



Radnor Road, Scorrier, Redruth, Cornwall, TR16 5EH.



## Issue & Revision Record

Revision	Date	Originator	Purpose of Issue / Nature of Change
-	19-9-16	H Galligan	Original



Prepared by  
**Engineering Design Group**

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**CORMAC Solutions Ltd**

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**MILLBROOK**  
**REVIEW OF SAFETY CONCERNS**  
**EDG1070**

**INTRODUCTION AND SCOPE OF REVIEW**

The Engineering Design Group, Cormac Solutions Ltd, was commissioned in March 2016 by Millbrook Parish Council to review specific areas of road safety concern, assess proposed ideas and make suggestions or recommendations for improvement.

Estimated costs for work are given within this report but are provisional due to uncertainties of underground services, traffic management and drainage requirements.

**DESCRIPTION OF VILLAGE**

Millbrook is located on the Rame Peninsula and has a population of approximately 2000 (2001 census data). The village has a Primary school, located along Blindwell Hill which has approximately 120 pupils.

Annual Average Traffic flows for the village range from 3300 on the B3247 at Hounster Hill to 190 at Blindwell Hill. The village is covered by a 20mph speed limit.

One injury collision has been recorded in the village within the last 5 years and involved a car reversing onto a footway causing slight injury to a pedestrian on West Street.

**SITE VISIT**

A site visit was made on 23rd June 2016 during the hours of daylight. The weather was fine and dry, with a dry road surface. The review was carried out by Adrian Roberts Project Manager (Safety), Cormac Solutions Ltd and Helen Galligan, Senior Highways Design Technician, Cormac Solutions Ltd.

**Specific areas of concern highlighted by the Parish Council:**

- Bottom of Blindwell Hill
- Fore Street – pavement parking
- Trefusis Terrace, St Johns Road
- Crossing to the Tractor Park
- Tanyard Corner and Fore Street junction area.
- West Street (one-way)
- West Street (footway)



## **1. Bottom of Blindwell Hill**

### **Local concern**

The primary school is located along Blindwell Hill and several children and parents use this as a walking route to school. There have been reports that children walking towards school, along the eastern side of Fore Street, have come to the end of the footway and stepped into the path of vehicles travelling along Newport Street. A raised table, to cover the junction area has been suggested.

### **Description**

The eastern footway reduces to 0.6m at the point where pedestrians wait to cross Newport Street to Blindwell Hill. Visibility of vehicles travelling along Newport Street is restricted due to the corner and buildings abutting the carriageway. The carriageway width, where pedestrians cross, is between 3.9m and 4.1m. See Photographs 1 & 2.

### **Discussion**

Due to the bend and narrowness of the carriageway, drivers' speed is constrained and the danger to pedestrians is low. However, the lack of pedestrian visibility at the corner is of concern. The construction of a raised table is unlikely to further reduce already low speeds. Fundamentally a raised table could remove the distinction between carriageway and footway and the segregation of vehicle and pedestrians would merge, potentially increasing the likelihood of pedestrians being hit.

### **Recommendation**

Currently two vehicles are unable to use this stretch of carriageway simultaneously that is, it is effectively a single lane. Reducing the carriageway width to 3m by widening the footway, particularly on the inside of the bend, would increase the area where pedestrians can wait to cross the carriageway and increase their visibility of approaching vehicles. Reducing the carriageway width will not adversely impact on traffic movement but be of benefit to pedestrians. In addition, the length of dropped kerbs at the bottom of Blindwell Hill could be extended to aid pedestrian movement. See Sketch 1.

**Approximate cost:** £10k

**St Andrew Street** – At the time of the site visit it was noted that St Andrew Street has a stop line and sign. Stop signs and lines may only be used at sites approved in writing by the Secretary of State and only approved where visibility is so restricted that it is essential for drivers to stop; this is not the case at this location. It is possible to turn this into a standard give-way junction. The give-way lines could be brought forward to improve driver visibility exiting St Andrew Street and also help guide drivers from Fore Street, around the junction. **Approximate cost:** £3k

## **2. Fore Street – pavement parking**

### **Local concern**

Royal Mail workers tend to park their vans on the western side of Fore Street, where the footway is wider, to allow them to make nearby postal deliveries. Other car drivers have been seen parking here to visit the local shop. The concern is that the parked vehicles force pedestrians into the carriageway and into the path of vehicles. The erection of bollards has been suggested at this location

### **Description**

Parking occurs on a section of the carriageway which is wider and where there are dropped kerbs. A single yellow line (Monday to Saturday between the hours of 9am and 6pm) is laid on each side of the carriageway. See Photograph 3.

### **Discussion**

The Traffic Regulation Order for the single yellow line exempts a vehicle, if it is in the service of or employed by the Post Office, allowing them to stop on the restricted area to deliver or collect post. Speeds along Fore Street are low and inter-visibility between pedestrian and driver is good. Erecting bollards to prevent parking is likely to displace vehicles to locations that are less safe.

### **Recommendation**

No practical resolution.

### **3. Trefusis Terrace, St John's Road**

#### **Local concern**

Vehicles parking on the footway and carriageway, at Trefusis Terrace, restrict pedestrian visibility of vehicles, particularly eastbound, travelling along St John's Road.

#### **Description**

The footway immediately in front of Trefusis Terrace is between 4m and 5.4m wide, and the carriageway 6.5m. Due to the wide section of highway, residents tend to double-park, that is, on the footway and carriageway and visibility for pedestrians crossing from Trefusis Terrace can be restricted. St John's Road is covered by a 20mph speed limit. See Photograph 4.

#### **Discussion**

Although St John's Road is within a 20mph speed limit, the traffic speeds were gauged to be higher. The higher speeds are likely to be generated by the wide carriageway and good forward visibility. Reducing the width of the carriageway, removing parking from the footway and providing a crossing point, would help reduce traffic speeds and improve pedestrian visibility.

#### **Recommendation**

Build out and provide parking bays to accommodate parking either side of a crossing point promontory allowing a carriageway width of 5.5m. This would control parking and remove parking from the footway creating clear visibility for pedestrians. Dropped kerbs on the opposite side of the carriageway would be required however; a utility chamber would need to be lowered. Landscaping the footway, for example, with low maintenance trees, will visually enhance the area. See Sketch 2.

**Approximate cost:** £40k



## **4. Tractor Park**

### **Local concerns**

Pedestrians crossing from Clinton Terrace to the play park, near the mini-roundabout at Southdown Road, have limited visibility of northbound traffic because of parked vehicles.

### **Description**

Double yellow lines just cover the dropped kerbs for the crossing and vehicles park up to this point and restrict pedestrian visibility of northbound vehicles. The carriageway width is 6.2m and footway 1.9m. The speed of vehicles is relatively low due to the proximity of the roundabout. See Photographs 5 & 6.

### **Discussion**

Four options have been considered for this site:

- Relocate the crossing point

Relocating the crossing point closer to the roundabout would improve pedestrian visibility of approaching vehicles however, due to the location of the entrance into the park, it is unlikely that pedestrians would use the alternative route because it would not be on the desire line to the park.

- Extend the double yellow lines

Extending the double yellow lines in a southerly direction would improve visibility of northbound vehicles; however, it would reduce available on-road parking. There is also the potential that drivers with a 'blue badge' will legitimately be able to park on the yellow lines and the problem of restricted visibility will remain. A short length of double yellow lines will be expensive (approximately £5k) due to the legal process necessary for a Traffic Regulation Order.

- Raised crossing point (flat-top road hump)

Raised crossing points are an effective traffic calming measure, particularly if used in conjunction with other traffic calming features. However, the speed of vehicles at this location is already low and there would be little improvement to pedestrian visibility.

### **Approximate cost: £15k.**

- Sheltered parking

Sheltered parking would create a promontory for pedestrians to wait upon and have clear visibility of approaching vehicles. A second promontory, to form a sheltered bay for parked vehicles, could be located approximately 100m south of the Tractor Park entrance; this would cater for pedestrian movement across the carriageway to and from the path around the lake.

Lining between the two promontories, to define the parking bays and to guide drivers past the build-out areas would be necessary and the centre line would need to be removed. A short section of double yellow lines may be required within the bay to allow northbound drivers to pull in if confronted with a vehicle approaching southbound. However, double yellow lines are currently not used along this particular section of carriageway. See Sketch 3.

**Approximate cost:** £30k

### **Recommendation**

Although the extension of double yellow lines would improve visibility of approaching vehicles there is the possibility that drivers will continue to park up to the crossing. A promontory, as part of a sheltered parking area, offers a permanent feature and assurance that pedestrians would have clear visibility of approaching vehicles at all times and would be the best option.



## 5. Tanyard Corner and Fore Street junction.

### Local concerns

There are aspirations to make further improvements to the Tanyard, specifically creating an access opposite the Fore Street junction. Parking bays allow limited waiting either side of the bend. In between the section of limited waiting there is a 'no waiting' restriction, however, drivers tend to park within this area, leading to concerns that buses have difficulty manoeuvring at the bend. Parked vehicles can restrict visibility for pedestrians crossing the carriageway.

### Description

The carriageway width at the bend is 8.6m and this reduces to 6.2m near Central House. The footway width, beside the Tanyard is 1.8m, however, there is very limited footway width at the West Street Fore Street junction. See Photographs 7,8 and 9.

### Discussion

Parking that occurs within the limited waiting area and indeed on the double yellow lines appears to be used by shoppers and helps keep cars out of the one-way system in West Street. The removal of legitimate parking within this area will be of little benefit, not only because enforcement of any restrictions is likely to be infrequent but disabled badge holders will be able to legitimately park on double yellow lines. Furthermore, the removal of parking in the area would increase vehicle speeds, particularly for those travelling down Millpool Head.

Although concerns have been raised about the difficulty that bus drivers have trying to negotiate the bend when vehicles are parked on double yellow lines near the Tanyard, it did not appear to be problematic at the time of the site visit.

Fundamentally, vehicle speeds are low however improvements for pedestrians could be made. The focus should be on improving facilities for pedestrians within the area as well as controlling parking.

A number of options have been considered:

- Sheltering the limited parking bays by providing a build-out on the apex of the bend would prevent casual parking and create a crossing point for pedestrians to and from Fore Street to the Tanyard; this would tie in with the long-term aspiration of the Parish Council to have an entrance into the Tanyard at this point. This area could include landscaping features. **Approximate cost: £30k**
- Adjust the give-way markings and build-out the footway at the Fore Street junction to allow a wider footway into West Street. **Approximate cost: £10k**

- Create a shared space within short sections of Fore Street and West Street with a semi-defined carriageway through it. This could encompass the bend at Millpool Head/Fore Street/King Street junction. **Approximate cost: £150k.** The shared space could be extended further along West Street to encompass the 'shopping area' at an **Approximate cost of £350k.**

### **Recommendation**

All of the above are viable options but will be dependent on funding sources available. See Sketch 4.

## **6. West Street (one-way)**

### **Local concerns**

West Street is one-way only (westbound) and drivers exiting the car-park have to turn left. There have been suggestions of a partial removal of the one way from the car-park to allow vehicles to turn right into West Street; this would be of particular benefit to cyclists.

### **Description**

No-Entry signs are located at the west end of West Street and a right-turn only and one-way arrow are located at the car-park exit. The eastern section of West Street is narrow with a carriageway width of 2.9m to 3.8m and is often busy with pedestrians. Traffic speeds were gauged to be below 20mph at the time of the site visit. See Photograph 10.

### **Discussion**

In order to allow two-way traffic, the right-turn ban and one-way from the car park exit would need to be removed. This would cause congestion and increase the likelihood of pedestrian/vehicle conflict, that is, vehicles are likely to encroach onto the footways to allow opposing traffic flows to pass. Furthermore, it would effectively create a route through the car-park and, if implemented, some drivers would use this as a short-cut rather than using the B3247 and Millpool Head. Higher traffic flow through the car-park, where there are likely to be high pedestrian movements, would increase the likelihood of pedestrian/vehicle conflict and traffic flows through private land is likely to be unacceptable. Also, widening the footway (Option 7) would not be viable if this arrangement was pursued. Ultimately, it is likely that this option would not be popular and would be ineffective and therefore not worth progressing.

Fundamentally, the primary local concern is to allow cyclists two-way movement through the eastern section of West Street and not to allow vehicles to turn right into West Street from the car park. This would still require the removal of the one-way restriction but could be achieved by either:

- a. implementing a 'No Motor Vehicles' restriction (TSRGD diag 619), allowing cyclists to turn right into West Street from the car-park or
- b. implementing a No-Entry with contra-flow cycling.

A 'No-Entry' with contra-flow cycling restriction is less likely to be ignored than a 'No Motor Vehicle' restriction and is therefore likely to be more effective.



**Recommendation**

Provide a 'No-Entry' with contra-flow cycling with a cycle by-pass to allow cyclists to travel along West Street in an easterly direction from the car park.

**Approximate cost:** £15k

## **7. West Street (footway)**

### **Concern**

The footway opposite the car park exit, outside the Hall, is extremely narrow and pedestrians have to walk in the carriageway.

### **Description**

Footway widths either side of the hall are sufficiently wide to allow pedestrians to walk along however, pedestrians are forced to use the carriageway because footway width fall well below 900mm. The width of the carriageway is 5.9m. See Photographs 11 & 12.

### **Discussion**

Due to the one-way system along West Street there is no need for the carriageway to cater for two way traffic and therefore the footway could be built out to approximately 1.5m over the length of the footway narrowing.

### **Recommendation**

Widen footway. See Sketch 5.

**Approximate cost:** £15k

Photo 1



Photo 2



Photo 3



Photo 4



Photo 5



Photo 6





Photo 7



Photo 8



Photo 9



Photo 10



Photo 11

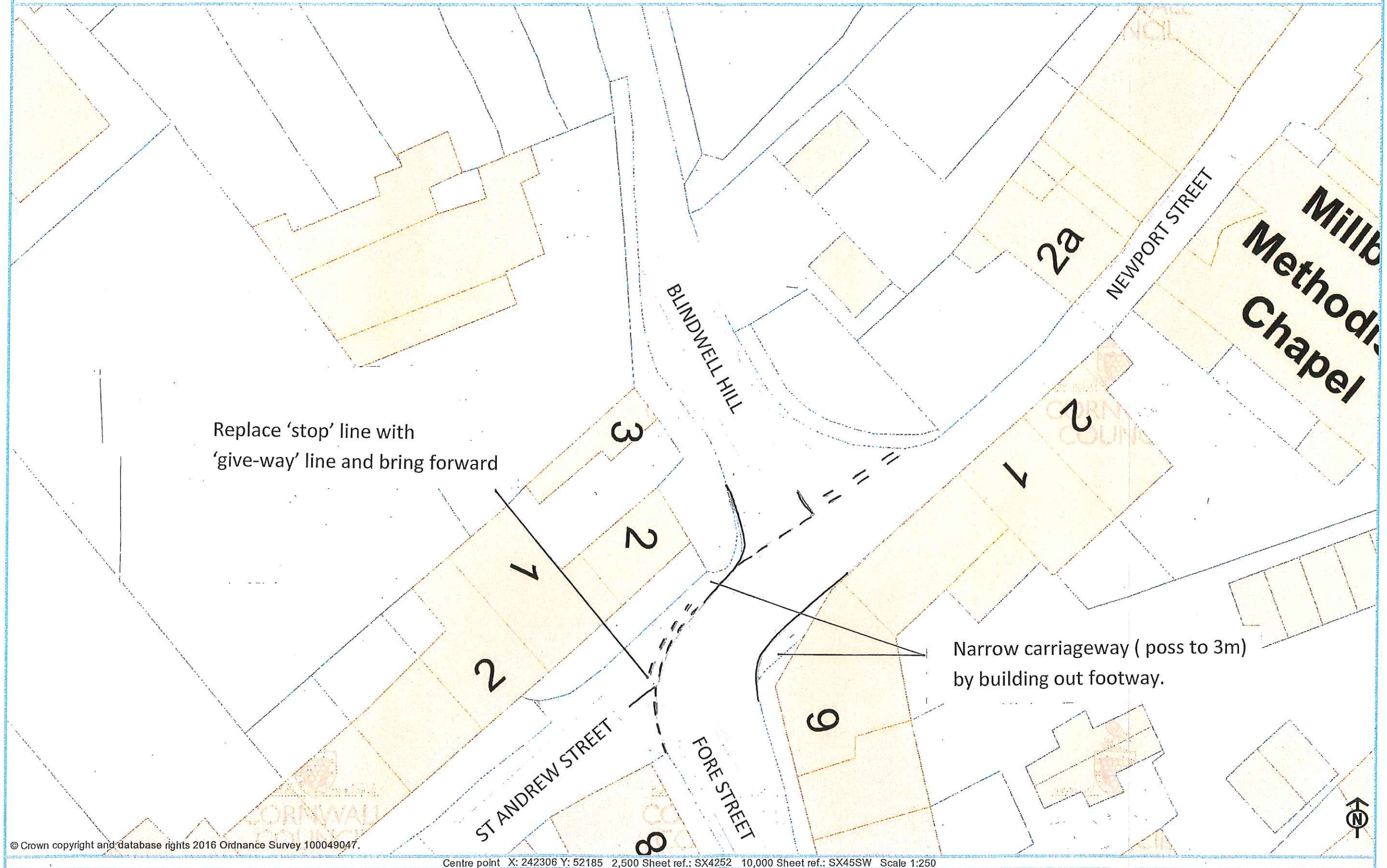


Photo 12



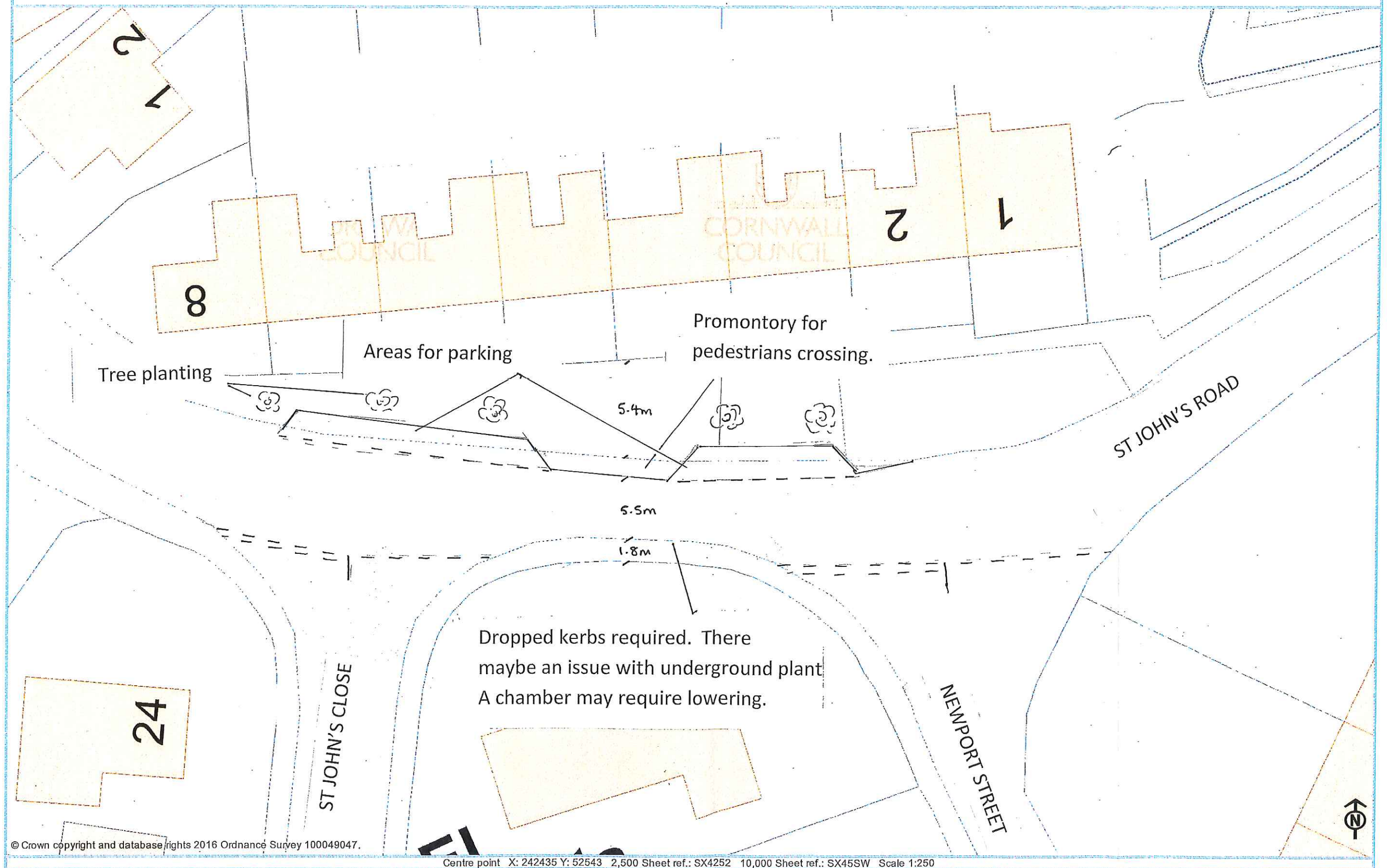


# Blindwell Hill

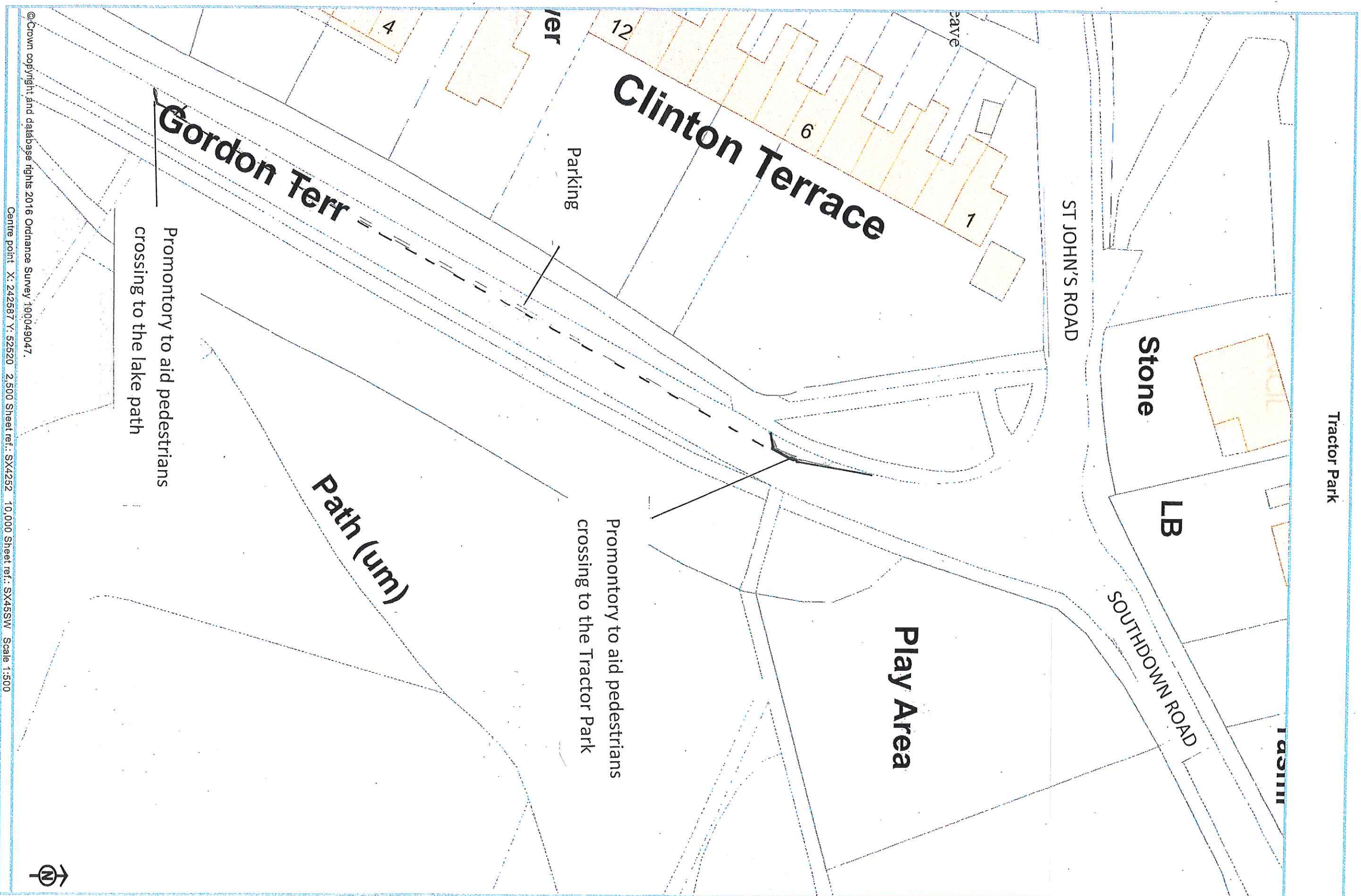




# Trefusis Terrace, St John's Road









Tanyard Court

Highland Ho

Raised table

Central House

Footway widening

Shared space

WEST STREET

PH

Raised table

Limited waiting

Promontory to improve pedestrian movement across King Street.

Limited waiting

MILLPOOL HEAD

PIPES



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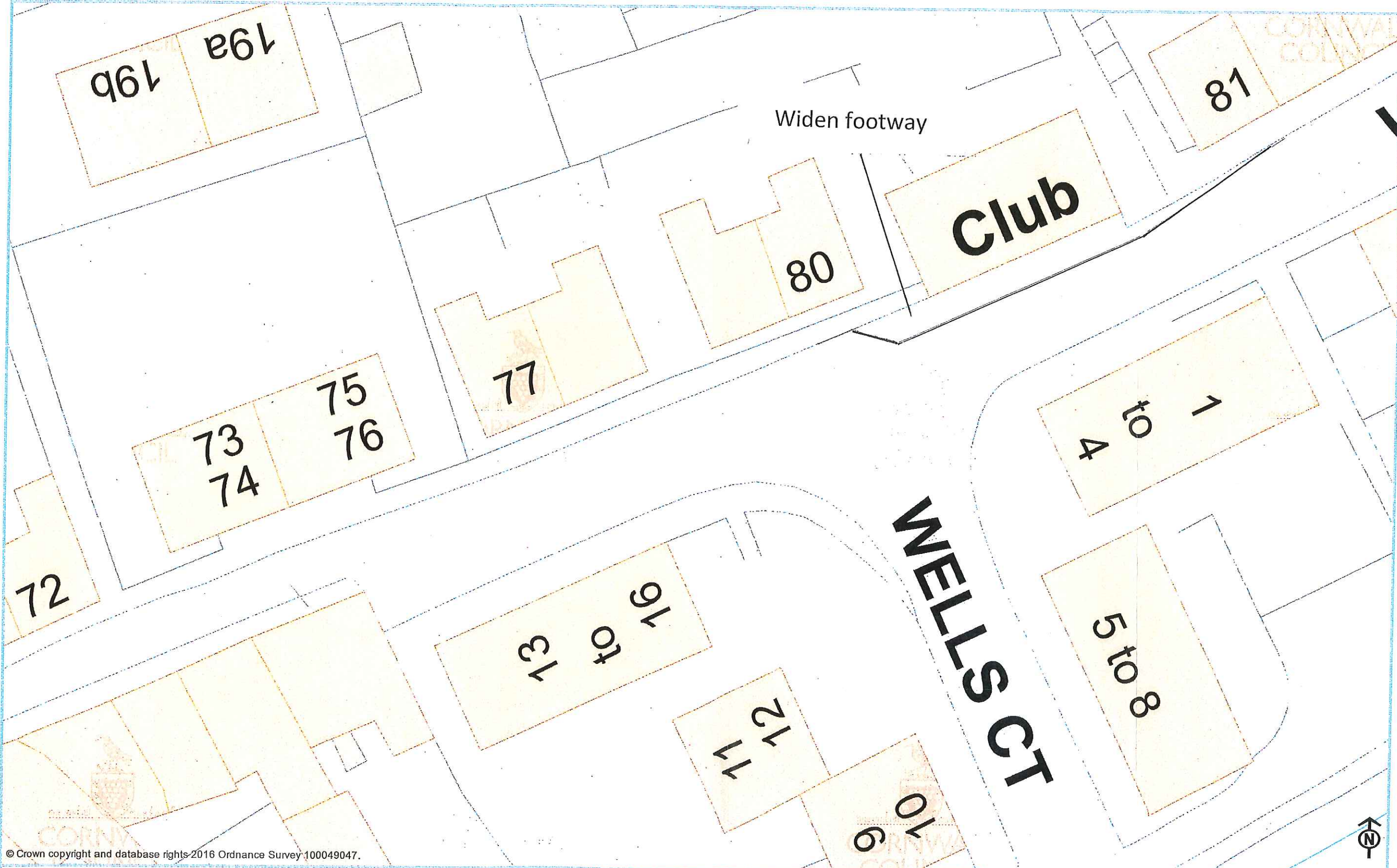


West Street

Widen footway

Club

MELLS CT



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