CORMAC

A388 Hatt

Rood's Corner Route Review Report

Infra22-068-CSL-ENM-SX397596-RP-D-0001-A388 Hatt Review Report

Cormac Solutions Ltd | Infrastructure Design





Issue & Revision Record						
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1 Introduction



1.1 Scheme Background

- 1.1.1 Cormac Solutions Ltd. was commissioned in 2017 to undertake a feasibility study for the provision of a safe route for pedestrians and cyclists alongside the A388 road between Callington and Saltash (Refer to Callington to Saltash Safe Passageway Options Appraisal Report, 2018, Appendix A).
- 1.1.2 Sustrans were commissioned to undertake a feasibility study to assess possible routes for walking and cycling beside the A388 road between Hatt and Carkeel. (Refer to Hatt A388 Route Study, 2022, Appendix B).
- 1.1.3 This report reviews the preferred routes between Hatt Roundabout and Rood's Corner presented in both the Cormac and Sustrans feasibility studies. A recommended option is presented with a provisional cost estimate.
- 1.1.4 Crossing improvements along the A388 have been considered. Cormac has reviewed this route in Section 7 of the previously produced Callington to Saltash Safe Passageway Options Appraisal Report, 2018. Sustrans preferred route alignment is presented in Section 5 of the previously produced Hatt A388 Route Study, 2022.
- 1.1.5 Route widths, design standards and location of the path in relation to the carriageway were considered when reviewing the reports. An option has been recommended following the review.

1.2 Report Structure

- 1.2.1 The report structure is as follows:
 - Section 2 Review of A388 Safe Passageway Options Appraisal Report (Cormac Solutions, 2018)
 - Section 3 Review of Hatt A388 Route Study (Sustrans)
 - Section 4 Preferred Route between Hatt and Rood's Corner
 - Section 5 Crossing at Rood's Corner
 - Section 6 Rood's Corner to Carkeel
 - Section 7 Conclusion and Recommendations

2 Review of A388 Safe Passageway Options Appraisal (Cormac)

- 2.1.1 Cornwall Council Transport Strategy team, in agreement with St Mellion Parish Council, commissioned the 'Callington to Saltash Safe Passageway Options Appraisal' to promote walking and cycling activities beside the A388. The 'A388 Safe Passageway Options Appraisal Report' was produced by Engineering Design Group, Cormac in 2017 in order to investigate safer routes for pedestrian and cyclists between Callington and Saltash.
- 2.1.2 In the report the study area that was investigated is between Callington and Saltash. The existing transportation conditions e.g. highway layout, traffic flows and speed, accident data, cycle provision etc. and environmental constraints e.g. historic environment, specific designations, invasive species, flood zones etc. has been considered within the report.
- 2.1.3 In addition to this, a questionnaire was undertaken by St Mellion Parish Council to clarify route preferences and concerns of the local community.
- 2.1.4 Cormac investigated 2 options (A and B) which were broken down into sections between Callington and Saltash. However, only Option A Section 7 Hatt Roundabout to the Rood's Corner is relevant to this report (Refer to Figure 2.1).

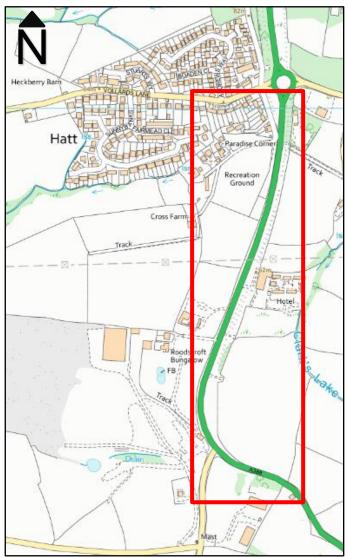


Figure 2.1. Hatt Roundabout to Rood's Corner (Option A-Section 7)

- 2.1.5 The feasibility study proposed to improve the crossing point on the southern side of Hatt Roundabout to better assist the pedestrians and cyclists and to provide a shared route on the east of the A388 to Rood's Corner. Another crossing point was recommended at Rood's Corner junction to link the route to new developments which will be located on the south of the A388. A roundabout is proposed at this location as part of the nearby housing development. The speed limit on this section of the road is 60mph which should be carefully considered during the detailed design stage of the scheme.
- 2.1.6 The Callington to Saltash Safe Passageway report proposes a shared use cycle /footway which is unsegregated, 3m wide and surfaced with bitmac. The study recommends a grass buffer strip of at least 1m between the shared route and the main carriageway, as the A388 is a busy road with high-speed traffic. The study also recommends improving the existing pedestrian refuge at Hatt Roundabout to create a cycle friendly crossing provision.

- 2.1.7 The existing pedestrian refuge to the south of Hatt roundabout could be extended to the south and widened to accommodate a staggered Toucan crossing with two independently controlled crossing points. This would need to be set back from the roundabout to allow traffic stacking distance at the crossing without hindering traffic at the roundabout. This would add significant cost compared to an uncontrolled crossing.
- 2.1.8 Relocating the carriageway to the south of Hatt so that the safe passageway can be installed to the west of the carriageway was also considered. This option is presented with a dashed red line in Drawing 1. This route raised the following concerns:
 - There are existing highway drainage systems on both sides of the road which would need to be altered if the main carriageway is realigned.
 - Increases the costs of the scheme in comparison to the original proposals
 - Requires various private landowner agreements
 - Will extend construction timescales and may increase disruption to the A388 over and above that required to introduce the route in general

Review of Hatt A388 Route Study (Sustrans)

- 3.1.1 Sustrans were commissioned to produce a study reviewing the provision of a safe route for walking and cycling between Hatt and the A38. The study included five route options and recommended a preferred option which is considered in this report.
- 3.1.2 Option 5 was Sustrans preferred route (Refer to Drawing 2 and 3). This route starts from the west side of Hatt Roundabout and uses the existing central splitter island to cross the carriageway and continues on the east side of the A388 to Rood's Corner Junction. In order to cross the A388 Sustrans proposed a crossing near Pengarth property on the north-west side of Carkeel village. The route will continue to Ball Wood and along the Latchbrook Leat river and will connect to the A388 with two separate routes (Refer to Figure 3.1).

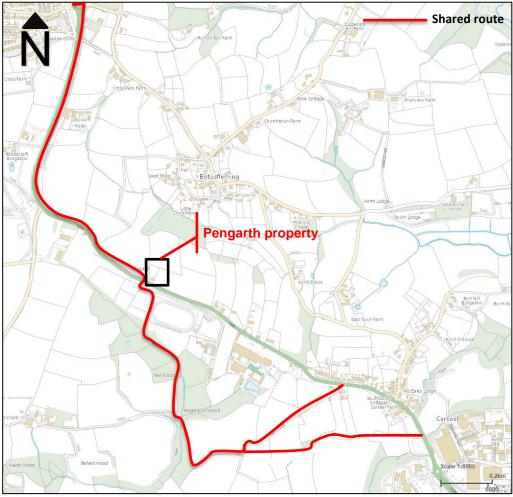


Figure 3.1. Hatt Roundabout to Carkeel (Sustrans - Option 5)

- 3.1.3 This study recommends a 3m wide path with a bound surface throughout the route to provide a high quality, smooth, and well-drained walking and cycling surface. The study proposes that the route will be parallel to the A388 including directional signs with distances of main destinations. In addition to this, the study recommends that the eastern side of the carriageway has a potential to provide a 5m wide route.
- 3.1.4 Section 4 and Section 5 will investigate the details of both 3m and 5m wide routes and the existing conditions along the A388.

4 Hatt to Rood's Corner

- 4.1.1 A site visit was undertaken on 12th August 2022. The route between Hatt Roundabout and Rood's Corner junction was walked and considered. A short section of the A388 to the north-west of Carkeel Village was also visited. The existing footway width, the island width at the Hatt Roundabout, the width of the existing verge area and the possible crossing point at Rood's Corner were investigated while on site.
- 4.1.2 The preferred route presented in the Cormac Feasibility Study Option A Section 7 was reviewed as well as the preferred route presented in Sustrans Study. In this section of the report the route options between Hatt and Rood's Corner are reviewed, and alternative solutions presented.
- 4.1.3 The width of existing footway on the west of the Hatt Roundabout has been measured as 1.8m. The refuge island at Hatt Roundabout is 2.5m wide in the centre and 1.5m wide at the crossing point. There are pedestrian guardrails on both sides of the refuge island, creating a staggered route for pedestrians. The railings restrict the crossing making it difficult for cyclists to manoeuvre across. According to Traffic Signs Manual Chapter 6, the guardrails can increase risk to cyclists and should not be installed if there is a clearly identified safety risk. In order for the crossing point to be upgraded for use by cyclists the island will need to be widened to provide a safer refuge and the existing guardrails should be removed. This will subject to approval from the Road Safety Team (Refer to Figure 4.1).



Figure 4.1. Existing refuge island at Hatt Roundabout

- According to Cornwall Council's intranet mapping the Average Annual Daily Traffic (AADT) was recorded at 15,700 vehicles and 1,290 of those vehicles are recorded as HCV or MGV (September 2015). Additionally, Hatt Roundabout is subject to 30mph speed limit. The Cycle Infrastructure Design (LTN1/20) guideline suggests a signalised crossing (e.g. Toucan crossing) when the traffic flow is more than 8,000 vehicles and there are a maximum number of two lanes to cross in one movement within a 30mph speed limit (Refer to Appendix C) However, every site should be assessed case by case. Therefore, the decision for crossing improvement will be subject to a detailed investigation and approval from the Road Safety team.
- 4.1.5 On the east of the Hatt Roundabout, there is an existing footway which ends at the crossing point in line with the central refuge island. The proposed shared route was investigated starting from the existing footway and heading south along the verge. The existing grass verge was measured at 3.5m on this side of the road 42m from Hatt Roundabout. A variety of mature trees e.g. oak, hazel, apple etc. were noted to be in good condition along the road (Refer to Figure 4.3). These were more abundant in a 200m section just south of Hatt roundabout.



Figure 4.3. Existing verge area 42m from Hatt Roundabout

- 4.1.6 The shared route has been considered with two different widths. An unsegregated 3m route was recommended in the Safe Passageway report and a 5m segregated route was suggested by Sustrans. In addition to this width, the route will require a buffer zone from the carriageway. The width of the buffer zone adjacent to the section of carriageway subject to a 60mph speed limit is 2.0m absolute minimum and 2.5m preferred minimum. In order to create a route with an appropriate crossfall some earthworks will be required. A topographical survey is required to determine the extent of these earthworks. The shared route will constructed with a bound bitmac surface with a 2.5% crossfall towards the carriageway and timber edging kerbs will be provided. A 3m wide route will have significantly less impact on the ecology than a 5m route (Refer to Drawing 1). A Preliminary Ecological Appraisal (PEA) will be required in order to identify and mitigate any environmental impact. Subject to the results of the PEA further surveys may be required.
- 4.1.7 Within 100m of Hatt roundabout are three street lighting columns that will need to be relocated. In addition to this there are gullies, utility covers and manholes which may need to be relocated or realigned with the new trail surfacing beside the A388. There is also a stone filled drainage ditch alongside the A388 within the first 200m of the route. Therefore, in order to avoid any impact on existing drainage, the shared route will start behind the ditch line. This may cause more vegetation clearance and disturbance of the tree roots.
- 4.1.8 Approximately 200m south of Hatt roundabout (123m from the change of speed limit) the existing grass verge widens to around 5m. This would allow a 3m wide route, with 2m buffer strip to be installed with minimal ecological impact. A 5m wide route is likely to impact the tree roots.
- 4.1.9 Further south, in front of the Croft Inn, it was noted that there is an existing 3m wide bitmac surface which could be used for part of the shared route (Refer to Figure 4.4 and 4.5). Mapping shows this to be public maintained highway and once was the former route of the highway although this would need to be confirmed.



Figure 4.4. Verge area 123m from speed limit boundary near The Croft Inn



Figure 4.5. Existing bitmac surfacing in front of The Croft Inn

4.1.10 To the south of the Croft Inn, there is a wide, sloping grass verge. There is an existing bitmac path at the back of the embankment area which could be considered as an alternative location for the shared route (Refer to Figure 4.6). As this is a low point in the area, careful consideration should be given to drainage design. This area must be included in the topographical survey.



Figure 4.6. Embankment nearside of the A388

4.1.11 The existing highway boundary and land registry has been investigated within this report. According to Cornwall Council's data, the proposed works are within the highway boundary. Land purchase may not be required in order to provide a shared route along the A388 between Hatt and Rood's Corner (Refer to Figure 4.7).

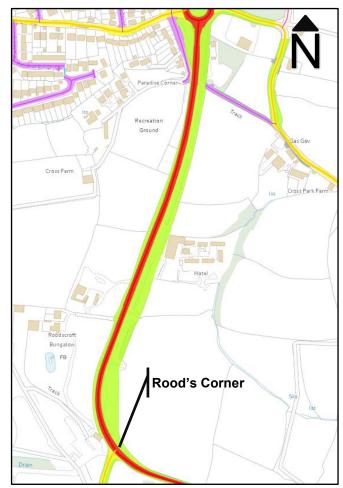


Figure 4.7. Public Highway boundary from Hatt to Rood's Corner

5 Crossing at Rood's Corner

In order to cross the A388 at Rood's Corner Junction, a crossing solution has been investigated. It is dangerous to cross at this section of the road as the speed limit is 60mph and there is a sharp bend which limits the visibility on both approaches to Rood's Corner (Refer to Figure 5.1) Therefore, careful consideration should be given at this particular location.



Figure 5.1. Rood's Corner junction at the A388

- A new roundabout is proposed at Rood's Corner, as part of the Treledan development. This is anticipated to reduce traffic speeds at Rood's Corner, allowing a safe crossing point for pedestrians and cyclists to be installed. Early engagement with the roundabout designer will be required during design / delivery process of the shared route (Refer to Appendix D).
- 5.1.3 It is proposed to provide a shared pedestrian / cycle route connecting to the Treledan development (Refer to Drawing 2). Therefore, possible routes connecting Rood's Corner to the Treledan development have been considered. (See Appendix E)
- 5.1.4 Cornwall Council's intranet mapping data shows that there is a public footpath from Rood's Corner connecting with a quiet lane to Notter (Refer to Figure 5.2). One option is to install a shared use crossing facility at Rood's Corner which connects to the public footpath to the quiet lane and to upgrade the footpath to a shared use route (Refer to Drawing 4).

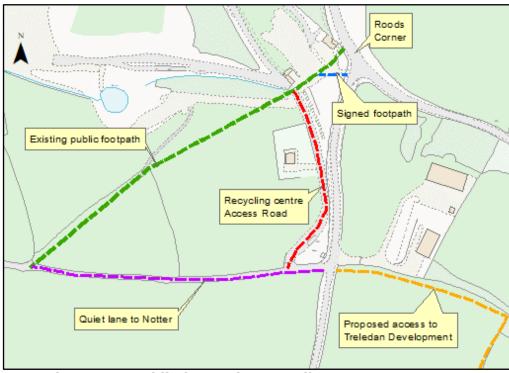


Figure 5.2. Public footpath at Rood's Corner

5.1.5 The existing footpath is within the land of Recycling Centre and Landfill Site Rood's Croft. There are public footpath signs at both ends of this path. The signed footpath from Rood's Corner does not quite match the route shown on mapping. There are stiles at both ends of the footpath which currently restrict access.





Figure 5.3. Public footpath route

- An alternative to upgrading the footpath is to use the existing Recycling Centre Access Road which provides a more direct route to the Treledan development. However, this would require land negotiation with the two landowners within this area (Refer to Figure 5.4). This will add additional cost to the scheme and there is no guarantee this would be successful. Additionally, it should be noted that the access to the Recycling centre will be used by large vehicles. Therefore, careful consideration should be given to the location of warning signs, lighting of the route, and additional safety features where possible.
- 5.1.7 The footpath has a less steep gradient than the recycling centre access road making upgrading the footpath a better option for cyclists.

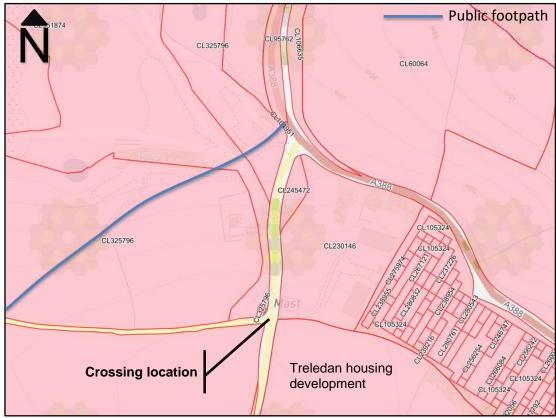


Figure 5.4. Land registry within the area of Recycling Centre

5.1.8 Both the footpath and the access road lead to the quiet lane to Notter. At the eastern end of this lane, it is proposed to provide a crossing point to the Treledan development (Refer to Figure 5.4). It is recommended that the visibility on both approaches to this location is improved. Furthermore, traffic calming is recommended to improve safety for pedestrians and cyclists at this location.

6 Rood's Corner to Carkeel

- According to the Sustrans preferred option the shared route will continue from Rood's Corner towards Carkeel. The Sustrans preferred route runs alongside the A388, behind the hedge, in privately owned fields. They propose a crossing point of the A388 near a property named Pengarth in order to access Treledan housing development area (Refer to Drawing 3).
- 6.1.2 This location could be dangerous to cross the A388 as there is limited visibility from the north-western approach. An alternative crossing could be considered near the 40mph speed limit signs at the entrance to Carkeel village since the visibility is better and there is more space on both sides of the carriageway. However, this would require the route to go around Pengarth or cut through the garden.

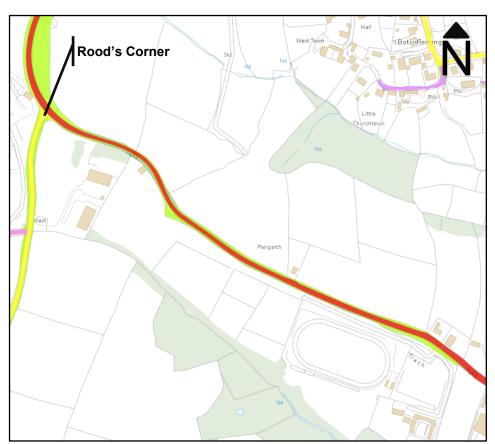


Figure 6.1. Highway boundary from Rood's Corner to Carkeel

6.1.3 The extract from Cornwall Council's intranet mapping, above, shows the highway boundary from Rood's Corner to Carkeel (Refer to Figure 6.1). A land search was undertaken in order to identify landowners. Land negotiation will be required from Rood's Corner junction to Carkeel in order to provide the shared route (Refer to Figure 6.2 and 6.3).

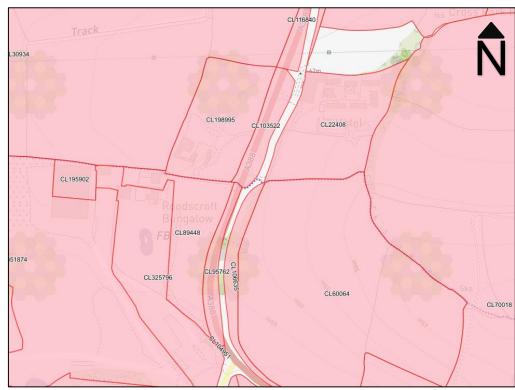


Figure 6.2. Land Registry at the A388 near Rood's Corner

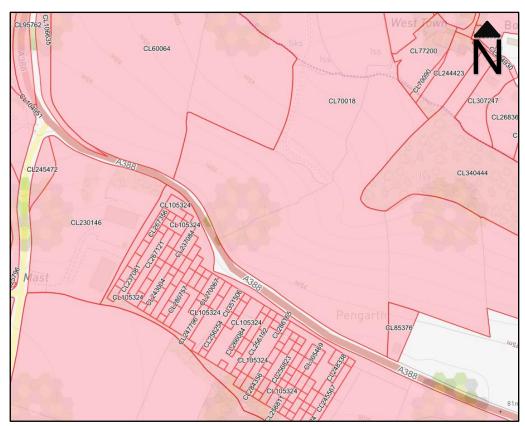


Figure 6.3. Land Registry at the A388 near Tamar Valley

6.1.4 It should be noted that the shared route will be in the boundary of the Tamar Valley Area of Outstanding Natural Beauty (AONB) (Refer to Figure 6.4). The construction of the shared route will have an impact on this area. Earthworks will be required in order to provide a suitable crossfall.

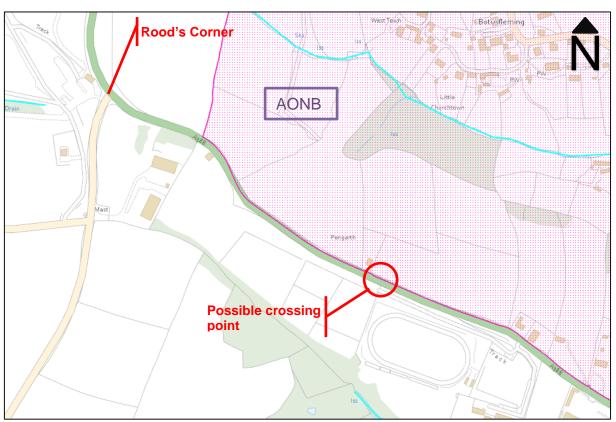


Figure 6.4. The boundary of AONB

To the south of this proposed crossing point, the Sustrans report recommends that the shared route will continue to Ball wood and Broadmoor wood following Latchbrook Leat and will link via two routes in to the A388 (Refer to Figure 3.1). According to Cornwall Council Intranet mapping, the route would be within the Biodiversity Action Plan (BAP) area and County Wildlife Sites (CWS) (Refer to Figure 6.5).

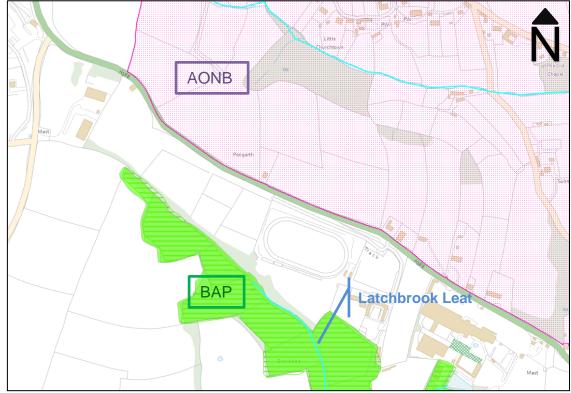


Figure 6.5. The boundary of BAP and CWS

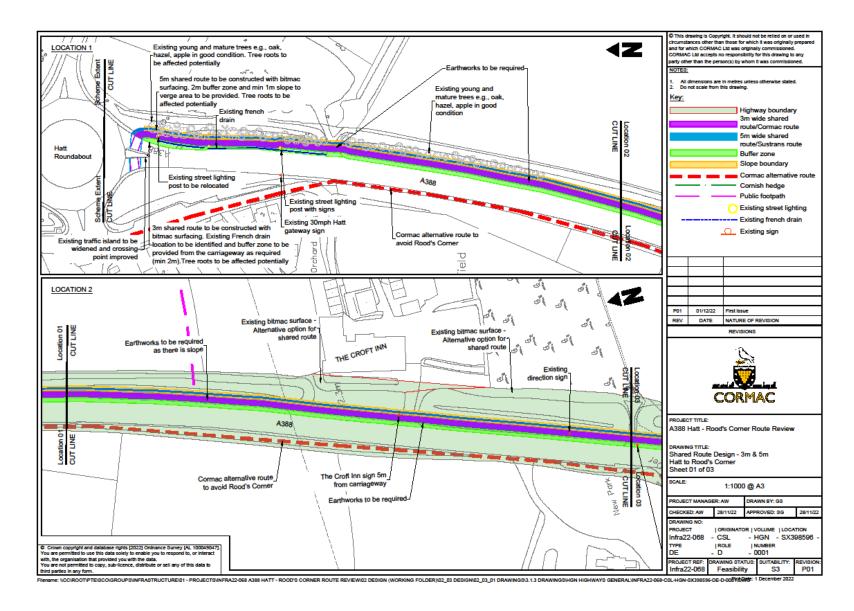
6.1.6 Therefore, Cornwall Wildlife Trust has been contacted in order to investigate the existing conditions and constraints of the Broadmoor and Ball Woods County Wildlife Site with an ID No. CN23. Following this, it is understood that Broadmoor and Ball CWS is privately owned and there is no existing path within the boundary of the site. Moreover, it is suggested not to construct any path within the boundary of the CWS as it will increase the human activity which will result in major disturbance to the wildlife and the construction of the path will cause habitat loss (Refer to Appendix F). Therefore, the Sustrans route will not be considered further as a possible shared route (Refer to Drawing 3).

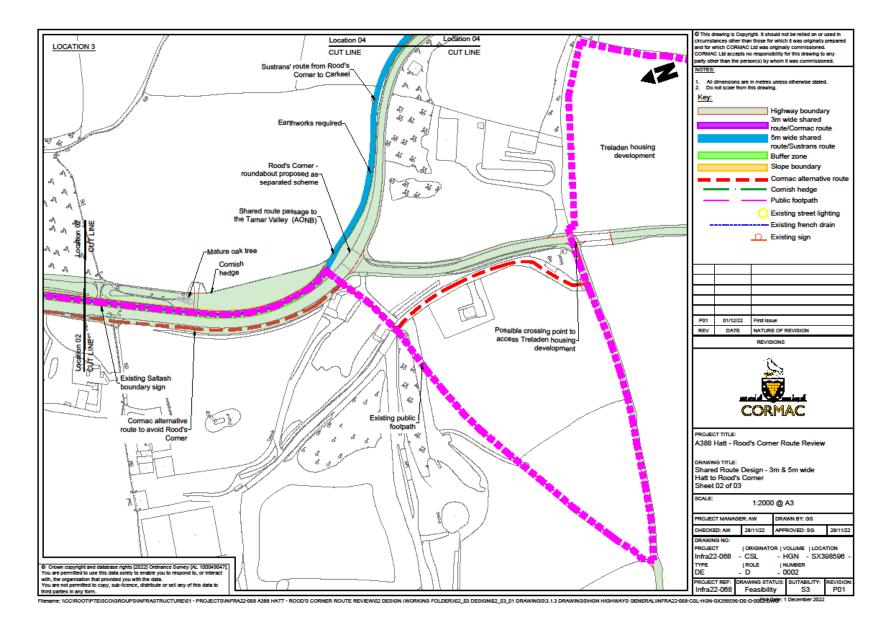
7 Conclusion and Recommendations

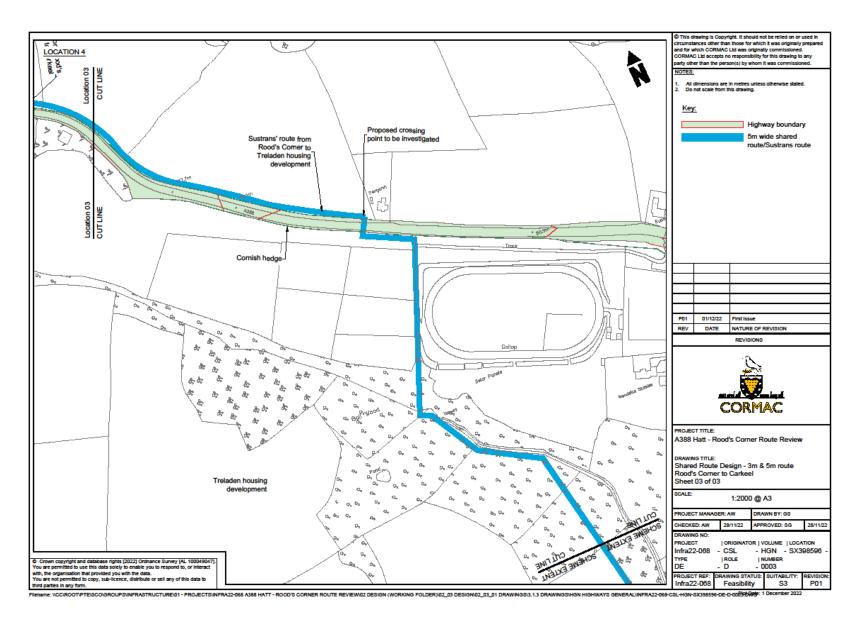
- 7.1.1 Both reports have been reviewed and the possible routes have been examined. During the site investigation process, the requirements and the possible impacts of the route have been inspected for two different widths which are an unsegregated 3m shared route and fully segregated 5m wide shared route. The route requires a recommended minimum of 2m buffer zone along the A388 carriageway.
- 7.1.2 Due to site conditions, both shared routes will require earthworks, however, the 5m route will have more impact on the environment as there are young and mature trees along the A388. It is recommended that a Preliminary Ecological Appraisal should be completed to inform the detailed design of the route.
- 7.1.3 There are gullies, manhole covers and a French drain beside the carriageway. It is recommended that the shared route will be located behind the French drain in order to avoid any construction impact on the existing drain system. Additionally, it is recommended to investigate and provide Sustainable Drainage Systems (SuDS) such as rain gardens to provide well drained shared route and enhance the biodiversity within the area.
- 7.1.4 The proposed shared route between Hatt Roundabout and Rood's Corner appears to be within the highway boundary and land purchase will not be required for this section of the route.
- 7.1.5 The continuation of the shared route from the Rood's Corner to Treledan housing development has been reviewed according to the proposals from the Cormac and Sustrans report. Sustrans proposal will not be considered as the proposed route will have an impact on the wildlife if it is provided.
- 7.1.6 A crossing point at Rood's Corner is considered a viable option if a suitable roundabout is provided at this location as it will help to reduce traffic speeds and a splitter island can be designed to be used as a central refuge. The crossing would, therefore, be designed to connect with a splitter island on the proposed roundabout and the shared route will be linked to the existing public footpath. Upgrading the footpath to a shared use route will require an agreement between Cornwall Council and the landowners. Additionally, consideration should be given to signs, road markings and lighting within the land boundary of the Recycling Centre as there will be large vehicles.
- 7.1.7 The shared route will end at the top of the road of the Recycling Centre. A crossing will be provided to access Treledan housing development. It is recommended to improve visibility as it is dangerous to cross with the existing conditions as the road is subject to a 60mph speed limit. Additionally, it is recommended to investigate the potential for traffic calming features along the road.

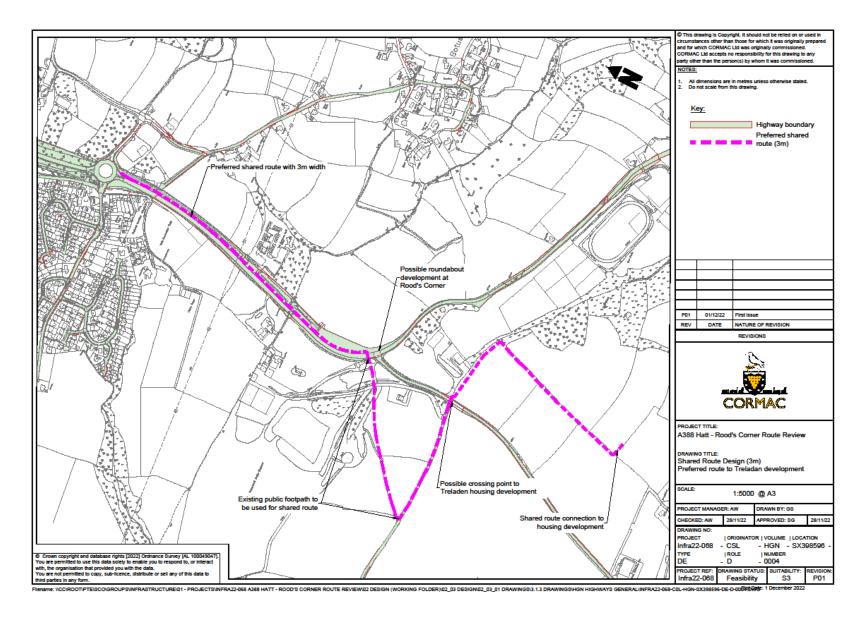
7.1.8 The construction work cost for the unsegregated 3m and segregated 5m shared routes have been calculated including 15% of contingency and 10% risk. All calculations have been completed according to the shared route between Hatt Roundabout and Rood's Corner. The civil work cost after Rood's Corner is not included. The civil works cost for a 3m shared route is £532,401.06 and segregated 5m shared route is £820,262.65. These construction cost estimates exclude utility diversions (inc. drainage) or third-party land acquisition cost, design fee, topographical or ecological surveys, ground investigation or any additional services.

DRAWINGS









APPENDICES

Appendix A EDG1245_OAR_001 V1

Appendix B SUSTRANS V2 Public April 2022-2

Appendix C LTN 1/20 Cycle Infrastructure Design (pg.100)

Appendix D Rood's Corner roundabout plan

Appendix E Broadmoor Farm housing development plan

Appendix F Advise from Cornwall Wildlife Trust on County Wildlife Site

APPENDIX A



APPENDIX B



SUSTRANS V2 Public April 2022-2.p

APPENDIX C

Speed Limit	Total traffic flow to be crossed (pcu)	Maximum number of lanes to be crossed in one movement	Uncontrolled	Cycle Priority	Parallel	Signat	Grade separated
≥ 60mph	Any	Any					
40 mph and 50 mph	> 10000	Any					
	6000 to 10000	2 or more					
	0-6000	2					
	0-10000	1					

≤ 30mph	> 8000	>2					
	> 8000	2					
	4000-8000	2					
	0-4000	2					- 4
	0-4000	1					



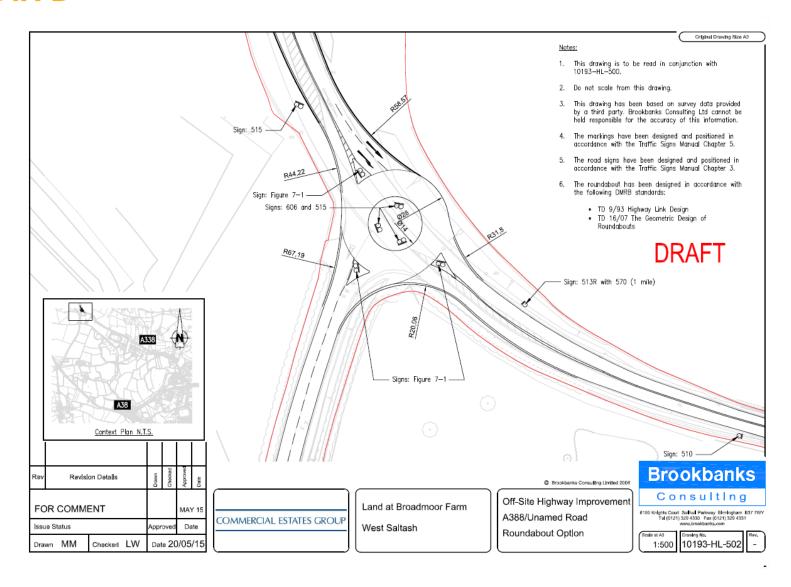
Provision not suitable for all people and will exclude some potential users and/or have safety concerns

Provision suitable for few people and will exclude most potential users and/or have safety concerns

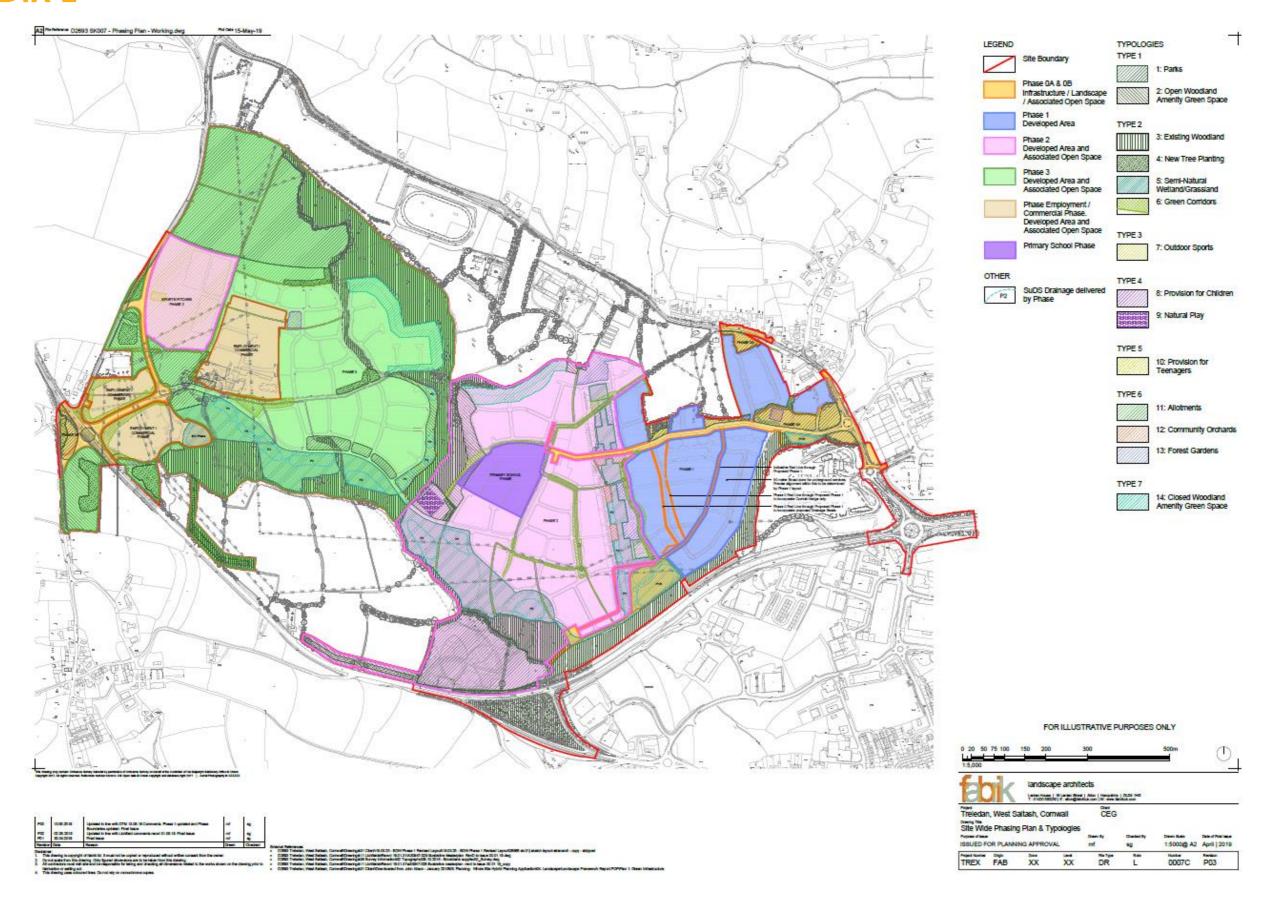
Notes:

- If the actual 85th percentile speed is more than 10% above the speed limit the next highest speed limit should be applied.
- The recommended provision assumes that the peak hour motor traffic flow is no more than 10% of the 24 hour flow

APPENDIX D



APPENDIX E



APPENDIX F

RE: Broadmoor and Ball Woods CWS-CN23





CONTROLLED

CAUTION: This is an EXTERNAL email which was sent from outside of Cornwall Council's network. Do not click links, open attachments, or reply unless you recognise the sender and know the content is safe. Do not provide any login or password details if requested.

Dear Gamze

Many thanks for contacting Cornwall Wildlife Trust. Your email enquiry was forwarded onto me. I have responded to your queries below:

1. Is there an existing path within the area of CWS?

County Wildlife Sites are privately owned. We do not have recent survey information for this site and therefore do not know if there are any existing informal paths throughout the woodland. Looking on the Cornwall Council Interactive map there are currently no public footpaths running through the site. Any proposals for a path would need to be agreed with whoever owns the land.

2. If there is; would it be beneficial to wild life if we link the shared to this existing path?

County Wildlife Sites are some of our most special places for wildlife – we would not wish to see a path impacting on wildlife within the CWS for example as a result of increased human disturbance in an existing quiet woodland. Neither would we want to see any path infrastructure resulting in loss of habitat.

3. If there is no path; do you recommend to create a shared route (min 3m wide) within the wildlife site?

Our position at Cornwall Wildlife Trust is to help ensure that the integrity of our network of County Wildlife Sites is protected and this is our priority over recreational access. Our preference therefore would be to avoid the woodland to prevent unnecessary disturbance to nature. In the event that proposals through the woodland were put forward - we would expect impacts on habitats and species to be fully considered as part of this process.

I do hope this helps with your investigations regarding a possible route. We feel it would be more appropriate for any path to be routed via adjacent fields in the wider landscape.

Kind regards

Laura

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