	Finchley and Golders Green Area Committee **27 April 2017**
Title	**Road Safety on Squires Lane (Manorside and Tudor Schools) and the junction of Etchingham Park Road and Squires Lane, N3**
Report of	Commissioning Director for Environment
Wards	Finchley Church End, West Finchley and Woodhouse
Status	Public
Urgent	No
Key	No
Enclosures	Appendix A – Table 1 – Accident Data Appendix B – Zebra Crossing Options 1, 2 and 3 Appendix C – 20 mph and Traffic Calming Options A and B Appendix D – Squires Lane/Etchingham Park Road Options 1 and 2
Officer Contact Details	Jamie Blake – Commissioning Director for Environment Jamie.blake@barnet.gov.uk

Summary

This report details the feasibility study undertaken to address the traffic and safety concerns raised regarding Squires Lane around Manorside and Tudor schools and incorporates the request to review the junction of layout at Etchingham Park Road and Squires Lane that has subsequently been approved by the Finchley and Golders Green Area Committee.

Recommendations

1. **That the Finchley and Golders Green Area Committee note the detail of the feasibility study as outlined in this report in relation to a Zebra Crossing, introducing a 20 mph speed limit and traffic calming measures along Squires Lane and at the Squires Lane/Etchingham Park Road junction.**

2. **That the Finchley and Golders Green Area Committee, noting the Council's Policy on Traffic Calming, agrees an Option from each measure below to implement safety improvements along Squires Lane and at the Squires Lane/Etchingham Park Road junction as follows:**

   <u>Options</u>

   Zebra Crossing

   Option 1 - Zebra Crossing with kerb build-outs
   Option 2 - Zebra Crossing with a central Island
   Option 3 - Zebra Crossing with kerb build-outs and a raised table

   20 mph Speed Limit

   Option A – 20 mph speed limit (without speed cushions)
   Option B – 20 mph speed limit (with speed cushions and a raised table at the junction of Queen's Ave/Squires Lane/Dickens Avenue.

   Squires Lane/Etchingham Park Road Junction

   Option 1 - Remain as existing layout
   Option 2 - "No entry" at Etchingham Park Road

   Other Minor Amendments

   Location 1 Extend of hatching or Double Yellow Lines
   Location 2 School signs at Long Lane

3. **That the Finchley and Golders Green Area Committee, gives instruction to the Commissioning Director for Environment to carry out a statutory consultation on the approved Scheme.**

4. **That subject to no objections being received to the statutory consultation, referred to in recommendation 3, the Finchley and Golders Green Area Committee instruct Commissioning Director for Environment to introduce the approved Scheme.**

5. **That the Finchley and Golders Green Area Committee agree that if any objections are received as a result of the statutory consultations, referred to in recommendation 3, the Commissioning Director for Environment will consider and determine whether the approved scheme should be implemented or not, and if so, with or without modification.**

6. **That the Finchley and Golders Green Area Committee note that the scheme is funded by the Local Implementation Plan (LIP) 17/18 funding to design and carry out statutory consultation and, subject to the outcome of that consultation, agree to introduce the approved Scheme.**

1. WHY THIS REPORT IS NEEDED

1.1 The March 2016 Finchley and Golders Green Area Committee considered the petition relating to road safety on Squires Lane in which the following requirements were outlined:

- Traffic calming measures along Squires Lane, including a 20mph speed limit, speed humps, speed cameras, and road safety signs and markings.
- Improvements to the crossing at the Squires Lane/Long Lane junction, including filter lights for drivers turning right and a longer crossing time for pedestrians.
- A zebra crossing between Manorside and Tudor Schools.

1.2 Following discussion of the item, *the Committee RESOLVED that:*

The Committee requested that in relation to the issues stated in the Squires Lane petition, an officer's report be submitted to the next meeting of the Finchley & Golders Green Area Committee with a firm timetable of possible measures and where further representation is needed to the Environment Committee – that this is also set out in the report

1.3 The November 2016 Finchley and Golders Green Area Committee considered a study of the road safety on Squires Lane/Etchingham Park Road.

1.4 Following discussion of the item, *the Committee RESOLVED that:*

The Finchley and Golders Green approved £2,000 from the Area Committee budget to look at the junction with Etchingham road and take this junction into account to improve the safety as a result of the current study in issues in Squires Lane, N3.

Initial Observations

1.5 An initial site visit took place on 25 November 2016 and all potential solutions have been considered and appraised against the potential issues which were raised by the petition as detailed in sections 1.1 and 1.3 above.

1.6 There were several issues noted during the site visit which could have an impact on vehicle and pedestrian safety along Squires Lane length.

1.7 A further site meeting took place on 22 February 2017 attended by Ward Councillors, parents and school representatives, where two main concerns were raised:

- Volume and speed of traffic on Squires Lane: This road is used as a 'rat running' to avoid A406 North Circular Road especially when blockages occur on this road.
- Lack of a safe crossing point.

1.8 In addition, we have received through correspondence the following issues from residents:

- Cars parked between the two mini-roundabouts east of Squires Lane have been hit several times by speeding drivers.
- Drivers' behaviour around Manorside School.

Accident History

1.9 Accident records for the 5 year period 01/09/2011 to 31/08/2016 have been studied along Squires Lane. During this time 19 accidents have been recorded in the study area, they are summarised in Appendix A.

1.10 The 19 collisions caused 21 casualties, of which 2 were considered serious and 19 were slight. 3 accidents included pedestrian (two serious and one slight), 3 accidents involved parked cars and in 1 speeding was cited as a contributory factor.

Proposed Layout Improvements General Details

1.11 General

1.11.1 Following the site visits and the analysis of the accident data, speed and traffic volume survey data were carried out. Several potential issues have been identified and the following actions have been proposed:

- A zebra crossing, west of the junction with Avondale Road;
- Speed reduction along Squires Lane with the introduction of a 20 mph speed limit and traffic calming measures.
- Improvements to the crossing at the Squires Lane/Long Lane junction. However, the traffic lights are owned and managed by Transport for London (TfL). London Borough of Barnet can propose changes to existing (such as phases of the traffic lights) but this will need to be approved by TfL. Therefore, this action will be not be considered as part of this proposal.
- Improvements at Squires Lane/Etchingham Junction.

1.12 Zebra Crossing options

1.12.1 A pedestrian survey was carried out in order to find the 'desire line' where the majority of pedestrian cross. After analysis of this survey and on site meeting with the electrical supplier, the most suitable location is at Squires Lane, west of the junction with Avondale Road, in where we propose the 3 following options:

1.12.2 <u>Option 1: Zebra crossing located 6 metres west of Avondale Road,</u>

This option includes the removal of the existing central island and the construction of new build outs on both sides, which improve the visibility, thus the pedestrians can see and be seen by the vehicles.

This new layout shows a total carriageway width of 7.3 metres and with no loss of parking.

(Refer to Appendix B-Drawing No C2016_BC000874-27-Options ZC-01)

Advantages

- Improved safety provided by controlled nature of crossing;
- The crossing is located equidistant distance between both Manorside and Tudor Schools.

Disadvantages

- Traffic Management Orders required for new carriageway layout.

Cost Estimated

Detailed Design	*£4,500*
Safety audit, surveys etc	*£2,500*
Consultation & TMO	*£5,200*
Construction (works cost)	*£33,500*
Implementation, supervision and post implementation costs	*£2,800*
TOTAL	***£48,500***

1.12.3 Option 2: Zebra crossing located 10 metres west from Avondale Road

This option includes the removal of the existing centralisland and construction of a new kerb build-out on the north side of Squires Lane and a new 2 metre wide central island.This new layout shows two separate carriageways both of which are 3.65 metres wide.

Regarding the parking, there will be a loss of 20 metres of parking on the southern side of Squires Lane which is approximately 4 car parking spaces.

(Refer to Appendix B-Drawing No C2016_BC000874-27-Options ZC-02)

Advantages

- Improved safety provided by controlled nature of crossing,
- The crossing is located equidistant distance between both Manorside and Tudor Schools.
- The island in the middle of the crossing provides a safer crossing environment for pedestrians.

Disadvantages

- Loss of parking
- Traffic Management Orders required for new carriageway layout

Cost Estimate

Detailed Design	*£4,500*
Safety audit, surveys etc	*£2,500*
Consultation & TMO	*£5,200*
Construction (works cost)	*£40,000*
Implementation, supervision and post implementation costs	*£2,800*
TOTAL	***£55,000***

1.12.4 Option 3: Raised zebra crossing located 8 metres west of Avondale Road

This option includes the removal of the existing central island, construction of a raised table and new kerb build-outs, which improve the visibility, therefore the pedestrians can see and be seen by the vehicles.

This new layout shows a total carriageway width of 8 metres.

Regarding the parking, there will be a loss of 20 metres of parking on the southern side of Squires Lane which is approximately 4 car parking spaces. *(Refer to Appendix B-Drawing No C2016_BC000874-27-Options ZC-03)*

Advantages

- Improved safety provided by controlled nature of crossing;
- The crossing is located equidistant distance between both Manorside and Tudor Schools.
- Reduced speeds decrease due to vertical deflection.

Disadvantages

- Loss of parking.
- Traffic Management Orders required for new carriageway layout.

Cost Estimate

Detailed Design	*£4,500*
Safety audit, surveys etc	*£2,500*
Consultation & TMO	*£5,200*
Construction (works cost)	*£54,000*
Implementation, supervision and post implementation costs	*£2,800*
TOTAL	***£69,000***

1.13 20 mph Speed limit and traffic calming measures

1.13.1 The 85th Percentile Speed which is the speed at which 85 per cent of vehicles travel at or below along a street or road (under free flow conditions).

1.13.2 This measure is not particularly affected by exceptional speeds since the value of the very highest and lowest results does not affect the results. The 85th percentile speed is used in road design to determine the 'design speed' for new features on the road. It is usually close to the speed limit the road and might be characterised as the speed that the majority of motorists consider a sensible maximum for the conditions.

1.13.3 Conditions are usually considered safe if 85th percentile speed is not in excess of the signed speed limit by 5 mph or more. Therefore for a 30 mph road the 85% percentile speed would ideally be less than 35 mph.

1.13.4 Squires Lane is subject to a 30mph speed limit, which also applies to all sides roads. Speed surveys were carried out at 5 different locations and the results set out that the 85th % tile vehicle speed (two ways) are shown in Table 2.

Table 2- 85th %tile Vehicle speeds on Squires Lane, N3

Data Period: 11 – 18 December 2016

Location	Direction	85th Percentile speed (mph)
Location 1	Northbound	29.8
(Squires Lane w-o bridge)	Southbound	29.8
Location 2	Northbound	27.5
(Squires Lane nr 156)	Southbound	28.9
Location 3	Northbound	26.6
(Squires Lane nr 113)	Southbound	26.2
Location 4	Northbound	24.2
(Squires Lane nr 70)	Southbound	22.4
Location 5	Northbound	27.7
(Squires Lane nr 33)	Southbound	27.3

1.13.5 It is recommended that a 20mph speed limit are only installed where they will be self-enforcing. If the recorded speeds of the roads are currently before 24 mph then the road measures can limited signage only can be provided (below 24mph), However, if the existing speeds are above 24mph as is the case with Squires Lane then it is recommended that the signage supplemented by physical traffic calming measures, in order to achieve the aims of a 20mph speed limit.

1.13.6. It has been proposed the introduction of a speed limit of 20 mph along the whole length of Squires Lane in combination with physical traffic calming measures and set out below in the Options.

1.13.7. The total length has been considered because of the residential character of the area and the presence of schools and nursery, as shown below *(please refer to figure 1):*

- From Our Lady of Lourdes RC School at Bow Lane in the east - between Dickens Avenue and Vineyard Grove: Manorside and Tudor Schools and the bus stops.
- From Bright Horizons Pentland Nursery and Preschool in the west.

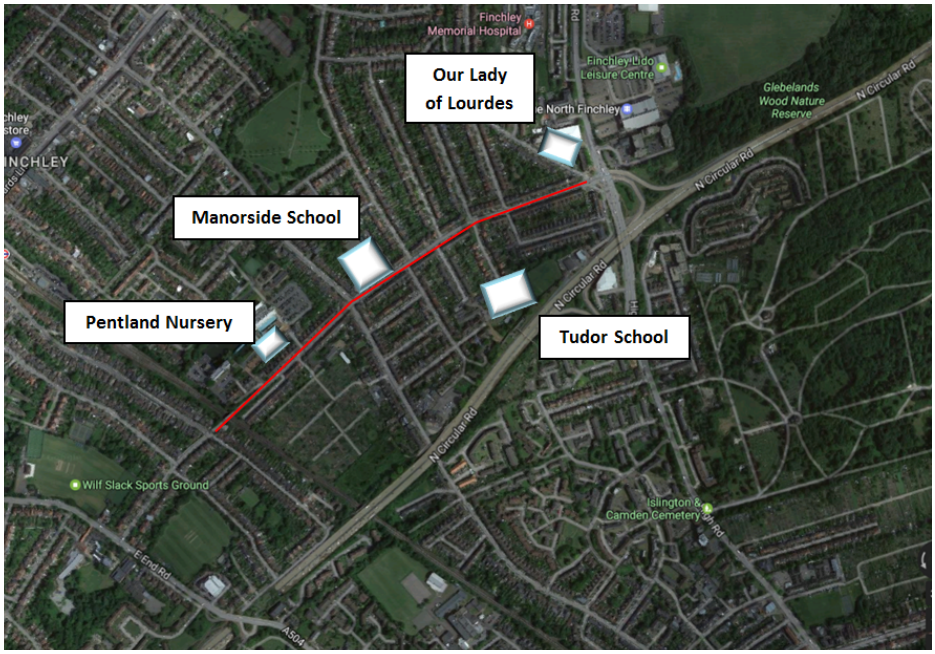


Figure 1

1.13.8. The proposals include:

- Installation of road markings and new traffic signs.
- Traffic calming measures, as set out below in the Options.

The different options are shown in the Appendix C drawings number:

- C2016_BC/000874-27-Option A-01
- C2016_BC/000874-27-Option B-01

1.13.9. <u>Option A:</u>

This option includes the following measures:

- Introduction of a 20 mph speed limit along Squires Lane, from Rosemary Avenue to Bow Lane. This requires the installation of 20 mph speed limit terminal signs (600 mm diameter) erected back to back with 30 mph sign at all junctions, also repeated 20 mph roundel road markings.
- Removal of existing 30 mph Vehicle Activated Sign and installation of a new 20 mph SLOW DOWN Vehicle Activated Signs at railway bridge close to Station Road.
- New 20 mph SLOW DOWN Vehicle Activated Sign westbound close to 207 Squires Lane.
- Removal of existing 30 mph Vehicle Activated Sign and installation of a new 20 mph SLOW DOWN Vehicle Activated Signs westbound close to 139 Squires Lane.
- Removal of the mini-roundabout at Queen's Ave/Squires Lane/Dickens Avenue, it has been proposed a new layout of the road that includes kerb build-outs. The removal of this roundabout is justified due to minimal volume of traffic entering and exiting from the two side roads,

Queen's Avenue and Dickens Avenue (less than 500 vehicles/day). As per DMRB standard *"A mini-roundabout must not be used as a speed reduction measure in isolation".*

- One new 20 mph SLOW DOWN Vehicle Activated Sign westbound close to 31 Squires Lane.

(Refer to Appendix C- Drawing No. C2016_BC/000874-27-Option A-01)

Cost Estimate

Detailed Design	*£5,600*
Safety audit, surveys etc	*£3,000*
Consultation & TMO	*£6,200*
Construction (works cost)	*£105,000*
Implementation, supervision and post implementation costs	*£2,800*
TOTAL	***£122,600***

1.13.10. Option B.

This option includes the following measures and speed cushions:

- Introduction of a 20 mph speed limit along Squires Lane, from Rosemary Avenue to Bow Lane as per indicated in Option A.
- Removal of existing 30 mph Vehicle Activated Sign and installation of two new piece asphalt or manufactured speed cushion at railway bridge close to Station Road.
- New asphalt or manufactured round top hump with 75mm in height close to 201 Squires Lane.
- Removal of existing 30 mph Vehicle Activated Sign and installation of a new 20 mph SLOW DOWN Vehicle Activated Signs westbound close to 139 Squires lane.
- Removal of the mini-roundabout at Queen's Ave/Squires Lane/Dickens Avenue). It has been proposed a new layout of the road that includes kerb build-outs and the installation of a raised table to covering the whole junction.
- New asphalt or manufactured round top hump with 75mm in height close to 33 Squires Lane.

(Refer to Appendix C- Drawing No. C2016_BC/000874-27-Option B-01)

Cost Estimate

Detailed Design	*£5,600*
Safety audit, surveys etc	*£3,000*
Consultation & TMO	*£6,200*
Construction (works cost)	*£94,500*
Implementation, supervision and post implementation costs	*£2,800*
TOTAL	***£112,100***

1.14. Squires Lane/ Etchingham Park Road Junction

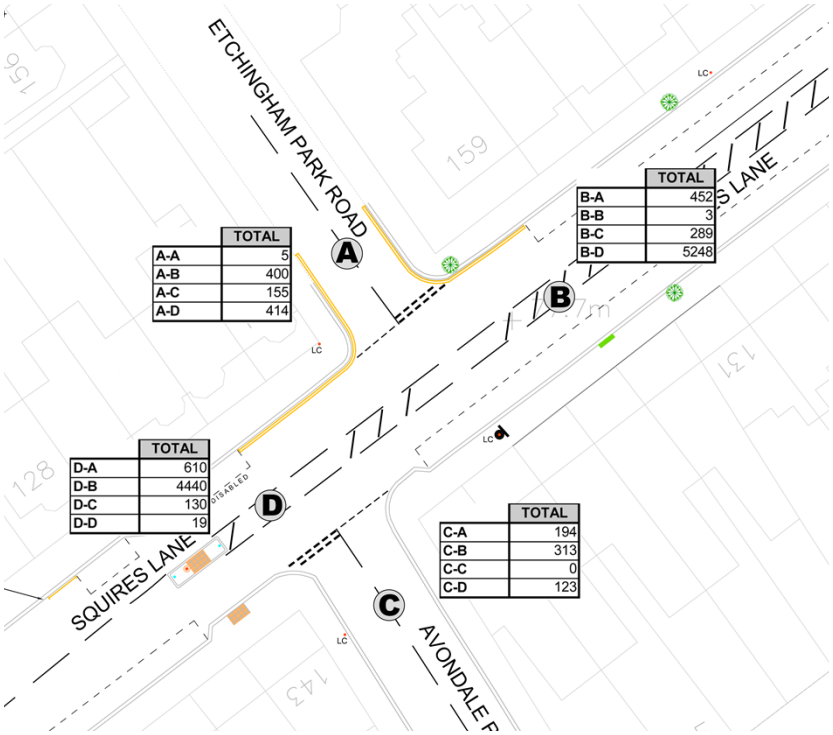
Initial Observations

1.14.1 In the site visit was observed that blockages occur at this junction especially when the vehicles cross diagonally from Etchingham Park Road to Avondale Road and vice versa.

Traffic survey

1.14.2 A traffic survey was carried out on Thursday 15 December and Saturday 17h December 2016.

1.14.3 The major volume of traffic was on a day week and the results are shown in the figure below:



1.14.4 The total volume at the junction in a week day is 12795 veh/day, which a 75.72% is along Squires Lane (from D to B & from B to D). Just 12.96 % turning or going straight across at the junction (movements from-to: A/C, C/A, B/A, A/D, D/C and C/B).

Accident History

1.14.5 The Personal Injury Accident records shown in Appendix A - Table 1, records one accident at Etchingham Park Road/ Squires Lane junction (Reference 0113SX20444), this accident was slight and speeding was not cited in the Police report as a contributory factor in this accident.

Proposed Layout Improvements

General

1.14.6 Following the site visits and the analysis of the accident data, and traffic volume surveys carried out, two options have been proposed as follow. It is noted that kerb build-outs option have been considered and are not recommended because the carriageway it is not wide enough to maintain 2 lanes of traffic of a minimum of 3.5 m.

Option 1

1.14.7 As part of the proposal of a 20 mph speed limit at Squires Lane, it is expected to reduce the speed and the traffic volume by approximately 25 %. Therefore, potentially the problem at this junction will be resolved and it is proposed remaining the junction as its existing layout.

Option 2

1.14.8 This option includes the introduction of a "No Entry" sign at Etchingham Park Road, which introduces a One way only between Park Avenue and Squires Lane. This solution allows removing of conflict at the junction, Prevention of 'rat running' in one direction and provides a safer for pedestrian to cross the road.

(Refer to Appendix D drawing number C2016_BC/001030-08-Option 02-01.)

1.14.9 If this option goes ahead, vehicles would need to use an alternative route to access part of the road as shown in Appendix D drawing number C2016_BC/001030-08-Option 02-02.

Cost Estimate

Detailed Design	*£2,000*
Safety audit, surveys etc	*£1,000*
Consultation	*£1,250*
Construction (works cost)	*£2,500*
Implementation, supervision and post implementation costs	*£900*
TOTAL	***£7,650***

1.15. Other minor actions

1.15.1 Extend of hatching or Double Yellow Lines before and after uncontrolled crossing near Heatherton Terrace. It has been observed that vehicles parked in the parking bays nearest the island can make it difficult for large vehicle to get through, especially for vehicles coming from the bridge.

1.15.2 Provide School Warning signs at Long Lane advising vehicles of school presence after the left/right turns.

1.16 Summary of Proposals

Zebra Crossing			
Option	**Brief Description**	**Summary of Potential Advantages/ Disadvantages**	**Indicative Costs**
1	Zebra crossing located 6 m western from Avondale Road	Advantages - Improved safety provided by controlled nature of crossing; - Equidistance between both Schools. Disadvantages - Traffic Management Orders required for new carriageway layout.	£48,500
2	Zebra crossing with central refuge located 10 m western from Avondale Road	Advantages - Improved safety provided by controlled nature of crossing; - Equidistance between both Schools. - Refuge in the middle of the carriageway Disadvantages - Traffic Management Orders required for new carriageway layout. - Loss of parking	£55,000
3	Humped Zebra crossing located 8 m western from Avondale Road	Advantages - Improved safety provided by controlled nature of crossing; - Equidistance between both Schools. - Decrease of the speed due to the proposed raised table Disadvantages - Traffic Management Orders required for new carriageway layout. - Loss of parking	£69,000

20 mph speed limit & Traffic Calming measures		
Option	**Brief Description**	**Indicative Costs**
A	- Speed signs and Road markings - 20 mph SLOW DOWN Vehicle Activated Sign: 4 no Removal of mini-roundabout /new kerb build outs and raised table	£122,600
B	- Speed signs and Road markings - Speed cushions: 1 no. - Round top hump: 2 no. - Removal of mini-roundabout /new kerb build outs and raised table	£112,100

Squires Lane/Etchingham Park Road Junction		
Option	**Brief Description**	**Indicative Costs**
1	Remain as existing layout	Included in 20 mph speed limit.
2	"No entry" at Etchingham Park Road	£7,650

Other minor works		
Location	**Brief Description**	**Indicative Costs**
1	Extend of hatching or Double Yellow Lines	£150
2	School signs at Long Lane	£1,200

1.17 Conclusions and Recommendations

1.17.1 The three options for the Zebra Crossing are considered as feasible. However, officers would recommend the humped zebra crossing (Option 3) because this provides a safer crossing due to the implementation of a raised table, which would cause speeding down of the vehicles approaching the zebra crossing. The total estimate cost for this is £69,000.

1.17.2 In regard to the 20 mph speed limit and traffic calming measures Officers recommend Option B, in terms of compliance, safety cost effectiveness. The total estimate cost for this Option is £112,100.

1.17.3 At Etchingham Park Road/ Squires Lane junction, if the introduction of a 20 mph speed limit is implemented, it would be recommended retaining the existing layout and monitoring after a period of 6 months, to check if the speed and congestion problems still continue.

2. REASONS FOR RECOMMENDATIONS

2.1 The zebra crossing (Recommended Option 3) would provide a safe crossing between Manorside and Tudor school.

2.2 The recommendation to progress the introducing of a 20 mph speed limit and traffic calming measures (Recommended Option B) on Squires Lane is address the road safety issues and accidents that have been highlighted in this report.

3. ALTERNATIVE OPTIONS CONSIDERED AND NOT RECOMMENDED

3.1 Regarding the junction at Squires Lane/Etchingham Park Road, Kerb build outs option have been considered and not recommended because the carriageway it is not wide enough to maintain 2 ways of a minimum of 3.5 m.

3.2 The only other option at this stage is to not proceed with any of the proposed improvements but only carry out the footway resurfacing maintenance works

for the scheme. This will however not address the original concern raised by local residents, schools and Ward Councillors.

4. POST DECISION IMPLEMENTATION

4.1 Following the Finchley and Golders Green Area Committee's agreement, consultation with schools, residents, Metropolitan Police and emergency services would be undertaken and detailed design of the proposal would be completed, with a view to implementing the proposal during the 2017/18 financial year.

5. IMPLICATIONS OF DECISION

5.1 Corporate Priorities and Performance

5.1.1 The proposals here will particularly help to address the Corporate Plan delivery objectives of "a clean and attractive environment, with well-maintained roads and pavements, flowing traffic" and "a responsible approach to regeneration, with thousands of new homes built" by helping residents to feel confident moving around their local area on foot, and in a vehicle and contribute to reduced congestion.

5.1.2 The proposal also helps address road traffic casualties and reduce the traffic volume.

5.2 Resources (Finance & Value for Money, Procurement, Staffing, IT, Property, Sustainability)

5.2.1 At feasibility stage, detailed cost estimates cannot be provided. Notwithstanding this, indicative costs have been provided bases on schemes of a similar nature. These costs are subject to change during the design phase.

5.2.2 Transport for London (TfL) provide core funding for implementation of a borough Local Implementation Plan (LIP) 2017/2018 programme, which is in the Council's capital programme at £4.857m. It includes a "Corridors, Neighbourhoods and Supporting Measures" programme for addressing a range of transport issues.
The proposals in this report would be introduced using funding from that programme – specifically, the budget for School Travel Plan schemes, which has a budget of £400,000. Depending on the approved Options the entire scheme would cost between £160,000 and £200,000. No additional funding is required from the Area Committee Budget to implement this scheme.

5.2.3 The estimated implementation costs of this recommendation are (based on prices contained in Year 4, Volume 4 Adjusted Rates – London Highways Alliance Contract (LoHAC) Northwest).

5.2.4 Future maintenance of electrical apparatus shall pass to Barnet Lighting Services, the PFI Contractor, who will charge a commuted sum for the maintenance – the cost of this can be absorbed within existing Council revenue budgets.

5.2.5 The work will be carried out under the existing PFI (electrical) and LoHAC (non electrical) term maintenance contractual arrangements.

5.3. Social Value

5.3.1 None in the context of this report.

5.4. Legal and Constitutional References

5.4.1. The Council's Constitution, in Article 15 headed "Responsibility for Functions" (Annex A) states that Area Committees may take decisions within their terms of reference provided it is not contrary to Council policy and can discharge various functions, including highway use and regulation, within the boundaries of their areas in accordance with Council policy and within budget.

5.4.2. The Traffic Management Act 2004 places obligations on authorities to ensure the expeditious movement of traffic on their road network. Authorities are required to make arrangements as they consider appropriate for planning and carrying out the action to be taken in performing the duty.

5.5. Risk Management

5.5.1. None in the context of this report. Risk management may be required for work resulting from this report.

5.6. Equalities and Diversity

5.6.1. The 2010 Equality Act outlines the provisions of the Public Sector Equalities Duty which requires Public Bodies to have due regard to the need to:

- eliminate unlawful discrimination, harassment and victimisation and other conduct prohibited by the Equality Act 2010
- advance equality of opportunity between people from different groups
- foster good relations between people from different groups.

5.6.2. Proposed changes associated with the proposal are not expected to disproportionately disadvantage or benefit members of the community.

5.7. Consultation and Engagement

5.7.1. A public will be carried out on the proposals and details of the proposals will also be outlined on the council's website.

5.8. Insight

5.8.1. The options developed for the scheme were informed through analysis of injury accident data and on site observations of the issues.

6. BACKGROUND PAPERS

6.1. Finchley and Golders Green Area Committee 30th March 2016, Item 10, Appendix A.

http://barnet.moderngov.co.uk/ieListDocuments.aspx?CId=712&MId=8267&Ver=4

6.2. Finchley and Golders Green Area Committee 30th November 2016, Item 11.

http://barnet.moderngov.co.uk/ieListDocuments.aspx?CId=712&MId=9085&Ver=4