority Junction

		AM Peak		PM Peak	
Movement	Name	RFC	Max Queue	RFC	Max Queue
B-AC	Turners Hill Road - Paddockhurst Road/B2110 Church Road	0.26	0.3	0.31	0.4
C-B	B2110 Church Road - Turners Hill Road	1.06	17.3	0.55	1.2

Table 8: B2110 Church Road/ Turners Hill Road Junction – Proposed Mini-Roundabout

		AM Peak		PM Peak	
Arm	Name	RFC	Max Queue	RFC	Max Queue
1	B2110 Church Road	0.20	0.24	0.12	0.14
2	B2110 Paddockhurst Road	0.10	0.11	0.10	0.12
3	Turners Hill Road	0.05	0.05	0.07	0.07

8.9 B2110 Church Road/ Paddockhurst Rd / Turners Hill Road Junction

8.9.1 In order to assess the performance peak hour traffic counts were carried out and summarised in Figure 6. The results of the assessments are summarised in Table 7 & 8.

8.9.2 The results indicate that although there will be slight delays for eastbound traffic the proposed mini-roundabout at B2110 Church Road/ Turners Hill Road will improve movements through the junction.

9.0 Road Safety Audit

9.1 A Road Safety Audit is a formal systematic independent assessment of the potential road safety problems associated with a road scheme. Road safety audits have been demonstrated to be a successful preventative tool for use on new road schemes. The audit is not a technical check but primarily to report on the following questions: "Who can be hurt in a collision on this part of the highway, and how might that happen?" followed by: "What can be done to reduce the potential for that collision, or to limit its consequences?" [Road Safety Audit – IHT 2008].

9.2 The Road Safety Audit was carried out in June 2012 for the initial proposals and reviewed again following design changes in February 2013. The extract of the issues raised by the June 2012 Audit and recommendations are copied in Table 9. The extract of the issues raised by the February 2013 Supplementary Audit and recommendations are copied in Table 10. Copies of the Audit are attached in Appendix 7a and 7b.

Table 9: Issues Raised as part of Road Safety Audit (June 2012 Audit).

Issues Raised	**Recommendation:**
Drawing UKD-105-2 Problem 2.1: The refuges shown on the mini-roundabout in Selsfield Road and North Street are substandard with the approaching refuge in both cases being approximately 0.8m wide. Pedestrians with push chairs would not be able to stand in the middle of the refuges in safety and vehicle/pedestrian collisions may result.	It is recommended that the new footway on the east side of the mini-roundabout is adjusted to provide more carriageway width so that wider refuges can be provided.
Problem 2.2: At all the locations where the speed tables are built and pedestrian crossing points are included with tactile paving, the notes describe the dropped kerbs as to be flush with the carriageway. The lack of any differential between the carriageway and the footway may result in blind and visually impaired pedestrians straying from the footway onto the carriageway, which may result in vehicle/pedestrian collisions.	Subject to any contrary outcome from consultations with appropriate bodies representing blind and partially sighted people and those with reduced mobility, provide flush crossing points where tactile paving is provided and at least 25mm upstand at all other places in accordance with the current DfT "Inclusive Mobility" recommendations.
Problem 2.3: On the southeast corner of the speed table there are proposals for a modified pedestrian crossing area of the footway, which measures 1.2m approximately on the drawing and which has guardrailing on the north side of the tactile paving. The guardrailing located in this position would restrict the use of the new footway to a point that the footway would not be usable by wheelchair users and such pedestrians crossing Selsfield Road east to west may not be able to leave the carriageway, which may result in accidents.	It is recommended that the last panel of guardrail as shown on the drawing should be deleted.

Table 9 continued:

Issues Raised	**Recommendation:**
Problem 2.4: The existing footway on both sides of North Street where the speed hump is to be provided is very narrow with approximately 1.0m on the west side and 0.8m on the east. It is proposed that tactile paving is provided but the footway is so narrow that it may result in blind and visually impaired pedestrians being unable to use the footway in safety. Furthermore, the use of the speed table as proposed as a crossing point for pedestrians with push chairs and disabled pedestrians using wheelchairs could also lead to pedestrian/vehicle accidents.	It is recommended that the footways on both sides of North Street be widened to a minimum of 1.2m by reducing the width of the carriageway.
Drawing UKD-105-3 Problem 2.5 Proposals are to provide a pedestrian route along the southern footway of Church Road - Turners Hill Road through the junction, which will result in pedestrians having to cross Church Road and Turners Hill Road. The route may be thought to be tortuous and may result in some pedestrians travelling east to west to continue to a point opposite the island in the mouth of Paddockhurst Road and using that island to rach the southern side of Turners Hill Road which may result in vehicle/pedestrian collisions.	It is recommended that the existing footway on the south side of Church Road be extended to a point alongside the island, that the island is converted to a refuge and provide new section of footway from Turners Hill Road
Drawing UKD-105-4 Problem 2.6 Proposals show the southwest bound bus stop being re-sited to a point 16m northeast of a new carriageway narrowing. If a bus is stopped at the bus stop a vehicle may pull out to overtake the bus and position itself in danger of oncoming vehicles which have proceeded through the priority narrowing correctly, which may result in vehicle/vehicle collisions.	It is recommended that the southwest bound bus stop be re-sited to a point southwest of the narrowing.

Table 10:
Issues Raised as part of Supplememtary Road Safety Audit (Feb 2013).

Issues Raised	**Recommendation:**
Section 2.3. It should be noted that the response to Problem 2.4 in the Designer's Response accepts the recommendation provided by the Audit Team but the drawings provided for the Supplementary Stage 1 RSA do not show the necessary changes.	This issue is not covered in the Supplementary Stage 1 RSA but all changes made to the proposals arising from both the original Stage 1 RSA and the Supplementary Stage 1 RSA should be included in new drawings prior to the Stage 2 RSA being carried out.
Drawing UKD-105-2RevB Problem 3.1: In Lion Lane it is proposed that an uncontrolled pedestrian crossing point is placed at a point adjacent to the Central Stores and immediately north of a proposed parking bay on the west side of the road. Pedestrians crossing Lion Lane west to east may be hidden from northbound drivers which could result in pedestrian/vehicle collisions.	It is recommended that visibility of pedestrians is improved by reducing the length of the parking bay sufficiently to allow drivers to see pedestrians waiting to cross the road.
Problem 3.2: At the junction of North Road/Lion Lane it is proposed that a red surfaced hatched carriageway marking is provided in the mouth of Lion Lane leading from the junction in a northerly direction. However the northern end of the carriageway marking will be very close to the proposed parking bay and will often lead to northbound vehicles running over the carriageway marking. In poor visibility the carriageway marking could lead to moving vehicles colliding with parked vehicles.	It is recommended the red surfaced hatched carriageway marking is deleted from the proposals.
Problem 3.3: At the junction of North Road/Lion Lane it is proposed that a small build-out is constructed adjacent to the footway outside of the Central Stores. However the build-out is designed to be separate from the existing footway with a narrow gap to allow drainage on the alignment of the existing gutter. Although the existing dropped kerb on the footway appears to be retained the gap may still become a location where pedestrian trip/fall accidents may occur.	It is recommended the build-out is constructed to connect to the existing footway with the dropped kerb removed and suitable drainage provided.

Table 10 continued:

Issues Raised	**Recommendation:**
Problem 3.4: At the junction of North Road/North Road it is proposed that a new Give Way/ roundabout sign is to be erected on the southwest corner of the junction. The existing footway is narrow and erecting such a sign will reduce the width off the footway and may result in pedestrians using wheelchairs or prams being unable to pass the sign. Pedestrians may enter the carriageway to pass the sign resulting in pedestrian/vehicle collisions.	It is recommended that the sign is erected on a cranked post on the grassed area adjacent to the footway.
Problem 3.5: At the junction of North Road/North Road it is proposed that a new Give Way sign is too be erected on the northeast corner of the junction. The location for the sign is shown to be within an area in front of a private access and may result in vehicle/street furniture collisions.	It is recommended that the sign is erected on a cranked post at the rear of the footway very close to the boundary of Thee Old Manse/Sunnyside properties
Problem 3.6: At the junction of East Street/North Street on the south side there are 2 No. bollards situated on the footway between the accesses to the car park. One must be removed to make way for the uncontrolled pedestrian crossing but the other will remain. The bollards reduce the width of the footway to the extent that pedestrians using wheelchairs cannot pass them and must enter the carriageway to pass the obstruction which may result in vehicle/pedestrian accidents.	It is recommended that the remaining bollard is removed.

10.0 Response to Stage 1 Road Safety Audit.

10.1 The Client/ Design response to the issues and recommendations raised by the Audit and supplementary Audit are set out in Table 11.

Table 11: Response to Issues Raised by Audit.

Response to issues Raised	**Response to recommendation.**
Drawing UKD-105-2 Problem 2.1: Summary: sub-standard refuges may result in accidents. Issue acknowledged	The proposed refuge islands are to be modified to accommodate a 1.2 metre minimum width as defined in Local Transport Note 2/95 ' The Design of Pedestrian Crossings' (DfT, 1995).
Problem 2.2: Summary: lack of differential between carriageway and footway may cause pedestrian accidents. Issue acknowledged	Kerb heights to be adjusted in accordance with 'guidance on tactile paving' (DfT,2005) as part of detailed design.
Problem 2.3: Summary: Lack of manoeuvring space may cause pedestrian accidents. Issue acknowledged	Panel to be shown removed as part of detailed design.
Drawing UKD-105-3 Problem 2.5: Summary: New footway may result in pedestrian accidents. Issue acknowledged	There is an existing footpath route already created across this junction that is considered equally or far more challenging than the current proposals. In addition to provide a crossing point and widen the refuge as suggested cannot be achieved within existing highway. Preference is to retain existing route as the proposed route is considered to be safer than the existing crossing arrangement.
Drawing UKD-105-4 Problem 2.6: Summary: Re-siting the bus stop may result in accidents. Issue acknowledged	Agree to re-position bus stop but will move it further east due to sub-standard footway width further west and difficulties with placing outside property.

Table 11 continued:

Response to issues Raised	**Response to recommendation.**
Problem 2.4: Summary: Narrow footway may result in pedestrian accidents. Issue acknowledged Raised again in Section 2.3 of February 2013 Review	Although issue acknowledged this is an existing footway width and this is not being modified. This is a known cycle route and narrowing the carriageway is not ideal from a cyclist view (Cycling England, 2010). The provision of a flat top junction will assist pedestrians crossing here. Although preference is to retain existing width to avoid increase risk to cyclists, on auditor's recommendation an increase in footway width is to be accommodated.
Drawing UKD-105-2RevB Problem 3.1: Summary: Parking bay may put pedestrians at danger Issue acknowledged	Length of Parking Bay to be reduced.
Problem 3.2: Summary: red surfaced hatching may result in accidents. Issue acknowledged	Red hatching in Lion Lane to be removed and replaced with single centre line.
Problem 3.3: Summary: small build-out may result in pedestrian accidents. Issue acknowledged	Small build-out to be removed and replaced with over-run Granite sett surfacing.
Problem 3.4: Summary: Position of 'Give Way' sign may result in pedestrian accidents. Issue acknowledged	Sign to be changed in accordance with recommendation as part of detailed design.
Problem 3.5: Summary: Position of 'Give Way' sign may result in accidents. Issue acknowledged	Sign to be changed in accordance with recommendation as part of detailed design.
Problem 3.6: Summary: Inadequate width of footway may lead to accidents. Issue acknowledged	Bollard to be removed in accordance with recommendation as part of detailed design.

10.3 The proposals have been the subject of an independent road safety audit. These have highlighted minor issues that can be addressed as part of the detailed design process. A 'stage 2 road safety audit' is recommended on completion of the detailed design.

11.0 Conclusion

11.1 The Turners Hill 'Green' is the central focus of the Village and is situated at the crossroads of the B2028 and the B2110. The 'Village Green' is a key part of the village's 'sense of place'. One of the key aspects of good urban design is that 'Places are for People' and need to connect with their surroundings, particularly by foot (Homes and Communities Agency, 2000). The current layout around the Green fails to achieve this. If Turners Hill is to be improved for future generations then a critical part of a successful scheme will be to improve the area around the 'Green'.

11.2 Traffic improvements, at the Turners Hill junction B2110/ B2028 (North Street, East Street, Selsfield Road, Church Road)' based on an outline proposal was approved in the Infrastructure Plan for the North Mid Sussex County Local Committee (CLC) (WSCC, 2011). This proposal involved closing the southern section of the carriageway adjacent to 'The Green'. This would significantly improve access and use to 'The Green'. With the support of the Local County Councillor this scheme has been further developed by the Parish Council as part of the Village Neighbourhood Plan.

11.3 The objectives of the scheme have been developed and can be summarised as follows:

- Enhance 'Village Green' to improve Turners Hill 'Sense of Place', giving priority to access on foot in the roads surrounding the 'Green';
- Improve the management and road safety of vehicle movements around the 'Green'.
- Compliment other measures associated with other initiatives being carried out in the Village.

11.4 The proposals developed by the Parish Council were subject to consultation with villagers in September 2012. The results of the consultation indicate majority support for the changes and in particular high support for a20mph zone. There were however further concerns about the design and further changes made to the layout. These designs have been assessed to ensure they offer an improvement to vehicle movement and safety which incorporates both modelling work (using PICADY and ARCADY) and carrying out a Road Safety Audit.

11.5 The proposals are shown on the drawings in Appendix 1 and comprise of the following:

i. Closure of the southern section of carriageway adjacent to the Village Green;

ii. revise the carriageway space to provide a twin mini – roundabout set on a raised table junction covering the entire carriageway space;

iii. Set the above changes within a wider 20mph zone together with additional engineering features to maintain lower speeds. The features developed include:

- Signed gateway on all approaches. The zone sign can include a Turners Hill logo to reinforce its 'sense of place' (DfT, 2012).
- The provision of a table junction covering the area around the 'Green'.
- A narrowing feature on the B2110 East Street, together with improvements to the bus stop by Mount Close. This will help passengers cross the road to an improved bus stop area.
- A mini-roundabout at the junction of the B2110 Paddockhurst Rd/ Turners Hill Rd.

11.6 The proposals described above are considered to satisfy the scheme objectives enhancing the 'sense of place' for Turners Hill together with improving road safety and access and compliment other initiatives in the Village. They have been subject to: consultation amongst residents; assessed for turning and impact on traffic movements; and an independent road safety audit. The proposals are considered to offer the best option for improvement.

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Appendices:

Appendix 1	Design Drawings
Appendix 2	Bus Route Maps
Appendix 3	Drawings showing swept path analysis
Appendix 4	Consultation Plan
Appendix 5	Summary Consultation Responses
Appendix 6a	Picady Report – B2028/ B2110 Church Lane Junction
Appendix 6b	Arcady Report – B2028/ B2110 Church Lane Junction
Appendix 6c	Picady Report – B2028/ B2110 East Street Junction
Appendix 6d	Arcady Report – B2028/ B2110 East Street Junction
Appendix 6e	Arcady Report – Twin Roundabout Assessment
Appendix 6f	Picady Report – B2110/ Turners Hill Road Junction
Appendix 6g	Arcady Report – B2110/ Turners Hill Road Junction
Appendix 7a	Stage 1 Road Safety Audit – June 2012
Appendix 7b	Stage 1 Road Safety Audit – February 2013

Appendix 1: Design Drawings

[Due to the size of the drawings they has not been attached here but all the drawings can be viewed and downloaded from the links in the table below. *Courtesy of CAD Precision Ltd*]

Drawing No.		**Title**
UKD-105-1	Rev A	Overview extents of 20mph zone – Preliminary Design https://cadprecision.box.com/s/tpdi9k9uq2do8f5cqglc
UKD-105-2	Rev B	Proposed Village Centre Improvements – Preliminary Design https://cadprecision.box.com/s/756rlw2q4bgqgyudrwge
UKD-105-3	Rev A	Proposed Mini-roundabout Turners Hill Rd/ B2110 Church Rd – Preliminary Design https://cadprecision.box.com/s/hks525yk81f93z2d9kgx
UKD-105-4	Rev B	Proposed Traffic Calming Feature B2110 East St/ Mount Lane – Preliminary Design https://cadprecision.box.com/s/jru2jv8ai9hizoyjvde5

Appendix 2: Bus Route Maps for Service 82 & 84

[Due to the size of the plans it has not been attached here but can be viewed and downloaded from the link below:

https://cadprecision.box.com/s/oz7m072zr4fxm7csxu1b

Courtesy of CAD Precision Ltd]

Appendix 3: Swept Path Analysis

[Due to the size of the plan it has not been attached here but can be viewed and downloaded from the link below:

https://cadprecision.box.com/s/0vaczqdbqoa2tel4b9jq

https://cadprecision.box.com/s/dd3e6s8oxbw51dzufwwu

Courtesy of CAD Precision Ltd]

Appendix 4: Consultation Plan

[Due to the size of the plan it has not been attached here but can be viewed and downloaded from the link below:

https://cadprecision.box.com/s/uvpbd1e0l2w3k792yyxd

Courtesy of CAD Precision Ltd]

Appendix 5: Summary Consultation Responses

Summary of questions and responses to questionnaire
(September 2012 – 33 replies)

	Questions:	Yes %age (Nos)	No %age (Nos)	Other / No reply
1.	Do you support the closure to vehicular traffic of one side of the road adjacent to The Crown to improve access and safety?	61% (20)	30% (10)	9% (3)

Comment	Response
But only if the bus stops are still in good locations	Noted
I can see the advantages in this but have concerns (no box ticked)	Noted
Have the police advised on this?	Sussex Police will be consulted as part of statutory process.

2.	If '**NO'** would you prefer to see a different type of scheme and if so what would it look like? *11 comments below and response:*	

Comment	Response
What other scheme? What is wrong with bus stops?	The objective is to improve the Village. A key concept of the scheme is to enhance and improve access to the 'Green' by closing the southern carriageway in front of 'The Crown'. To achieve this will involve managing the changes to traffic flow. This is best managed by the use of the now twin mini-roundabouts. The disadvantage of the proposal is unfortunately the loss of the bus stops in the centre of the Village. However every effort will be made to improve other bus stops in the village to compensate for this loss.
Leave green as is, make slip road one way towards East Street. Amend proposed roundabout to enable north bound traffic to negotiate. Enlarge the roundabout (mini as shown) incorporating widening the junction as in B.	The enlargement of the roundabout will incur significant extra cost due to the relocation of the BT box on the 'Green'

Comments on question 2 continued	**Response**
I don't know and can't make up my mind whether closing the road at The Crown would be a help. There is little space at the green.	Every street represents a balance between movement (the capacity to accommodate through traffic) and a sense of place (the quality which makes a street somewhere to visit and spend time in, rather than to pass through) (DfT, 2011). To enhance the centre of the Villages' sense of place and improve access to the 'Green' on foot and links to adjoining premises, a closure of the carriageway on one side of the 'Green' offers the best solution. If you consider the 'Green' as a triangle the preferred carriageway to be closed is the section opposite the Crown Public House as this connects with one of the main historical buildings in Turners Hill. The section of carriageway adjoins a forecourt already used by patrons for socialising and provides opportunity to expand this use.
Having the two roundabouts that are proposed will not alleviate the problem of traffic 'backing up' on the feeding arterial routes. Do not close road in front of Crown but use existing green as roundabout.	The 'Green' has been a central public space for centuries and rather than remove it is felt it is better to protect and enhance this space. Although the comment is noted the current proposals support the above view. The traffic modelling carried out indicates that the changes will help to reduce congestion not increase it.
Yes to 1 but would really worry that traffic would back up down the steep hills (snow/ice) and also traffic going to EG from the school road would have to queue to turn right at the green & this would back up into the main road.	There is little that can be done to deal with the gradient – which is a problem through the junction whether it is changed or not. Mini-roundabouts have a good road safety record across the County and there is majority support for these features from the consultation carried out. The traffic modelling carried out indicates that the changes will help to reduce queues not increase it.
Slip road North St- East St made one way eastbound, East Street one way outside Crown to new roundabout, extend slightly village green.	Although the suggestion is noted the issue of concept of connecting to 'The Green' would be weakened. A 4 arm mini-roundabout would not be as safe as a 3 arm mini-roundabout.
I support the idea of 20mph zone for the village. A width restriction at both ends of East St to prevent lorry traffic, the restriction would lower automatically for Cox Skips vehicles only. A road could be built from the junction of B2110 Paddockhurst Rd, straight down past the pond and come out on to B2028. This would reduce traffic through the centre of the village.	At present the focus is to help improve management of traffic within the existing Highway rather than build new roads with all the Legal, Environmental and Financial implications this would involve.

Comments on question 2 continued	Response
Concerned that the traffic speed in East St would increase as no need to slow down for traffic coming straight across the cross roads so would accelerate out of the village, round a sharp corner by current bus stop. Turning right onto North St from East St could be very difficult as all traffic for EG will be North St waiting to turn, would this force traffic to go up and completely around the roundabout to come back down North Street? I can envisage the junction opposite Mace completely gridlocked perhaps needs a yellow box to assist with traffic flow.	The objective is to improve the Village. A key concept of the scheme is to enhance and improve access to the 'Green' by closing the southern carriageway in front of 'The Crown'. To achieve this will involve managing the changes to traffic flow. This is best managed by the use of the now twin mini-roundabouts.
Current plan would bottle neck current levels of congestion into one road only We would not get off our drive in East Street. Traffic to continue in front of Crown to go straight on or left turn only. From slip road no left turn only right towards CD. Stop sign, not give way, at junctions of slip street and East St.	The comment about the increase in traffic flows through the northern arm of the B2110 is noted. This dis-benefit has to be weighed up against the overall advantages of the scheme and the wider road safety benefits. The traffic modelling carried out indicates that the changes will help to reduce congestion not increase it. Whilst it is acknowledged that use of the private access will change, the provision of private drives onto 3 arm mini-roundabouts is not uncommon and has functioned successfully.
Judicious use of traffic lights to facilitate traffic flow through centre of village/crossroads. Develop role of village green as a roundabout.	Due to the horizontal and vertical alignment of the junction and available road space, traffic signals would be difficult to accommodate safely and will cause an increase in delays due to the number of stages and inter-green times. The objective is to improve the Village. A key concept of the scheme is to enhance and improve access to the 'Green' by closing the southern carriageway in front of 'The Crown'. To achieve this will involve managing the changes to traffic flow. This is best managed by the use of the now twin mini-roundabouts.
Whenever there are temporary traffic lights in the village has it been noticed how easily the traffic moves at the crossroads. All other villages have traffic calming around schools & elderly populations why doesn't Turners Hill.	

3.	If **'YES'** to (1) are you happy with the proposed mini-roundabout and widening at Selsfield Road/North Street junction to accommodate the change in traffic movement around the green (**Yes/No**)? (If '**YES**' please go to question 5)	49% (16)	21% (7)	30% (10)

Comment on question 3	Response
There are issues that arise from this so although in its simplest form it appears to be a good idea I think that this should be explored further.	Noted

4.	If '**NO'** to (Q.3) what alternative would you prefer? *9 comments below and response:*	

Comment	**Response**
If someone decides it is going to happen no good arguing because it will probably happen, no story. No suggestions leave well alone.	Highway issues remain a priority concern in the Village. The scheme seeks to address some of these concerns and enhance the use of the area around the 'Green'. The indications from surveys indicate a 'do nothing' option is not supported.
A mini roundabout outside shop at this would become a busier cross-roads. I don't think a roundabout at the top of the hill is necessary and may cause more problems as cars will have to stop at top of Selsfield Road, so more likely to roll backwards into cars behind as they try to pull away. The raised surface is a good idea and would encourage a speed reduction. A simple T junction would be adequate.	The objective is to improve the Village. A key concept of the scheme is to enhance and improve access to the 'Green' by closing the southern carriageway in front of 'The Crown'. To achieve this will involve managing the changes to traffic flow. This is best managed by the use of the now twin mini-roundabouts.
Larger re positioned to accommodate right turns from East Street.	The design has been modified and now includes a mini-roundabout at the junction near the shops to assist right turn movements into East Street.
The mini roundabout needs to be larger to EG junction at High Street, College Lane, Lewes Road)	The design maximises the highway space available. Any larger would require additional land.
Yes to 3 but would prefer traffic lights at brow of hill	Due to the horizontal and vertical alignment of the junction and available road space, traffic signals would be difficult to accommodate safely and will cause an increase in delays due to the high number of stages and inter-green times.
Needs to be slightly larger to accommodate the one way westbound traffic from East St (as per suggestion in 2)	The design does include a carriageway widening and slight reduction in 'Green' to accommodate changes in traffic movement.
Make Church Rd and junction with Selsfield Rd a T junction and move the roundabout to the junction near Central Stores	The design has been modified and now includes a mini-roundabout at the junction near the shops.
We support the mini roundabout but have concerns regarding the traffic congestion when the vehicles will turn right into East St, the right turn needs to be given priority.	The design has been modified and now includes a mini-roundabout at the junction near the shops to assist right turn movements into East Street.
Q3 not answered - roundabout instead of crossroads is excellent idea and will allow traffic to flow more evenly in the directions of Worth and Haywards Heath.	Noted.

5.	Do you support the approach to promote a 20mph zone together with traffic calming features (**Yes/No**)?	82% (27)	15% (5)	3% (1)

Comment	**Response**
I would like to see the introduction of 'pinch points' on all four roads into the village, similar to those used around the Maidenbower roads, drivers have no choice but to slow down then.	A 20mph zone requires engineering features to maintain compliance with the speed limit. These engineering features include a number of features and only one narrowing is considered necessary to maintain compliance. Although the view is noted other comments do not reflect complete support for additional measures and a balance needs to be drawn against conflicting opinions. The current view is that this balance has been achieved.
I support a variation on the 20mph scheme as described in my answer to Q1 (no box ticked)	Noted
Yes but not pinch point, not required	Noted – see response above

6.	If '**NO'** to (5) would you still like to see alternative measures to improve pedestrian safety (**Yes/No**). If **'YES'** what do you think they could be? *6 comments below and response:*	9% (3)	N/A	N/A

Comment	**Response**
I stand several times a week to cross to the shop & post office and know a crossing there would be a disaster because if one had to stop the rest would run into the back of one another.	Noted
Traffic calming yes, raised mini-roundabout no. 20mph yes What about pedestrian crossings.	The need for improvements for pedestrians crossing over the entire area is agreed. The approach has been to provide refuge islands and form crossing points as part of the raised table. This is a widely used approach with case examples set out in Manual for Streets and Traffic Calming Guidance (DfT, 2007). The disadvantage with the use of formal signal crossings is that they are restricted to one singular crossing point, whereas there are numerous crossing points which justify treatment. By treating the area as a whole and slowing traffic through the use of a raised table you create a safer environment for pedestrians over a wider area.

Comments on question 6 continued	**Response**
Zebra crossings - especially for the crossing from the Crown to school.	The need for improvements for pedestrians crossing over the entire area is agreed. The approach has been to provide refuge islands and form crossing points as part of the raised table. This is a widely used approach with case examples set out in Manual for Streets and Traffic Calming Guidance (DfT, 2007). The disadvantage with the use of signals is that they are restricted to one singular crossing point, whereas there are numerous crossing points which justify treatment. By treating the area as a whole and slowing traffic through the use of a raised table you create a safer environment for pedestrians over a wider area.
We support 20mph zone but not traffic calming features.	A 20mph zone requires engineering features to maintain compliance with the speed limit. These engineering features include one raised table across the entire junction which has a role to help pedestrians cross the road. Although the view is noted this approach has had a positive impact on road safety (DfT, 2007) and currently has the majority of support from responses to date.
20mph zone signs, speed bumps outside Crown, TH school, Ark end of East St.	Noted
Yes to 5 but would like speed humps.	A balance has to be made between opposing views on the traffic calming features. The current proposals have the majority support and are considered to strike the right balance between opinions.

7.	If '**YES'** to (5) do you agree with: The mini-roundabout at Church Road/ Paddockhurst Road in support of the 20mph zone (**Yes/No**) and if '**NO**' what are your concerns? *7 comments below and response:*	66% (22)	18% (6)	15% (5)

Comment	**Response**
No 20mph limit no roundabout.	Although the views are noted, the response indicate majority support for the proposals.
Undecided - I'm not convinced it will held reduce the speed. Other traffic calming measures may be better such as speed humps. There will be more congestion and a lot of the time traffic coming into the village doesn't reach 20mph anyway.	A balance has to be made between opposing views on the traffic calming features. The current proposals have the majority support and are considered to strike the right balance between opinions. The traffic modelling carried out indicates that the changes will help to reduce congestion.
It is a beautiful part of our village that appears on your website. There is a blind part of the junction but most people use the main junction to turn right. This will be made all the safer if 20mph zones and a one way priority system near the village gates was developed. With this and the new pedestrian crossing will keep traffic speed low. Why go to the expense and unappealing sight of another dot roundabout.	The objective is to improve the Village. A key concept of the scheme is to enhance and improve access to the 'Green' by closing the southern carriageway in front of 'The Crown'. To achieve this will involve managing the changes to traffic flow. This is best managed by the use of the now twin mini-roundabouts. The detailed design process will consider minimising the visual impact of the changes.

Comments on question 7 continued	**Response**
Don't really see the need to go to this expense - if the pinch points (mentioned in 5) were in place say by the village gates and the church, then traffic would already be driving slow enough to negate the need for a roundabout.	The objective is not just to install traffic calming engineering features but to enhance the centre of the village through improving the arrangement for pedestrians crossing and the management of traffic flows.
This is a great idea.	Noted.
In combination with other traffic calming measures as you enter the village boundary such as speed cushions.	Visual Gateways through signing is proposed at the terminal point of the 20mph zone. A balance has to be made between opposing views on the traffic calming features. The current proposals have the majority support and are considered to strike the right balance between opinions.
The traffic from Worth School direction could be slowed down through speed bumps and going 30mph then 20mph	A balance has to be made between opposing views on the traffic calming features. The current proposals have the majority support and are considered to strike the right balance between opinions.

8.	If '**YES'** to (5) do you agree with: The give-way priority at Mount Lane in support of the 20mph zone (**Yes/No**) and if '**NO**' what are your concerns? *3 comments below and response:*	61% (20)	12% (4)	27% (9)

Comment	**Response**
Not sure give way priority is needed if there is a 20mph. Speaking from experience coming in and out. I think a mini roundabout at this junction would be more suitable and would slow through traffic.	A 20mph zone requires engineering features to maintain compliance with the speed limit. A balance has to be made between opposing views on the traffic calming features. The current proposals have the majority support and are considered to strike the right balance between opinions.
Traffic flow and increased congestion.	The feature is likely to increase delay to encourage slower speeds through the zone. This outcome needs to be weighed against the wider benefits to road safety.
Traffic leaving the village would have no reason to slow down once on East St as they do not have to give way. So vehicles would accelerate out of the village past driveways, new proposed bus stop with 50+ Imberhorne students waiting. It can already be difficult to get out of driveways with less hazards for vehicles will get worse.	This issue is noted. For this reason the proposals have been changed to a narrowing to encourage slower speeds in the east bound direction. The wider impact on bus stop areas is to be considered in further detail as part of the detailed design process.

9.	Please outline any further reservations/ concerns about the proposals presented? *23 comments below and response:*	

Comment	**Response**
I do not like the school car park idea or the entrance to it. Why not turn the playground into a car park as the gates are already in place; then turn the school field into a playground and extend the fence at the end of the playfield across to where the proposed car park would be. This would mean less work and expense, the children will have one larger play area all year round (away from the road) and the farm fields can stay as they are (other than the section taken for the new playfield). The animals will then go right up to the school field which the children will enjoy. We would benefit from a new driveway under the new proposals, which would be safer for us, but we worry about our security with an open driveway behind our house. It makes us an island with people able to drive completely around our property. It takes away our enjoyment of the sheep and cows coming right up to our garden on all sides, and ruins our views. These are the reasons we live here and it feels like we may be forced to move away. The proposed housing estate behind the Old Vicarage are ridiculous and the scale on the drawing is completely wrong. You won't fit 40+ properties on that land and keep a rural feel. The entrance road won't fit and will impair the quality of residents lives. This will also increase the number of cars in the village. We want a quieter, more rural village, not a busier one. Build in towns not villages.	*The comment relates to a different proposal described in this report. This comment will be responded to separately.*
Guess something has to be done don't think it will relieve traffic congestion. Too dangerous to move the bus stop though I know they don't come very often.	The disadvantage of the proposal is unfortunately the loss of the bus stops in the centre of the Village. However every effort will be made to improve other bus stops in the village to compensate for this loss.
Sorry I haven't been very helpful, if I was standing there when building I might have same idea. We here are mostly elderly and manage - just sad the village will be spoilt like other villages.	The objective is not to spoil the village but seek to improve the 'sense of place' around the 'Green'.
Entrance to new car park too far out if for village use as well as school use. If in 20mph zone why can't entrance be on Church Road.	*The comment relates to a different proposal described in this report. This comment will be responded to separately.*
Car park area in Church Road would benefit from entry/exit straight onto Church Road by old water tower and not off the new roundabout at Paddockhurst junction, it would be in the 20mph zone. It would promote people to use it.	*The comment relates to a different proposal described in this report. This comment will be responded to separately.*

Comments on question 9 continued	**Response**
Pedestrian crossing to village shop essential. Also pedestrian pavement as far as the Antiques shop and footpath opened to Noahs Court. Would also like to see electric point erected to charge an electric car or bicycle. Concern that the present green will not be used as much. Speed cameras essential.	The need for improvements for pedestrians crossing over the entire area is agreed. The approach has been to provide refuge islands and form crossing points as part of the raised table. This is a widely used approach with case examples set out in Manual for Streets and Traffic Calming Guidance (DfT, 2007). The concept of an electric charge point is a good idea but probably inappropriate as part of this scheme and at this location. Ideally it maybe better close to 'The Ark'. Use of the 'Green' will need to considered in detail post scheme implementation but it is vital that the 'sense of place' is promoted. A 20mph zone requires engineering features to maintain compliance with the speed limit rather than use of cameras which would be very difficult to locate.
Pedestrian crossings. Traffic lights. Pedestrians need to cross road safely. Drivers still drive on regardless. We need a pedestrian crossing.	The need for improvements for pedestrians crossing over the entire area is agreed. The approach has been to provide refuge islands and form crossing points as part of the raised table. This is a widely used approach with case examples set out in Manual for Streets and Traffic Calming Guidance (DfT, 2007). The disadvantage with the use of signals is that they are restricted to one singular crossing point, whereas there are numerous crossing points which justify treatment. By treating the area as a whole and slowing traffic through the use of a raised table you create a safer environment for pedestrians over a wider area.
Egress from proposed new car park by school could well only afford limited line of vision. Proposed new route for children to walk to St Leonards doubles the risk involved by crossing the road twice. Extend path past mini roundabout, have controlled crossing zone over to Grove Cottage and then all round to Church. Have warning lights and notices on Paddockhurst Rd before approaching bend which can be manually operated when necessary.	*The comment relates to a different proposal described in this report. This comment will be responded to separately.*

Comments on question 9 continued	**Response**
I am angered that no one has felt the importance of adequately addressing the safe passage of our children across North Street to our village school. Why does this not feature as a priority in our neighbourhood plan? A raised hump is not a crossing, it cannot be relied upon as a way to stop cars. The argument that there is a lollypop lady at the start and end of school is poor. There is no one to help midday collection of toddlers (mums often with pushchairs) after school clubs, evening events and more often than not on parents returning, often with pushchairs, after drop off. I think the more recently proposed car park for the school has not been thought through why opt for more urbanisation and destruction of views before looking at options for redevelopment of the school car park as it stands. Why not remove the roundabout and replace with small linear beech hedge which frees up more parking spaces. Also remove the large grass bank that only presents danger to the children falling into the road. This is a large space that would be opened up and again offer a good number of new parking spaces. There is a significant under utilisation of the Church car park by parents/visitors etc. but if the crossing and traffic calming and new footpath were in place this would be addressed. I think the school also needs a pathway around the back of the Old School House Cottage that provides alternative access to the school avoiding the narrow footpath. Although we think that the village green development would be pleasing in many ways we think that if a roundabout is created it seems strange that 50 yards or so away another bottleneck is being created for traffic from East Street not being able to utilise it. And, finally, touching on an issue that is very significant to us, we are frustrated that we seem to be prepared to create/rely on traffic calming measures as a way of safeguarding our children. An official crossing should be created. (no postcode)	The need for improvements for pedestrians crossing over the entire area is agreed. The approach has been to provide refuge islands and form crossing points as part of the raised table. This is a widely used approach with case examples set out in Manual for Streets and Traffic Calming Guidance (DfT, 2007). The disadvantage with the use of signals is that they are restricted to one singular crossing point, whereas there are numerous crossing points which justify treatment. By treating the area as a whole and slowing traffic through the use of a raised table you create a safer environment for pedestrians to cross. *The comment relates to a different proposal described in this report. This comment will be responded to separately.*
The over sized new car park for the school	*The comment relates to a different proposal described in this report. This comment will be responded to separately.*
The junction of the B2208/B2110 is currently congested - I don't believe the new proposal would help. I would suggest another roundabout with a pedestrian crossing to the south to give the (elderly) better access to the village shop. I understand a crossing is included in the plan so I very much support this.	The traffic modelling assessment demonstrates that although there will always be traffic congestion through this junction the changes will be an improvement.

Comments on question 9 continued	**Response**
I came along to the consultation at the school and found the meeting very informative, it was especially helpful when Thelma Mason spoke directly to me about the proposals rather than me having to work it out for myself. I have a concern over the proposed car park alongside the school playing field. The car park would be on land currently used for farming and land which often has cattle or sheep grazing it with delightful views across the valley to the farm beyond. To develop a car park there seems to me to be a great shame. I appreciate the suggestion that the car park would be of benefit to school families coming from Worth/Maidenbower direction; however there must surely be sufficient parking in the church car park which is already well hidden from the road. If the thought is that it is not very safe to walk children across the junction of TH Rd/ Paddockhurst Rd, then with adequate measures in place to reduce the speed of traffic along these roads this would improve the safety of crossing. I have included my suggestion to reduce traffic speed in the questionnaire, however I will reiterate it here. As in Maidenbower I suggest that at the village gates on the Paddockhurst Rd and on Turners Hill road where the 30mph sign is, that the pinch points are in place thereby forcing only one car's access at a time with priority over drivers leaving the village; other speed reducing methods like sleeping policemen, could also be introduced within the30mph area along the Paddockhurst Rd leading up to the school. With these measures in place I feel pedestrian safety would be greatly improved. Another point regarding families using this car park when coming from Worth/Maidenbower is that, if and when the proposed housing goes ahead and the children from these new houses join the school, surely there wouldn't be enough space for families to join the school from as far away as Worth /Maidenbower, thereby these driver numbers would decrease? Obviously the thought is that drivers will use the new car park when coming from the Crawley Down direction too. In this instance my solution would be to increase the parking at The Ark, again negating the need to decimate a beautiful view. Parking at The Ark has never seemed adequate, when organisations hold their meetings their cars are regularly parked up in the grass verges along East St and along the access road to the Ark, often up on the pavement to help increase the road width between cars parked on opposite side of the road. Even families visiting the park before going home after school, myself included, often park on the access road because the few parking bays near East St have already been filled. If a car park of the size suggested at the school was placed alongside the play area then surely there should be adequate parking for all to use. If the thought is that the proposed car park is for the use of the school staff, again I have a proposed solution. Outside the front of the school there are two grassy areas, neither of which seem to have much of a purpose. The 'roundabout' bit in the 'D' often has its edges driven over and is not very attractive, surely the ideal opportunity to turn into parking bays. Equally the bank by the wheelie bins could surely be removed to make way for parking bays; having a bank for children to run down straight into the road has never seemed to be a very good idea to me anyway. Returning to the pinch points I would just like to add that I would like to see these sorts of measures introduced along all roads accessing TH, also with the introduction of speed humps. I can see that the argument against such measures could be that these roads are all used by heavy lorries on a regular basis; my answer to that is that they are not exempt from sticking to speed limits any more than car drivers and as long as the road width with the pinch point installed is the width of a standard single lane road width then surely there shouldn't be a problem. It wouldn't be a bad idea if some of the lorry drivers DID drive a little more carefully through our beautiful village anyway. Good luck!	*The comment relates to a different proposal described in this report. This comment will be responded to separately.*

Comments on question 9 continued	**Response**
Please no car park near school - this does not help villagers & does nothing for the village look. Please no large housing estate behind fire station - village cannot cope with more houses without more facilities/buses etc. This is Paddockhurst just wanting to make money not doing this for the village.	*The comment relates to a different proposal described in this report. This comment will be responded to separately.*
Access to and from driveway to The Courtyard and The Old Manse compromised by current proposals	*The comment relates to a different proposal described in this report. This comment will be responded to separately.*
If the roundabout is kept at junction of Church Rd & Selsfield Rd there will be traffic backing up from the new junction at the front of The Manse. Better to have roundabout here.	Design has been changed to accommodate another mini-roundabout at the junction with East Street as suggested.
By routing all of the traffic past the current bus stop at the village green, turning right out of there to go to Crawley down will become dangerous and more complicated due to the traffic turning right that would previously have gone straight past the Crown. The school bus service to Imberhorne has changed and there are now forty children waiting in the morning for the school bus. I do not feel that there will be room for the children at the new location near 10 Newstone Cottages.	The disadvantage of the proposal is unfortunately the loss of the bus stops in the centre of the Village. However every effort will be made to improve other bus stops in the village to compensate for this loss.
Is the 20mph enforceable? Concerned with safety of Imberhorne students waiting for bus at new bus stop. Lack of space. Speed of traffic I believe traffic will be accelerating out of village as per my previous comments (Q8). Need bus shelter of some description and pull in area for bus. Takes time for students to join bus, as all children on same bus. Is moving bus stop from centre of village a good idea?	The disadvantage of the proposal is unfortunately the loss of the bus stops in the centre of the Village. However every effort will be made to improve other bus stops in the village to compensate for this loss. The 20mph zone includes engineering measures to encourage compliance with the speed limit.
Too many roundabouts	The view is noted. Mini-roundabouts have a good road safety record across the County and there is majority support for these features from the consultation carried out.
Our fear is the decision has already been made! If pinch spot is put in place where are East St residents to park. Should be other side of Mount Road. Road humps best for all. On an average of 1-5 cars per house the newly approved housing will add to congestion which contradicts your report. The only possible beneficiary of this plan will possibly be the Crown pub.	20mph zones require engineering features to enforce low traffic speeds. The current design seeks to minimise any impact on on-street parking in East Street.
Concern at speed and manner in which motorists currently corner as turning into slip road from East St and in particular as turn into slip road from North St. Suggest corners which would require a more conscious 'turn'. Proposals would create real difficulty exiting Lion Lane towards current crossroads. Proposals surely just shift crossroad problem down the hill to junction of North St and slip road.	Design has been changed to address this concern by proposing another mini-roundabout at the junction with East Street. The difficulty exiting Lion Lane is acknowledged and design amended, but is unlikely to be completely resolved due to the need to accommodate on-street parking in front of the shop.

Comments on question 9 continued	**Response**
My general opinion of the whole "makeover" is rather on the negative side, I'm afraid, but only because it will look less and less like the village I was born into. That aside I am realistic enough to appreciate something just has to be done to deal with ever increasing volume of traffic and collisions in the village as it is now, let alone when even more houses are built. Besides, things only change gradually and are the hot topic of conversation for a while before the next bit of "gossip" takes over!! I've lived with all the changes since Medway was first developed, so I'm quite sure I shall manage to cope with a few more before I fall off my perch!	The central focus of Turners Hill is the 'Village Green' and is a key part of the village's 'sense of place'. If Turners Hill is to be improved for future generations then a critical part of a successful scheme will be to improve the area around the 'Green'. Every street represents a balance between movement (the capacity to accommodate through traffic) and a sense of place (the quality which makes a street somewhere to visit and spend time in, rather than to pass through) (DfT, 2011). To enhance the centre of the Villages' sense of place and improve access to the 'Green' on foot and links to adjoining premises, a closure of the carriageway on one side of the 'Green' offers the best solution. If you consider the 'Green' as a triangle the preferred carriageway to be closed is the section opposite the Crown Public House as this connects with one of the main historical buildings in Turners Hill. The section of carriageway adjoins a forecourt already used by patrons for socialising and provides opportunity to expand this use. This change forms the basis of the proposal and the current view is that this offers an improvement.
We are very unhappy about the creation of an access onto Church Road for a housing development. Church Road is already a very congested road.	*The comment relates to a different proposal described in this report. This comment will be responded to separately.*

Appendix 6: Modelling Reports
Carried out by Richard Pelham (Pelham Transport Consulting)

[Due to the size of the printouts they has not been attached here but all the reports can be viewed and downloaded from the link below:

https://cadprecision.box.com/s/4jjhu3zjss16f0rkb9jg

Courtesy of CAD Precision Ltd]

Appendix 6a:
Picady Report – B2028/ B2110 Church Road Junction

Appendix 6b:
Arcady Report – B2028/ B2110 Church Road Junction

Appendix 6c:
Picady Report – B2028/ B2110 East Street Junction

Appendix 6d:
Arcady Report – B2028/ B2110 East Street Junction

Appendix 6e:
Arcady Report-B2110/ B2028–Twin Roundabout Assessment

Appendix 6f:
Picady Report – B2110/ Turners Hill Road Junction

Appendix 6g:
Arcady Report – B2110/ Turners Hill Road Junction

Appendix 7a:
Stage 1 Road Safety Audit (June 2012)
Carried out by Laurence Shaw Associates

[Due to the size of the document it has not been attached here but can be viewed and downloaded from the link below:

https://cadprecision.box.com/s/1msmoer34wkmp3xhjbnv

Courtesy of CAD Precision Ltd]

A proposed feature in Lion Lane was also audited but is being taken forward separately as part of redevelopment works. The comment raised in Problem 2.7 will be dealt with as part of these works.

Appendix 7b:
Supplementary Stage 1 Road Safety Audit (Feb 2013)
Carried out by Laurence Shaw Associates

[Due to the size of the document it has not been attached here but can be viewed and downloaded from the link below:

https://cadprecision.box.com/s/zqpr88g7gvq6adxgrz8b

Courtesy of CAD Precision Ltd]

A revised scheme related to the proposed mini-roundabout for Turners Hill Road and B2110 Church Rd was also audited but is being taken forward separately as part of other works. The comment raised in Problem 3.7 will be dealt with as part of these works.