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Executive Summary

1. Objectives

- 1.1 Currently almost half of children in the Greater Dublin area are being driven to school. This contributes to traffic congestion, pollution and obesity in children. It is also unsustainable from an environmental point of view.
- 1.2 Over recent years there have been some initiatives to counter this trend. An Taisce has launched the Green Schools projects, with some schools being able to progress to the transport theme, which aims to reduce car use. A number of parents have also organised their own bus services but these are normally small scale initiatives. There have also been pilot projects to reduce car use to school in the Dublin area, involving increased walking, cycling and new school bus services.
- 1.3 However, without encouragement or intervention from outside bodies the trend towards children being driven to school is likely to increase.
- 1.4 Consequently South Dublin County Council has commissioned TAS to investigate the potential for setting up dedicated school bus services, which could possibly be along the lines of US and Canadian yellow school buses. Alternatively more recent projects in England, Wales and Scotland could potentially serve as a more relevant model for future initiatives in South Dublin.

2. Experience Elsewhere

USA and Canada

- 2.1 Yellow school buses have been a common feature throughout the USA and Canada for many years and are often the only buses operating in many communities. They are mainly provided in suburban and rural areas where the schools are some distance away from most pupils' homes, and are used by both primary and secondary students, though there is generally a fall off at about age 16 to 17 as the entrenched car culture results in many students then driving themselves to school.
- 2.2 Due to the network of yellow school buses most parents in the USA do not take their children to school by car, as they have enough confidence that the yellow buses will provide a safe and reliable service. In 2005 it was estimated that 54% of all school pupils in the USA used yellow school buses to get to and from school.
- 2.3 Yellow school buses are distinctive and have flashing lights and stop signs, but often not seat belts. State laws forbid drivers from overtaking stationary school buses to reduce the risks faced by children crossing the road. The

buses generally have regular drivers and often the drivers are parents of children at the school, being employed on a part time basis.

Great Britain

- 2.4 A combination of perceived problems with the existing bus services as well as a desire to reduce car use to school has led to the introduction of new school bus services along the lines of the yellow school bus model in the US and Canada.
- 2.5 This follows a substantial increase in the use of cars to transport children who formerly walked, rode bicycles or used buses. There is also a growing problem of children travelling increasing distances to school as the 'school choice' measures take hold (particularly in England).
- 2.6 There are also perceived problems with existing school bus services, particularly in terms of vehicles and safety, with life expired double deck buses often being used. Further problems result from application of rigid limits for free school transport, with there being traditionally little interest in developing school bus services for children living within these two (up to 8) or three (9 to 16) mile limits.
- 2.7 In order to address these problems, many local authorities have introduced new yellow school bus services, sometimes importing the vehicles from abroad. These have been introduced in, among other locations, Wrexham, Staffordshire, Surrey, Aberdeen, and West Yorkshire.
- 2.8 The West Yorkshire services focus particularly on primary school children in Ilkley and Hebden Bridge where the specific aim was to persuade parents who drove their children to school to use the buses instead. This is similar to the aims in South Dublin and in other parts of the Greater Dublin area.
- 2.9 The two West Yorkshire schemes have some elements in common with the US model:
- A dedicated driver (same every day);
 - Clearly marked vehicle;
 - All children having a seat; and
 - Not open to public, school service only.
- 2.10 The West Yorkshire schemes go beyond the US model in some ways such as having a register and constant radio contact with a control room. Parents pay to use the services, but this is less than the full cost of the service. There is a pre payment system in place and fees are collected at the start of each term.

3. Current School Transport in Ireland

- 3.1 As a rule public buses in the Greater Dublin area are not ideally suited for primary school children to travel to and from school. This is for several reasons, including but not limited to:
- Walking (or cycling) is more appropriate in many instances due to close proximity to school.
 - Routes and timings are not always convenient for the home to school link.
 - There is too great a distance from home and/or school to bus stops, and
 - Safety concerns (road crossing or other).
- 3.2 In order to address these concerns a small number of schools, both in South Dublin and elsewhere in the Greater Dublin area have introduced their own bus services to and from schools. These are operated by private bus companies and are generally through an arrangement with the schools and parents, without the intervention of Dublin Bus, Bus Eireann or the Department of Education.
- 3.3 Privately operated school buses generally cost parents between €45 and €80 per month, with the lower figure being that quoted for primary school services around Bray for which we have some details. The services are fully commercial and no subsidies are received.
- 3.4 Dublin Bus services are widespread around the schools in South Dublin, but these are often inadequate for primary school travel. The availability and the suitability of Dublin Bus services for all of the schools studied with has been comprehensively examined and is detailed in the main report.
- 3.5 Privately operated local bus services are in place in part of the area, notably in Lucan, but as these are timed mainly for commuters to and from central Dublin they are unsuitable for local travel to and from schools. Similarly the Dublin Bus organised Schoolink services cater largely for secondary schools and are not suitable for travel to the primary schools we have studied.

4. Current Travel to and from Schools

- 4.1 We have full results of the 2002 DTO School Travel Survey for most of the schools selected for study by South Dublin County Council. It shows that overall for the selected schools:
- 50% of children are taken to school by car.
 - 44% walk.
 - 1% of children cycle to school, and

- 5% of children take the bus to and from school.

- 4.2 As expected there is a wide variation in travel patterns among schools. The school with the highest walk percentage in 2002 was St. Anne's in Lucan with 69% of children walking to school, followed by Sacred Heart in Clondalkin with 64%.
- 4.3 The highest percentage of car use was Rathfarnham Parish National School 89%, with Lucan Educate Together next highest at 79%. However, since the survey a private bus service has been introduced at Rathfarnham Parish so the percentage would be slightly lower now.
- 4.4 The only school to have significant cycling use was Ballyronan (Holy Spirit) Boys National School, with 10% of their pupils cycling. Gaelscoil Naomh Padraig in Lucan has the highest percentage of bus use at 50%, but this was mainly due to two school buses being provided from the Palmerstown area, from where the children are entitled to free travel. Some school children use Dublin Bus services in the Clondalkin area, but there is almost no use of buses to travel to primary schools around Rathfarnham (with the exception of the subsequently introduced private bus to Rathfarnham Parish School noted earlier).

5. Parents Survey

- 5.1 Our partners Global Action Plan contacted all of the schools nominated by South Dublin County Council in the three areas of greater Rathfarnham, Clondalkin and Lucan. Of these 14 agreed to participate in the survey programme and of these ten returned their surveys by the date agreed with our partners. As we needed to progress with our work our initial analysis concentrated on the ten schools that returned their surveys by the deadline. We subsequently analysed the additional four schools and the results from these are in an Appendix.
- 5.2 From the ten schools the overall travel results for the children to and from school were:
- 52% car;
 - 43% walk;
 - 2% cycle;
 - 2% Dublin Bus, and
 - 1% school bus.
- 5.3 This is close to the 2002 figures noted in the previous section, but with a slight increase in car use since then.

- 5.4 The modes of travel varied greatly between individual schools. The school with the highest car use was 63% at Loreto NS in Rathfarnham, with the highest rate of walking being 65% at St. Colmcilles Senior NS in Ballyronan. The highest cycling rate is 17% at Gaelscoil Naomh Padraig in Lucan, while the highest use of Dublin Bus services was 8% at St. Anne's in Lucan.
- 5.5 Response rates from the initial ten schools varied between 8% to 54%, measured in terms of the number of pupils at each school. The varied response rate in part reflects the interest of parents and the school administration, as the surveys were distributed to between one third and one half of pupils, dependent upon the size of the school
- 5.6 Overall 49% of parents were interested in having a school bus for their children. The school with the highest percentage of interested parents was Lucan Educate Together, with 66%. The lowest percentage of interested parents was at St. Colmcilles Senior NS, but this is largely related to the high rate of walking to this school.
- 5.7 The survey asked about possible attributes of a school bus service that parents would find important. The highest of these was seat belts at every seat, with an overall score of 8.5 out of 10. Personal security, having a stop within 200 metres and having a supervisor on-bus were also highly rated attributes of a potential school bus service.
- 5.8 Parents were generally willing to pay approximately €2 return per day for a school bus service. There was a major division between preferences for fare collection, with approximately equal numbers of parents wanting to pay a fare on the bus as opposed to termly. In order to resolve this it may be necessary to offer a 'hybrid' option of term fare collection with an option for other children to use the service occasionally.
- 5.9 There was strong interest in alternative drop off points, mainly for taking children to childminders and other after school activities. Consequently it is likely that the morning and the afternoon routes would be different for most of the services.
- 5.10 Based on the results of the surveys we have designed services that incorporate:
- A dedicated vehicle, clearly identifiable as a school bus with seat belts at every seat.
 - An on-board supervisor to monitor behaviour, act as a point of contact for parents and deal with fare collection issues, and
 - Stops as close to the children's homes as possible, subject to the road system in the area.

6. Consultation

- 6.1 As part of the programme our partners Global Action Plan consulted with schools to determine their views about school bus services. As South Dublin County Council wanted to incorporate attitudes to cycling as well as to school bus services we also asked questions about cycling, including about facilities at the schools.

School Buses

- 6.2 Some principals or secretaries said a school bus would be helpful, but others said that most children lived locally and that school buses are not required. In the latter case the surveys often proved that many children lived over two kms. from the school and that parents were in fact interested in a school bus service. However, the attitude of the administrators could be crucial and even if parents were interested lack of support from the administration could make introducing a bus service more difficult.
- 6.3 General safety, seat belts and supervision on buses are noted as key elements of success for potential school bus services. Some schools had experience of bullying and poor behaviour on school bus services in the past. The main benefit generally was seen as reduction of traffic in the area around the school.
- 6.4 In terms of what schools were willing to do to support the bus service, this was mainly in terms of promotion of the service, to ensure that parents were aware of it and to get as many as possible who are using cars to sign up. No school mentioned that they would be willing to help support the service financially, though one school said that they could help with collecting payments.

Cycling

- 6.5 The lack of safe cycle routes to school is a major concern. Schools that are located in areas of heavy traffic congestion generally have few children cycling as the routes are considered unsafe. However, other schools, generally in newer areas, have suitable cycle lanes and paths in their area. Clear differences can be seen between the different localities on this question, but there are also differences within individual localities depending upon how residential the area immediately around the school is.
- 6.6 The need for and the attendance at a cycling safety and awareness course in was mentioned several times by consultees. It was felt that this encourages children to cycle to and from school.
- 6.7 Cycling varies depending upon the season, with schools reporting a higher take up in the spring and early autumn compared to the winter.

- 6.8 Many schools have secure cycle racks and theft has generally not been a major problem where these are provided. Some schools mentioned the cost of the racks where these have been provided recently and some link the use of these to cycling safety courses.

7. Outline Services

- 7.1 We plotted the home locations of the interested residences (on the level of a named street) from each school on a map using the MapInfo mapping programme. Subsequent to this we then determined an 'ideal' bus route that would serve as many of the interested parents as possible and plotted this in MapInfo. The distance of the outline routes was measured in MapInfo and used as a basis for cost estimations.
- 7.2 From the data given to us by parents in the survey we were able to propose a bus route that served every school except Gaelscoil Naomh Pdraig in Lucan, where the interested parents were too dispersed to organise a sustainable school bus service. Two routes were devised to serve both St. Colmcilles Junior and Senior schools in Knocklyon as combining the bus for the two schools results in a wider range of areas being served.
- 7.3 In terms of vehicles, the most appropriate appear to be the purpose built school buses currently used in Great Britain. A price quote for a BMC 1100 bus from a distributor in Dungannon, Co. Tyrone, resulted in an estimated cost of €130,000 for the latest Euro 4 emission standard compliant vehicles with the latest safety features.
- 7.4 In some areas the road system may not be able to support the use of purpose built buses, or alternatively there may not be enough passengers to support the use of a larger vehicle. In these cases we recommend the use of a refurbished mid life midibus or minibus, which would have a lower cost than the purpose built school bus but would also have a lower capacity.
- 7.5 Parents would appear to be generally be willing to pay around €2 return per day to use the proposed school bus service. As there was a fairly even division between paying for transport termly and paying on-bus we feel that a term payment approach, with the possibility of occasional use by other children, would be the best way to handle fare payment on these services.
- 7.6 Operating costs for a smaller mid life vehicle would be between €399 and €515 per week per service for an estimated annual cost of €145,779. The cost using a purpose built school bus would be between €592 and €708 per week for an estimated annual cost of €210,057.
- 7.7 We would recommend that the services are contracted to South Dublin County Council. The reason for this is that other potential organisers do not have experience of these more 'entrepreneurial' types of services, with Bus Eireann, for example, only having experience of statutory school transport which has

traditionally been aimed at providing transport to entitled pupils at the lowest cost.

- 7.8 We also recommend that SDCC hires and trains the on-bus supervisors, and is responsible for fare collection. This is consistent with SDCC's current responsibilities for transport safety, including employment of school crossing wardens.
- 7.9 We have made revenue and cost projections based on low use and 'medium to high' use estimates, with the low use estimated being based solely on the parents who expressed interest in our surveys. The medium to high use estimate was based on twice these numbers, taking account of the potential to increase participation through marketing and also the response rates among parents.
- 7.10 Due to the highest capacity bus being able to transport more passengers, the purpose built school buses have a better cost recover ratio than smaller vehicles. The annual projected deficit using a mini or midi bus and having a low use estimate (generally 20 to 25 passengers per bus) was estimated at €75,000, while that for using a purpose built school bus and medium to high use was €68,000.
- 7.11 The main reasons for the operating deficit are two factors:
- The use of higher quality vehicles, and
 - The provision of an on-bus supervisor
- 7.12 However, the services are unlikely to be successful if these are not provided. The most realistic option to reduce the deficit is to attempt to get schools to stagger school start and finish times to reduce the bus requirement. For example, if the 9 proposed services could be operated with 5 instead of 9 buses the operating deficit using purpose built school buses with medium to high use would reduce from €68,000 to approximately €5,000 annually.
- 7.13 In addition to support from South Dublin County Council, the Dublin Transportation Office has indicated to us that they may be able to provide some financial support for the initial stages of the project. We also feel that the Department of Education and Science can be approached directly in the context of supporting a pilot project.
- 7.14 Seen in the context of the wider social benefits that could be delivered from the introduction of school bus services the overall benefits would still be considerably greater than the annual subsidy required.

8. Benefits

8.1 The benefits to children, parents and the wider community from the operation of school bus services include:

- Reduced traffic congestion;
- Reduced accidents;
- Reduced pollution;
- Improved attendance at school;
- Improvement of children's physical health, and
- Enhanced social cohesion, both within the community and between the community and the school.

8.2 For the first three benefits we can assign monetary values, based on previous studies in the UK and in Europe as well as on current Irish statistics on accidents and traffic congestion.

8.3 The highest monetary benefit is from the reduction of traffic congestion, as this is based on the value of time. This is followed by the benefits from accident reduction and finally benefits from pollution reduction. For the use of smaller buses these are:

- €62,166 for reduction in traffic congestion;
- €15,541 for reduction in accidents, and
- €1,646 for reduction in pollution

For a total annual benefit of €79,354.

8.4 Using larger buses the benefit increases due to the increased number of children carried and consequent further reductions in car journeys. The benefits for larger buses are:

- €124,332 for reduction in traffic congestion;
- €31,083 for reduction in accidents, and
- €3,884 for reduction in pollution

For a total annual benefit of €159,299.

8.5 Seen against the subsidy requirement outlined in the previous section, the use of smaller buses with lower use would provide a net public benefit of €4,615. However, using purpose built school buses and having a higher level of use this benefit increases significantly to €91,322.

- 8.6 As the benefits are significantly greater using larger buses, we have made our recommendation based on using these where possible.

9. Recommendations

- 9.1 Once the general idea of the pilot project has been approved by the council we propose that parents in the schools are asked to commit to using the services. In parallel we recommend that the council makes a formal approach to the DTO and the Department of Education and Science for seed money to launch the project. The DTO has indicated that they may be willing to support a pilot project, but would not be able to provide ongoing revenue support.
- 9.2 Once the interest of parents has been confirmed we recommend that tenders are issued and operators are invited to bid to operate the services. Prior to tenders being issued the basis of operation needs to be determined and we suggest the following approach:
- If a grant can be obtained for €1 million or more, we recommend that SDCC buys the buses and invites operators to bid on the basis of operating and maintaining the buses only.
 - If this grant is not forthcoming, or a smaller amount is received than we recommend that the operators purchase and supply the buses and that their depreciation costs are passed on as part of the operating cost.
- 9.3 The tenders should be circulated to all known bus and coach operators having a base within 15 kilometres of South Dublin in order to involve the maximum number of operators possible. Once bids have been received, the successful operators would be chosen on the basis of best value, taking into account other considerations, such as the type of vehicle proposed if this is appropriate.
- 9.4 If the services did not have enough passengers (generally 40 or more) to justify a purpose built school bus (suggested model is a BMC 1100) then they could be operated with a refurbished midi or mini bus with similar features. As would be the case with the purpose built bus any such vehicles would only be used for the transport of school children and a condition to this effect would be included in the contract.
- 9.5 Once the routes are finalised we recommend that SDCC hires and trains the on-bus supervisors.
- 9.6 Subject to the vehicles being available we suggest that the first group of services are introduced at the start of the new school year in September 2007. SDCC would be responsible for fare collection, with this task being part of the duties of the on-board supervisors, although schools could assist if they are willing to do so.

- 9.7 The performance of the services would be monitored and adjustments made as required. Parents who did not sign up for the service initially would have the opportunity to do so at the start of the next term, and similarly parents who no longer wished to have their children use the service would be able to withdraw their children at the end of a term. Parents who wish to have their children use the service occasionally (less than once a week) would be required to book with the on-bus supervisor at least one day in advance of their journey.
- 9.8 We propose that the services for a second group of schools are introduced as a second stage in the following January. In subsequent years, two or three schools could be added until the longer term vision of providing one or more services at each suitable school is realised.
- 9.9 If SDCC is buying the buses an annual capital replacement programme for a certain number of buses each year would be required. The operations on their own would break even or generate a small profit, and, as direct operational profits increase through economies of scale and (potentially) the staggering of school start and finish times, the contribution towards the capital requirements would increase.
- 9.10 In the longer term the goal would be to encourage a policy change by the Department of Education and Science to facilitate the provision of non-statutory school buses and to fund the capital required. Even if the services are not funded completely, as occurs in the USA, the financing of the capital requirement on a large scale, with a consequently lower unit price through economies of scale, would result in a relatively low subsidy per pupil.
- 9.11 We also recommend that in the short term on-bus supervisors are provided for the statutory school bus from Palmerston to Gaelscoil and that SDCC work with both Bus Eireann and the operator of the service to improve vehicle quality. In the longer term we believe that this service should be transformed into a yellow school bus on the same model as the services in the pilot project.
- 9.12 Our longer term vision is that all buses operated on school services in South Dublin, whether they are paid for in part by parents or are free to the users, are of the equivalent standard to those in the pilot project.
- 9.13 We feel that ultimately one third to one half of primary schools in South Dublin could support one or more school bus services. At the same time we feel that services operating to and from secondary schools should also be upgraded to the standard of the buses that are proposed for the primary schools.

1.1 Objectives

- 1.1.1 Currently almost half the children in the greater Dublin area are taken to school by car. This contributes to traffic congestion, pollution and the rise in childhood obesity and is also unsustainable from an environmental viewpoint.
- 1.1.2 Over recent years there have been some initiatives aimed at countering this trend. An Taisce has launched the Green Schools project, with some schools being able to progress to the transport theme, which aims to reduce car use. A number of parents have also organised their own bus services but these are normally small scale initiatives. There have also been pilot projects to reduce car use for travel to school in the Dublin area, involving increased walking, cycling and in one or two cases new school bus services.
- 1.1.3 However, without encouragement from or the intervention of outside bodies the trend towards children being driven to school is likely to increase.
- 1.1.4 Consequently South Dublin County Council has commissioned TAS to investigate the potential for establishing dedicated school bus services, which could possibly be along the lines of US and Canadian yellow school buses. Alternatively recent projects in England, Wales and Scotland could potentially serve as a more relevant model for future initiatives in South Dublin.
- 1.1.5 This report examines the potential for school bus services in South Dublin and examines in detail:
- school bus services in the USA and in Great Britain;
 - the current public and school transport situation in South Dublin;
 - surveys of parents to determine the current means of travel and their preferences;
 - the feasibility of introducing new school bus services;
 - the costs and benefits of new school bus services; and
 - recommendations to achieve the goals of the project.

1.2 Choice of Schools

- 1.2.1 In order to focus our study on those schools where the potential school bus use was highest we looked at areas that had a history of high car use for journeys to and from school. We also looked at areas that had the lowest incidence of walking to school.

- 1.2.2 These areas are generally those with above average incomes and with medium population densities. Some have conventional road systems with few dedicated walking or cycling routes, while others have few through routes and are the more difficult to serve, but they tend to have purpose built walking or cycling paths.
- 1.2.3 In discussions with South Dublin County Council it was decided to focus on Rathfarnham, Clondalkin and Lucan. This would potentially permit the use of buses to provide services to schools that are relatively close to each other in cases where children in a residential area may attend different schools.
- 1.2.4 The following schools were chosen to take part in the survey programme and the subsequent design of bus routes:

Rathfarnham/Ballyronan/Knocklyon

- Loreto NS, Grange Road
- St. Mary's Boys National School
- Rathfarnham Parish National School
- Holy Spirit Boys National School
- Scoil Naomh Padraig
- St. Colmcilles Junior National School
- St. Colmcilles Senior National School
- Gaelscoil Chnoc Liamhna

Clondalkin

- St. Josephs Boys National School
- Scoil Mhuire National School
- Scoil Aine National School
- Scoil Ide National School
- Gaelscoil Na Camoige
- Gaelscoil Chluain Dolcain
- St. John's National School
- Sacred Heart National

Lucan

- Scoil Mhuire, Woodview Heights/Airlie
- St. Thomas's Junior National School
- St. Annes Senior National School
- Gaelscoil Naomh Padraig
- Lucan Educate Together
- Griffeen Valley Educate Together

1.3 Other Stakeholders

- 1.3.1 As part of our work on this report we consulted a wide range of other stakeholders about the goals and objectives of the project. We actively solicited their views and where there were possibilities of support or joint working we incorporated their views into the report.
- 1.3.2 Among the organisations consulted were:
- Dublin Transportation Office
 - Department of Transport
 - Department of Education and Science
 - An Taisce
 - Dublin Bus
 - Bus Eireann
 - PAMBO (Private Bus Operators Association)
 - Individual private bus operators.
- 1.3.3 It was difficult for some stakeholders to see beyond their own area of expertise or statutory obligation. This was mainly the case with government departments and those involved in existing transport arrangements.
- 1.3.4 By contrast, other stakeholders, such as the DTO as well as An Taisce were cooperative and fully in agreement with the aims of the project. Although their own programmes are different to what SDCC are proposing they acknowledge the value of a new programme with similar objectives.

- 1.3.5 Some private bus operators were also helpful in providing an understanding of how a potential scheme could work and how they would envisage operating the proposed services.

2.1 USA

- 2.1.1 Yellow school buses have been a common feature throughout the USA for many years and are often the only buses operating in many communities. They are mainly provided in suburban and rural areas (with lower level of use in large central cities) where the schools are some distance away from most pupils' homes. Yellow school buses are used by both primary and secondary students, though there is generally a fall off at about age 16 to 17 as the entrenched car culture results in many students then driving themselves to school.
- 2.1.2 Most parents in the USA do not take their children to school by car, as they have enough confidence in the yellow buses to provide a safe and reliable service. The only locations where driving children to school in cars has become common is where school transport is not mandated by state law, and has been cut back severely as a result of school district financial problems. Such occurrences are fairly common in some parts of the USA. In the USA as a whole 54% of children are transported to and from school by school buses¹.
- 2.1.3 Another form of transport using yellow school buses in the USA is what is known confusingly as 'bussing', which is operated for racial integration purposes. This has taken place mainly in large cities (Boston, Cleveland, Charlotte, among others) where pupils are transported from minority to white neighbourhoods or vice versa. Although this action generated controversy as children were no longer able to attend local schools the basic elements of the schemes are the same as those for normal yellow bus school transport, in that the children are taken from a stop near their home to a school.
- 2.1.4 Normally US school buses operate reasonably efficiently as school hours are staggered so that secondary (and intermediate) schools start and finish before the primary schools. Consequently a bus can normally make two or three trips in each of the morning and afternoon school peaks. This staggering of school hours has long been accepted in the USA.
- 2.1.5 Some buses are used during the day for curriculum transport and also after school to provide transport for school sports teams and to other extra-curricular activities. Consequently some drivers are employed on a full time or a de-facto full time basis, but many are part time employees. These are often parents of pupils, generally mothers. There is a tendency (but this is not always the case) to have regular drivers and the same driver in the morning and the afternoon.

¹ http://www.ems.ohio.gov/PDF/Natl_schoolbus_safety_month05.pdf

- 2.1.6 The vehicles used on US school bus services generally have distinct markings, including lights and stop signs. Most states have laws that make it illegal to pass a school bus whilst it is picking up or dropping off children (at which time the lights are flashing) and this precaution reinforces the image of safety given by the buses. It would be possible to have school buses with flashing lights and stop signs in Ireland, but new legislation would be required to prohibit overtaking whilst boarding or alighting is in progress. This would involve an element of culture change and a major programme of driver education.

2.2 England and Wales

- 2.2.1 As a result of perceived problems with school transport in the UK there has been pressure for widespread adoption of the US yellow school bus model. This has followed a substantial increase in the use of cars to transport children who formerly walked, rode bicycles or used buses to travel to school. There is also a growing problem, particularly in England, of children travelling increasing distances to school as the 'school choice' measures take hold.
- 2.2.2 Yellow school bus pilot schemes have been introduced in, among other locations, West Yorkshire, Staffordshire, Wrexham (Wales) and Surrey. These have all been launched with a view towards increasing the use of buses for school travel and reducing safety and environmental problems associated with parents using cars to transport children to or from school.
- 2.2.3 In many of these areas school buses already operated, but these tended to be life expired double deck buses that were not attractive. Additionally there have traditionally been rigid limitations about how far children have to live from school before qualifying for free transport (two or three miles dependent upon age) and consequently there has not been a great emphasis on developing services for children living within these limits in many areas. Commercially operated school services have been provided where operators feel that they can obtain an adequate return, but these are normally also operated with older vehicles, sometimes up to 20 years old. Fare levels on these services vary, although some discount over what would be charged to adults is normally available, and this concession is often funded by public authorities in the larger urban areas.
- 2.2.4 The Wrexham yellow school bus experience concentrated on increasing both the use and quality of vehicles on services that were, for the most part, already provided. The opportunity was taken upon renewal of the contracts to introduce yellow school buses as a replacement for existing buses. These cater mainly for secondary school pupils but their availability also extends to those in post 16 education at local colleges, which is an older age group than is normally associated with yellow school buses.
- 2.2.5 The West Yorkshire schemes in Ilkley and Hebden Bridge focused on primary schools where the specific aim was to persuade parents who drove their

children to school to use the bus instead. This is similar to the aims in South Dublin and in other parts of the Greater Dublin area.

2.2.6 The two West Yorkshire schemes have some elements in common with the US model:

- a dedicated driver (same every day);
- clearly marked vehicle;
- all children having a seat; and
- not open to public, school service only.

2.2.7 Due to media attention about 'stranger danger' (more perceived than actual) the West Yorkshire schemes have in some cases gone beyond the US model in the area of safety. Children generally are committed to using the bus for a full term and their name is on a register, which is checked to determine who can travel. While other children can use the bus on an occasional basis (billed as 'taking a friend home for tea') this is expected to be booked in advance with the control centre. Additionally parents are expected to inform the control centre each day that a child will not be in school.

2.2.8 The two West Yorkshire schemes include some payment by parents for their children to use the bus, but this is less than the full cost of the service. Pre-payment has been favoured, as this avoids having to handle cash on the bus on a daily basis. In both these schemes the majority of children previously travelled by car.

2.2.9 The UK yellow bus schemes have not been without problems, mostly involving conflicts at the school gate between buses and parents who have continued to drive their children to and from school. However, education of parents has proven to be useful if not essential in resolving this and with getting parents to accept the school bus ethos generally.

3.1 Introduction

- 3.1.1 As a rule public buses in the Greater Dublin area are not ideally suited for use by primary school children to travel to and from school. This is due to several reasons, which include, but are not limited to:
- walking (or cycling) is more appropriate in many instances due to close proximity to school;
 - routes and timings are not always appropriate for the home to school link;
 - there is too great a distance from home and/or school to bus stop; and
 - safety concerns (road crossing or other).
- 3.1.2 In order to address these concerns a small number of schools, both in South Dublin and elsewhere in the Greater Dublin area have introduced their own bus services to and from schools. These are operated by private bus companies and are generally through an arrangement with the schools and parents, without the intervention of Dublin Bus, Bus Eireann or the Department of Education.
- 3.1.3 While these are not widespread, they are a useful model to follow in seeking to implement school bus services more generally. However, if school bus initiatives for primary school in Greater Dublin are to be more than small scale, locally organised, ad-hoc arrangements there may need to be public support either in terms of finance or on organisational or logistical matters.

3.2 Privately Operated School Buses

- 3.2.1 In South Dublin several schools have privately operated school buses. Due to the nature of the arrangements, generally between parents and the operator, it is difficult to ascertain the bus operator, the type of bus used, the number of pupils carried or the fares charged.
- 3.2.2 At least one school among our initial sample, Rathfarnham Parish School, has a privately operated bus service. According to the principal, around 25 of their pupils use this bus, which is operated by a parent of a child at the school.
- 3.2.3 Privately operated buses serve schools in many other parts of Ireland. According to the secretary of PAMBO, the private bus and coach operators association, there are more children carried in Co. Kildare by privately arranged bus transport than by statutory school buses (normally arranged by Bus Eireann).

- 3.2.4 In the Bray and Greystones areas five school bus services are operated by the local operator Finnegan's of Bray and these are provided on a reserved seat basis, with fares being paid monthly by parents. These range from €43 to €80 per month, with the lower fare being for Bray local school services and the higher fare being for a service to Blackrock College. Approximately 110 children are transported each day and the services are fully commercial, with no subsidies being received.
- 3.2.5 In spite of the growth of their privately operated schools network it was the opinion of Finnegan's that the problem of modal shift from cars to school buses could not be effectively tackled without some form of subsidy that would lower the cost to parents to make the services more attractive.

3.3 Existing Dublin Bus Services

- 3.3.1 Most schools in South Dublin have at least one Dublin Bus service passing in close proximity to the site. The suitability of these services is highly variable and is dependent upon the school, the areas in which the children reside and the frequency and timing of the service in question.

- 3.3.2 While we will not examine in detail the suitability of Dublin Bus services to all schools in South Dublin we consider provision in the three areas where it is accepted that a dedicated school bus service will have a good chance of success.

Rathfarnham

- 3.3.3 Rathfarnham as a whole is reasonably well served by Dublin Bus services, but the coverage varies dependant on the precise part of the suburb in which the school is situated.
- 3.3.4 Both St. Mary's Boys National School and Loreto National School, which are located near a main road junction, have a wide choice of bus routes available. Cross city services 16 and 16A (each generally operating every 20 minutes) and the orbital services 17 and 75, which operate less frequently, can be used. Service 15C to Whitechurch and the city centre, but running infrequently is also available nearby.
- 3.3.5 Rathfarnham Parish National School, which is located to the west of the village centre, is more difficult to access by Dublin Bus. Services 15B and 75 provide some links. To the north service 15B covers Templeogue and areas towards the city centre, but it terminates nearby and so is of no use for travel to or from the south. Service 75 provides east-west links and operates every 20 to 30 minutes at peak times. As Rathfarnham Parish School is a Church of Ireland school it may have a wider catchment area with children travelling longer distances than some of the other schools in the area.

- 3.3.6 Schools in Ballyboden and Knocklyon are similarly isolated from most bus services, generally having only one main bus service nearby. In the case of Ballyboden, this is the 15C, which generally only runs hourly (or less frequently) during the main part of the day, with approximately a half hourly service at peak times.

Clondalkin

- 3.3.7 Most schools in the Clondalkin area are located near the village centre. However, some are in residential areas and the relationship between the school attended and where the pupils live is unclear. It is possible that the schools in the village centre draw from a wide area, but this is also likely to be true for the Gaelscoils as well as the Church of Ireland primary.
- 3.3.8 The schools in the centre of the village (St. Joseph's Boys, Scoil Mhuire, Scoil Aine, Scoil Ide, St. John's) have bus services available from most areas of Clondalkin. Their frequency varies, but is generally the highest on the common 51B/51C section on Watery Lane and Woodford Walk, in the eastern part of Clondalkin, where buses are generally spaced ten to 15 minutes apart. As services 51B and 51C cover different routes in the western part of Clondalkin, however, the frequency on unique sections is 20 to 30 minutes.
- 3.3.9 Other bus services in Clondalkin are less frequent. Services 76 and 76B combine to provide a 20 minute frequency for most of the day but do not cover many of the residential areas in Clondalkin, mainly providing links to points south (Tallaght) and north (Liffey Valley, Ballyfermot). Service 69 operates to Rathcoole and provides a local service in the St. John's Drive area of Clondalkin, but only operates hourly or less frequently for most of the day. Similarly service 68 provides infrequent links to Newcastle covering areas to the west of the village centre.
- 3.3.10 Schools outside the village centre are less well served by local bus services. The two Gaelscoils in Clondalkin, Gaelscoil Na Camoige and Gaelscoil Chluan Dolchain fall into this category, being to the east and the west respectively. Sacred Heart NS is also outside of the village centre and is mainly served by the infrequent 69, although the 51B and 51C are within walking distance.

Lucan

- 3.3.11 Lucan has expanded greatly in recent years with most of the new housing being south of the N4 dual carriageway, which separates it from the centre of the old village. Due to rapid population growth there is an issue in Lucan with school places. This is particularly the case with the Educate Together schools and the Gaelscoils. As a result many children do not go to their nearest school and are more likely to require transport, either by being driven to school or travelling by bus.
- 3.3.12 Most schools are located close to the 25A bus route which generally operates every 15 minutes throughout the day. The exception is Scoil Mhuire, which is

in the west of the area and is rather isolated, being served by the less frequent service 25 that provides no links to the main housing areas.

3.4 School Services Organised by Dublin Bus

- 3.4.1 Dublin Bus organises a number of school bus services, which are provided by private operators under the Schoolink banner. These mainly serve secondary schools but some also call at primary schools. According to Dublin Bus, Schoolink services are intended to supplement the capacity of existing bus services instead of providing links that ordinary buses do not.
- 3.4.2 In the South Dublin area there are relatively few Schoolink services, although some secondary schools in the Tallaght area are covered and they also provide links between Tallaght and some schools to the east, such as Drimnagh Castle and St. Pauls School in Greenhills.
- 3.4.3 In Lucan there are two Schoolink services. One runs as an extra journey on the 25A to Lucan Community College, whilst the other links the housing areas to the south of the N4 with St. Joseph's school in Lucan village. The morning departure runs via the 25A route then direct to the school, but no afternoon return journey is provided.
- 3.4.4 It appears that the existing Schoolink network would not cater adequately for primary school students in the areas that we are examining as part of this study.

3.5 Privately Operated Local Bus Services

- 3.5.1 There has been a gradual increase in the number of privately operated local bus services over the last ten years. These currently operate without subsidy and do not form part of the Dublin Bus network, and so passengers holding a Dublin Bus network pass need to pay a separate fare. This situation could change in the coming years, and much will depend on whether or not the existing private bus services are included in the new network envisaged for Greater Dublin.
- 3.5.2 There are no private bus services in most areas of South Dublin, and those that do exist are often limited in span and frequency. For example, Morton's Circle Line operate their CL2 service in South Lucan, but this is designed to cater for commuting to Dublin and offers limited opportunities for local travel. While a reasonably frequent service is provided in the morning peak (towards Dublin only) the return journeys pass schools well after their finishing times. This service may be improved in the coming months, but its potential for use by primary school children will continue to be limited.

- 3.5.3 Consequently there would appear to be few opportunities for children, particularly those of primary school age, to use privately operated local bus services for travel to and from school.

4.1 Introduction

- 4.1.1 The most common means by which children travel to the selected schools in South Dublin are being taken by car and walking. The exact figures for modal split vary widely by school and there are differences between the three areas, but in general terms walking and car travel are equally important, with much smaller numbers cycling and using buses.
- 4.1.2 Buses are already organised for some schools and this is notably the case with Gaelscoil Naomh Padraig in Lucan, where a significant number of children use two school buses from the Palmerstown area. Other children, notably in Clondalkin, use regular Dublin Bus services, but this type of travel is almost completely absent in the Rathfarnham and Lucan areas.

4.2 DTO 2002 Survey results

- 4.2.1 The Dublin Transportation Office (DTO) conducts surveys on a regular basis and among these is a survey of travel to and from schools. The most recent survey with a full set of results was conducted in 2002, though a survey was undertaken in 2006 for which full results are not yet available.
- 4.2.2 The results of the 2002 survey for schools in the South Dublin County Council area was provided to TAS by the DTO and the selected schools were analysed to determine the percentage of children travelling by car, walking, cycling and bus. The results are summarised in Table 1 below.

Table 1: Travel to and From Sample Schools - 2002

School	% Car	% Walk	% Cycle	% Bus (all)	Notes
Ballyroan Holy Spirit Boys National School	59%	29%	10%	2%	
Naomh Padraig	57%	40%	2%	1%	
St. Colmcilles Junior	49%	50%	1%	0%	
St. Colmcilles Senior	34%	64%	2%	0%	
Rathfarnham Parish National School	89%	11%	0%	0%	
St. Mary's Boys National School	56%	42%	2%	0%	
Loreto School					A
Gaelscoil Cnoc Lumnagh					A
Rathfarnham Summary	52%	46%	2%	1%	
St. Joseph's Boys National School	49%	25%	3%	23%	

School	% Car	% Walk	% Cycle	% Bus (all)	Notes
Scoil Mhuire	61%	16%	1%	22%	
Scoil Ide National School	54%	29%	0%	17%	
Scoil Naomh Aine					B
Gaelscoil Na Camoige	58%	38%	1%	3%	
Gaelscoil Chluan Dolcain	59%	37%	1%	3%	
St. Johns/Naomh Ioan					B
Sacred Heart National School	32%	66%	0%	2%	
Clondalkin Summary	47%	40%	1%	12%	
Scoil Mhuire	50%	50%	0%	1%	
St. Thomas's Junior National School	47%	51%	0%	2%	
St. Anne's Senior National School	27%	69%	0%	4%	
Gaelscoil Naomh Padraig	46%	3%	0%	51%	
Lucan Educate Together	79%	17%	1%	3%	
Griffeen Valley Educate Together					C
Lucan Summary	49%	44%	0%	7%	
Overall	50%	44%	1%	5%	
Notes					
A	School not on DTO list				
B	School did not participate in 2002 survey				
C	New school, established since 2002				

- 4.2.3 In 2002 half of children were driven to school, 44% walked, 1% cycled and 5% used bus services. However, this overall result masks large differences between schools. Some had 60% or more of their pupils being driven to school, and Rathfarnham Parish and Lucan Educate Together had particularly high numbers being transported by car. This is possibly because these schools draw from a wider geographic area than other schools, though the importance of car travel at Rathfarnham Parish will have been reduced since the school bus (as reported in section 3.2.2) was introduced after the 2002 survey.
- 4.2.4 Three schools, in three separate areas, had over 60% of their pupils walking to school, but only one school, Holy Spirit National School, Ballyronan, had a significant percentage of pupils cycling to school (10% in 2002).
- 4.2.5 Over 50% of pupils at Gaelscoil Naomh Padraig in Lucan travel by bus, mainly on the statutory school buses (provided free to parents under current regulations because the children live more than 3.2 kms. from school) from the Palmerston area. Some pupils in the Clondalkin area use Dublin Bus

services, but at most other schools buses are used by no more than 1% of pupils.

5.1 Survey of Parents

- 5.1.1 All the 21 schools that were nominated by South Dublin County Council officers were contacted. Of these 14 agreed to participate in the survey programme and ten returned the surveys by the revised deadline of mid March. As a result we have focussed on the ten schools that returned their surveys in time.
- 5.1.2 Some schools were reluctant to participate in this project and cited a number of factors – most commonly that there was no need for a school bus as most of the children lived very close to the school. However, the DTO survey data (see above) revealed that this was not the case, and that significant numbers of children were being driven to school. Other schools felt that as they had already participated in the most recent DTO survey that completing our survey would result in additional work for school staff and require parents to complete a second survey on a similar subject in less than a year.
- 5.1.3 In one case a privately operated bus service, provided by a parent at the school, had recently been introduced. It was felt that introducing additional services would risk threatening the good relationship with that parent and ultimately the existence of the newly introduced bus service itself.
- 5.1.4 One problem encountered in distributing the surveys was in contacting persons with authority, as the principals of many schools are generally teaching during a significant part of the day. In addition participation in the survey required the approval of the governing body at some schools and this generally resulted in delay in these cases.

5.2 Methodology

- 5.2.1 A total of 1,500 survey forms were distributed to the participating schools. In order to obtain a representative sample they were generally distributed in one class per year and this meant that approximately one third of pupils in each school were covered, though in some cases this increased to half. 887 survey forms were returned by the initial deadline, an overall response rate of 59%.
- 5.2.2 The questionnaire had two parts. The first asked:
- basic questions about the child;
 - how far he or she lived from the school;
 - their current travel arrangements; and

- whether or not the parents would be interested in their child using a school bus service.

5.2.3 Only the responses of parents who were interested in using a school bus service were recorded in the second part of the survey. This contained questions relating to attributes of school bus services and what features would be the most important in persuading parents to allow their child to travel on a school bus service. It also contained questions about fares, including a question to determine the maximum fare level that parents would pay and their preferred method of fare payment.

5.2.4 A copy of the survey is included in Appendix A.

5.3 Overall Results

5.3.1 The initial analysis of the returned surveys revealed that the modal split for travel to and from school was:

- 52% car;
- 43% walk;
- 2% cycle;
- 2% Dublin Bus; and
- 1% school bus

5.3.2 This result is close to that of the 2002 survey, although there has been a slight increase in car use in the interim.

5.3.3 The other main question in the first part of the survey was whether the parents would be interested in their children using a school bus service for their children and opinion was almost equally divided (49% interested, 51% not). Most parents who were not interested stated that this was because they lived close enough to the school for their child to walk, although others either believed that the children were 'too young' to use a bus or had concerns about safety and bullying on the bus.

5.4 Results by School

5.4.1 In order to establish whether or not it would be viable to introduce school bus services at each school, as well as to determine the overall attributes and the fares that parents would be willing to pay at each school we analysed the surveys on a school by school basis.

5.4.2 Table 2 shows the response rate at each school, calculated by comparing the number of surveys returned with the number of children at the school

(determined by reference to the most recent numbers from the Department of Education and Science). Although more surveys were distributed at some schools than at others the response rate can be interpreted as a general indicator of the interest of the school administration in the project.

Table 2: Responses From Schools

School	Area	Pupils on Roll	No. Of Respondents	% Response
Loreto National School	Rathrarnham	528	128	24%
Scoil Naomh Padraig	Ballyronan	325	109	34%
St. Colmcilles Junior NS	Knocklyon	714	128	18%
St. Colmcilles Senior NS	Knocklyon	726	55	8%
Scoil Aine NS	Clondalkin	247	133	54%
Scoil Mhuire	Lucan	635	84	13%
St.Thomas's Junior	Lucan	463	121	26%
St. Anne's	Lucan	457	44	10%
Gaelscoil Naomh Padraig	Lucan	258	42	16%
Lucan Educate Together	Lucan	452	36	8%
Overall rate		4805	880²	18%

5.4.3 Scoil Aine, Clondalkin, had the highest response rate at 54%, followed by Scoil Naomh Padraig, Ballyronan with 34%.

5.4.4 Table 3 outlines the modal split at each school, and the level of parental interest in a school bus service.

Table 3: Current Travel to/from Schools and Interest in School Bus Services

School	Area	Car	Walk	Cycle	Dublin Bus	School Bus	Interested
Loreto National School	Rathrarnham	63%	35%	1%	0%	0%	59%
Scoil Naomh Padraig	Ballyronan	55%	44%	2%	0%	0%	50%
St. Colmcilles Junior NS	Knocklyon	52%	47%	1%	0%	0%	36%
St. Colmcilles Senior NS	Knocklyon	33%	65%	2%	0%	0%	33%
Scoil Aine NS	Clondalkin	50%	41%	0%	7%	3%	59%
Scoil Mhuire	Lucan	46%	51%	1%	1%	0%	48%
St.Thomas's Junior	Lucan	58%	41%	0%	1%	0%	44%
St. Anne's	Lucan	34%	58%	0%	8%	0%	39%
Gaelscoil Naomh Padraig	Lucan	45%	24%	17%	2%	13%	38%

² Seven respondents did not indicate which school their child attended.

School	Area	Car	Walk	Cycle	Dublin Bus	School Bus	Interested
Lucan Educate Together	Lucan	54%	35%	11%	0%	0%	66%
Overall rate		52%	43%	2%	2%	1%	49%

- 5.4.5 The highest level of car use was at Loreto NS in Rathfarnham, with 63% of the children surveyed using the car to get to or from school. High levels of car use were also evident at St. Thomas's Junior School, Scoil Naomh Padraig and Lucan Educate Together.
- 5.4.6 The highest percentage of children walking to and from school was at St. Colmcilles Senior NS, where 65% did so. St. Anne's and Scoil Mhuire in Lucan were the only other schools to have more than 50% of children walking to school.
- 5.4.7 The two schools that reported significant levels of cycling to school were Gaelscoil Naomh Padraig and Lucan Educate together, both in Lucan. Scoil Aine, Clondalkin, and St. Anne's, Lucan, both had a reasonable level of use of Dublin Bus services, but they had a negligible share elsewhere. The use of school bus services was significant only at Gaelscoil Naomh Padraig, where 13% of survey respondents used the statutory school bus services from Palmerston.
- 5.4.8 Parental interest in having a school bus service is highest at Lucan Educate Together (66%), Loreto National School and Scoil Aine, both at 59%.
- 5.4.9 Table 4 outlines the relative attributes for each potential aspect of school bus services as outlined in the questionnaire.

Table 4: Relative Scores for Attributes for School Bus Services (10=highest)

School	Dedicated Bus	Seat Belt	Same Driver	Stop 200m	Travel Time	Supervisor	Safety Traffic	Personal Security	Traffic Congestion	Comfort	Reserved Seat	Contact Super.	Discount
Loreto National School	8.6	9.5	7.6	8.6	7.1	8.2	7.0	8.6	8.4	8.0	7.1	7.1	6.1
Scoil Naomh Padraig	7.7	9.5	7.1	8.5	6.7	7.9	6.7	8.4	7.9	7.7	7.1	7.7	5.5
St. Colmcilles Junior NS	7.3	8.4	6.4	7.4	6.9	8.1	6.2	7.7	7.3	6.9	7.3	6.4	5.3
St. Colmcilles Senior NS	7.9	9.3	7.9	8.8	7.4	8.2	7.5	8.5	8.7	8.1	6.8	7.8	7.3
Scoil Aine NS	6.2	7.1	6.1	6.7	5.9	6.7	5.8	7.0	6.6	6.8	6.6	6.5	6.4
Scoil Mhuire	7.1	8.4	7.5	7.7	7.1	7.4	6.7	8.3	8.5	8.3	7.8	7.1	6.9
St.Thomas's Junior	6.8	8.0	5.8	6.5	5.8	7.2	6.2	7.6	6.9	6.6	6.6	6.4	6.3
St. Anne's	8.1	8.3	6.6	7.2	6.8	7.1	7.2	8.2	7.2	7.4	6.8	6.5	7.1
Gaelscoil Naomh Padraig	7.0	8.3	7.3	8.1	5.2	6.5	5.9	6.6	7.4	6.9	6.1	6.3	6.4
Lucan Educate Together	8.2	9.3	7.4	7.7	7.0	7.6	7.2	7.7	8.1	7.2	7.6	6.9	7.0
Overall rate	7.4	8.5	6.9	7.6	6.5	7.5	6.5	7.8	7.6	7.4	7.0	6.9	6.2

- 5.4.10 The provision of a seat belt at every seat was the highest priority of parents, with an overall rating of 8.5. Other attributes receiving a high rating include enhanced personal security, a reduction in traffic congestion and environmental pollution, the provision of an on-bus supervisor, a stop within 200 metres of home and the comfort and cleanliness of vehicles.
- 5.4.11 From these results it is apparent that in order for a service to attract interest, the buses need to be reasonably modern, kept clean, only used for this type of work and be equipped with a seat belt at every seat.
- 5.4.12 With personal security being a key issue, along with the expressed desire for an on-bus supervisor, we recommend that the proposed services have a second person on board to monitor behaviour and potentially undertake fare collection. Ideally they would be a parent from the school served, employed on a part time basis. Fears about behaviour on the bus were a significant factor for some parents in deciding that they would not be interested in using school buses, so it is possible that some of these parents might be willing to allow their children to use the service if an on-bus supervisor was provided.
- 5.4.13 Although cost is an issue a possible discount for second and subsequent children at the same school was rated the least important of the possible attributes of the service.
- 5.4.14 Table 5 outlines, by school, the maximum fare parents would be willing to pay for a return journey, as well as their preferred method of fare collection and their interest in alternative drop off points.

Table 5: Fares and Alternative Drop Off Locations

School	Maximum Fare	Not Willing to Pay	Pay on bus	Term Only	Term, but able to use occasionally	Alternative drop off location
Loreto National School	€1.71	5%	43%	39%	21%	55%
Scoil Naomh Padraig	€1.81	9%	28%	32%	42%	62%
St. Colmcilles Junior NS	€1.49	9%	33%	39%	35%	54%
St. Colmcilles Senior NS	€1.74	0%	50%	50%	6%	61%
Scoil Aine NS	€2.00	8%	41%	44%	26%	59%
Scoil Mhuire	€2.12	5%	25%	48%	33%	48%
St.Thomas's Junior	€2.16	6%	32%	47%	30%	64%
St. Anne's	€1.34	6%	53%	24%	35%	41%
Gaelscoil Naomh Padraig	€1.91	13%	30%	35%	35%	48%
Lucan Educate Together	€1.95	13%	29%	50%	38%	63%
Overall rate	€1.83	7%	37%	41%	31%	58%

- 5.4.15 The average return fare that parents were willing to pay was €1.83, with a limit of €1.34 at St. Anne's but an acceptance of a fare above €2 at three schools, the highest being at St. Thomas's Junior School in Lucan.
- 5.4.16 In terms of payment preferences, Term Only was the preferred option, but not by a significant margin, exceeding payment on the bus every day by only 4%. The 'hybrid' option had a lower score, but may be the only practical option in most schools, given that parents are divided on this issue.
- 5.4.17 Parents seemed very interested in the option of having an alternative drop off locations, and this would be suitable if a child was to be dropped off at a child minders or at an after school activity. As a consequence bus routes may be different in the morning and the afternoon, and potentially could vary by day of the week, depending upon where children wished to go after school on a particular day.

5.5 Consultation with Schools

- 5.5.1 Schools were consulted to determine their views about school bus services. As South Dublin County Council wanted to incorporate attitudes to cycling as well as to school bus services we also covered this topic, including asking about facilities at the schools.

School Buses

- 5.5.2 Some principals or secretaries said a school bus would be helpful, but others said that most children lived locally and no service would be required in their opinion. In the latter case the surveys often proved that many children lived over two kilometres from the school and parents were, in fact, interested in a school bus service. However, the attitude of the administrators could be crucial and even if parents were interested a lack of support from the school could make introducing a bus service more difficult.
- 5.5.3 General safety, seat belts and supervision on buses are noted as key elements of success for potential school bus services. Some schools had had experience of bullying and poor behaviour on school bus services in the past. The main benefit generally was seen as reduction of traffic in the area around the school.
- 5.5.4 Schools were willing to support the bus service by providing promotion to ensure that parents were aware of it and to get as many existing car users to transfer to it. None of the schools committed to help support the service financially, although one school said that they could help with collecting payments.

Cycling

- 5.5.5 The lack of safe routes to school is a major element in militating against cycle use and schools that are located in areas of heavy traffic congestion generally have few children cycling. However, other schools, generally in newer areas, have cycle lanes and paths. Not only were there clear differences between the various areas on this question, but also differences within areas depending upon the extent of residential development around the school.
- 5.5.6 The need for and the attendance at a cycling safety and awareness course was mentioned several times among consultees. Sometimes this was arranged at the school but having children attend a course in Clontarf was also mentioned. It was felt that this encourages children to cycle to and from school.
- 5.5.7 The extent to which pupils cycle also varies depending upon the season, with schools reporting a higher take up in the spring and early autumn compared with the winter.
- 5.5.8 Many schools have secure cycle racks and theft has generally not been a major problem where these are provided. However some schools mentioned the perceived high cost of these racks where they have been installed recently.

6.1 Outline Services

- 6.1.1 In order to determine the feasibility of introducing a service for each of the schools or groups of schools we plotted the home addresses of all parents who had indicated an interest in having their children use a school bus. This was produced using MapInfo and the background maps were based on Microsoft MapPoint or Ordnance Survey Ireland maps, depending upon which had the best coverage of the area concerned.
- 6.1.2 Bus routes were then designed that served as many of the families as possible, although some children who lived in isolated locations or significant distances from the school could not be accommodated. The length of each proposed route was calculated by using MapInfo.
- 6.1.3 Table 6 details the proposed routes and their start and finish times, based on school hours of 0900 to 1500, with buses arriving ten minutes prior to the school start and leaving ten minutes after school finish time. Maps of the proposed routes are attached in Appendix B.

Table 6: Outline School Bus Services

School	Origin	Start Time	School Arrive	School Depart	Finish Time	Route Length (Kms)
Loreto NS	Prospect Estate	0833	0855	1455	1517	7.4
Scoil Naomh Padraig	Prospect Estate	0829	0840	1440	1451	3.7
St. Colmcilles (J & S)	Parklands Road	0822	0840	1440	1458	5.8
St. Colmcilles (J & S)	Orlagh View	0827	0840	1440	1453	4.3
Scoil Aine	Monastery Gate Close	0828	0840	1440	1452	3.9
Scoil Mhuire	Willsbrook Road	0809	0840	1440	1511	10.1
St. Thomas	Liffey Valley Park roundabout	0830	0850	1450	1510	6.6
St. Anne	Ballyowen Road	0832	0850	1450	1508	6.0
Lucan Educate Together	Esker Road	0815	0840	1440	1505	8.1

- 6.1.4 There was insufficient parental interest in a bus from Lucan to Gaelscoil Naomh Padraig to justify the production of a proposal. However two statutory school buses operate to this school from the Palmerston area, and there could be potential to improve these in terms of vehicle quality and supervision. Recommendations for this service are included in 8.3.12.

6.2 Vehicles

6.2.1 In terms of vehicle choice there are a number of issues to be considered. These include, but are not limited to:

- size;
- cost; and
- safety features

6.2.2 Vehicle size affects both capacity and the ability to penetrate residential areas. A large vehicle, such as a specially designed school bus, would be able to carry more children and would have a lower cost per child if running at or near capacity. Conversely large school buses may not be able to penetrate the estates to a degree acceptable to parents. If the road system in the areas where there is the highest interest is unsuitable for large buses there could be a preference in some areas for mini/midi buses to be used. These could still incorporate many of the features of larger school buses, but would not have their capacity. Consequently additional cost might be incurred in providing two buses when one could cope with the number of children travelling.

6.2.3 The cost of a vehicle varies considerably depending upon its size and features. A conventional minibus would have the lowest cost, while a school bus with additional features would have the highest cost. Some of the 'extras' associated with US school bus operation are not actually needed in Ireland, but it should be borne in mind that US school buses are normally fairly utilitarian and, as a rule, cost much less than public transport buses. This fact is sometimes overlooked in the pricing of such vehicles in the UK and Europe.

6.2.4 No matter what type of vehicle is actually used there are some features that parents consider important. The most important of these is seat belts, and these would be required for every seat. There would also be a requirement for the vehicle to be identified clearly as a school bus, although this could be by the means of signs or markings on the vehicle rather than painting it yellow.

6.2.5 The bespoke yellow school buses in the UK have been manufactured by Blue Bird of the USA or BMC from Turkey. They have been expensive (although the price now appears to be reducing) and this results in high operating costs that cannot normally be covered by revenue from fares, as (unlike a bus used to provide public services) the bus is only used for a limited time each day.

6.2.6 Recent announcements from Northern Ireland that Translink has placed a substantial order for new school buses following policy changes there, raises the prospect that such vehicles maybe produced in Ireland through co-operation between Wright's of Ballymena and a chassis manufacturer. There is currently a high demand for low floor buses of all sorts, and the emphasis of most European manufacturers is on these instead of school buses.

- 6.2.7 A smaller vehicle such as an Optare Solo may be preferred in some areas. Examples are the Prospect Estate and some parts of Lucan as a large vehicle may be unable to penetrate estate areas where a significant number of parents have expressed their interest in school bus services. Site inspections and, if required, route tests with different types of vehicles will determine the extent to which smaller buses will be required.
- 6.2.8 The main vehicle-related issues are their cost and potential for additional use. Clearly identified school buses cannot be used for other work during the main part of the day unless this is related to the transport of children, and it may be possible to use some of the buses for transport to swimming baths or on school visits. However, unlike a standard coach, the school bus would have a limited ability to generate additional private hire revenue in the evening or at weekends. As a result the school services would bear the brunt of the vehicle depreciation and this increases their cost considerably.

6.3 Features of Operations

- 6.3.1 The main issue that arose in both the surveys and the consultation with schools is the desirability of having a supervisor on board to address concerns about bullying and safety. This person would ideally be recruited from the community that the bus serves (ideally a parent or alternatively a retired person) and would only be paid for the time spent on the bus.
- 6.3.2 Parental attitudes to the method of payment for the bus services are almost evenly divided between paying for a full term in advance or paying on the bus every day. This suggests that there are some parents who would want the option of using the bus occasionally, although the school bus services cannot be justified as a 'back up' to other arrangements. They need to have a regular core of committed users in order to become established.
- 6.3.3 We suggest therefore that parents need to commit to their children using the services, or they will not be provided. There should be the option for using the service on an occasional or less than daily basis (although children whose parents commit to using the service every day would have priority) and also to serve alternative drop off points in the afternoon, as both aspects would allow a similar level of flexibility to that afforded by the car. Fares should normally be collected in advance, either on a termly or a monthly basis, and could be collected by the school (if they are willing to cooperate) or by the on-bus supervisor.
- 6.3.4 We also recommend that it be possible for other children to use the school bus occasionally. This could be billed as 'take a friend home for tea' as is the case for some of the schemes in England, or children could pre-book travel on an occasional basis (not more than once a week), which could be used as a trial to gain the confidence of parents.

- 6.3.5 The bus supervisor would be contactable by mobile phone, and their number would be given to parents when they sign up for the service. Parents would be expected to notify the supervisor when their children are absent from school.
- 6.3.6 Some schools advised that they have an earlier leaving time for younger pupils and that a bus would also be required at that time. Such additional journeys could be provided, but would involve additional cost and the pupil numbers will determine whether or not they are viable.

6.4 Cost of Operation

- 6.4.1 We have contacted several operators in order to establish an estimation of likely costs, but despite prompting few have supplied details. One operator charges €2 per day (return) on their privately operated services in another area, although these do not have an on-bus supervisor. A second operator quoted €20 per week per child, based on providing an on-bus supervisor. The first figure tallies with what parents are willing to pay, but the second reflects the additional cost of supervision, which appears to be essential for the acceptance of the service by parents and schools.
- 6.4.2 In order to ascertain the likely costs of operation for a typical operator we undertook a route costing exercise using a number of different vehicle options and based upon current operating costs of:
- €11 per hour for a driver; and
 - €9 per hour for a supervisor.
- 6.4.3 The driver's time and fuel and maintenance cost calculations include a time allowance of 20 minutes for travel between a depot and both the start point and the school. The supervisor's time was calculated only on an in-service basis.
- 6.4.4 The prices of potential vehicles was estimated at:
- €120,000 for an Optare Solo (advanced low floor minibus).
 - €60,000 for an off the shelf commercial minibus or a four year old Dennis Dart (midibus – this is a 'cheaper vehicle' option).
 - €130,000 for a BMC 1100 School bus, as used in England and Wales (price quote from Loughshore Motors, Dungannon).

In all cases these vehicles have been depreciated over ten years.

- 6.4.5 The costs of operation are calculated at:
- Optare Solo between €561 and €676 per vehicle per week;

- lower cost option between €399 and €515 per vehicle per week; and
- larger school bus between €592 and €708.

6.4.6 However, the larger bus has a much greater capacity, and if well patronised it would have a cost recovery ratio as good as or better than the lower cost option. The potential for cost recovery and the subsidy requirements are outlined in section 6.7.

6.5 Fares

- 6.5.1 From the survey it is clear that parents, with the exception of two schools, are prepared to pay somewhere in the region of €2 per day for a return journey to and from their child's school.
- 6.5.2 The Finnegan's of Bray primary school services also charge approximately €2 per day and this must be considered to be a fare that covers the full commercial cost of operation and includes a factor for operator profit. However these figures are on a driver only basis, using a partly depreciated vehicle and having a depot based in the locality.
- 6.5.3 Parents' assessments of what they are willing to pay are dependent on a number of different factors. They do not expect to pay a lot if the school is 'local' (a vague term) and there is also an anticipation that they would pay less for children at primary school children than for those at secondary school. Dublin Bus charges secondary school children 55 cents for a single journey and some parents may be using this as a guideline to what they expect to pay.
- 6.5.4 As €2 figure is an average, it is possible that half the parents may not be willing to pay this amount. Consequently we might expect a reduction in the number of parents who would actually sign up for the service compared with those who expressed an interest if a €2 return fare per day was to be charged.
- 6.5.5 Finnegan's volunteered the opinion that there would be no modal shift unless the daily fare was reduced below their current level of €2. This must be taken into account when considering the position when regarding subsidies.

6.6 Methods of Operation

- 6.6.1 There are a number of ways in which the services could be organised. At present the privately operated services are organised directly by the bus operator, who is responsible for all aspects of its provision. Although such services are sometimes operated at the request of parents there is rarely any formal agreement or contract.
- 6.6.2 Statutory school bus services, even in the Greater Dublin area, are under the control of Bus Eireann. However, there could be some attitudinal difficulties in

using Bus Eireann as an agent as they have no experience of non statutory school bus operation. At present all their efforts are focused on providing services to statutorily entitled pupils and consequently denying them to others. There has also historically been an emphasis on providing services at the lowest cost, although it is likely that this has diminished to some extent following the well reported accidents in recent years. Nevertheless it is our opinion is that it would not be appropriate for Bus Eireann to manage these services.

- 6.6.3 Dublin Transportation Office (DTO) could also be involved as an organiser or agent, but they have no experience in this area either. In fact our discussions with them have led us to believe that this initiative would need to be independent of their efforts, though they may be willing to support a pilot project. Future plans are for the DTO to become the Dublin Transportation Authority (DTA), and if this comes to pass contracts and service level agreements for bus services would then become part of their responsibilities, along with integrated ticketing. However school buses would only be a small part of their work, as their main focus would be on regular scheduled services.
- 6.6.4 South Dublin County Council also has no experience of contracting buses and their responsibilities generally exclude both education and public transport, although their transport role has expanded beyond local roads into the provision of bus lanes and developing quality bus corridors. They also organise and employ school crossing wardens and the production of this report in itself is an expression of their increasing interest in public transport. As far as we are aware there are no restrictions that preclude South Dublin County Council from contracting for bus services.
- 6.6.5 Consequently we suggest that SDCC arranges the contract for the bus services. The council has experience of contract administration in non-transport matters and this would be of benefit for the school transport contracts. We also recommend that SDCC employs the on-bus supervisors directly, as is already the case for school wardens. Initially this could be under the auspices of road safety staff, though if the volume of contracts increases through the success of the pilot projects there would potentially be a need for a dedicated person to organise and administer the contracts. If financing could be secured from an agency or a department of central government this could then be paid to SDCC as part of the normal grant process but would ideally be a specific ring fenced item.

6.7 Financial Performance and Subsidy Required

- 6.7.1 In commercial bus operations the revenue collected exceeds the cost of provision and such services are withdrawn if they are not sufficiently profitable. Privately operated public transport bus services and privately operated school services in Ireland fall into this category.

- 6.7.2 The small number of privately operated school bus services that exist is a reflection of the fact that they generally produce limited commercial returns. Those that do exist tend to utilise driver only operation and mid life vehicles, both of which are used for other work during the day. In the UK it is common for school bus services operated by the private sector on a commercial or a contracted basis to use life expired vehicles. This avoids incurring high depreciation costs for services that only operate an average of two to three hours each day for around 190 days a year.
- 6.7.3 Table 7 outlines the predicted costs and revenue from fares for two operating scenarios.

Table 7: Predicted Weekly Revenue and Costs of Proposed School Bus Services using smaller vehicles

School	Start Location	Daily passengers (low estimate)	Weekly Revenue	Costs Solo	Costs Mini	Diff. Solo	Diff. Mini
Loreto NS	Prospect Estate	24	€240	€562	€399	-€322	-€159
Scoil Naomh Padraig	Prospect Estate	20	€200	€562	€399	-€362	-€199
St. Colmcilles (J & S)	Parklands Road	21	€210	€602	€440	-€392	-€230
St. Colmcilles (J & S)	Orlagh View	15	€150	€573	€411	-€423	-€261
Scoil Aine	Monestary Gate Close	27	€270	€567	€405	-€297	-€135
Scoil Mhuire	Willsbrook Road	23	€230	€677	€515	-€447	-€285
St. Thomas	Liffey Valley Park roundabout	20	€200	€613	€451	-€413	-€251
St. Anne	Ballyowen Road	21	€210	€602	€440	-€392	-€230
Lucan Educate Together	Esker Road	21	€210	€642	€480	-€432	-€270
Weekly totals		192	€1,920	€5,399	€3,940	-€3,479	-€2,020
Annual totals (37 weeks)		7,104	€71,040	€199,779	€145,779	-€128,739	-€74,739

- 6.7.4 Table 8 shows the costs and projected difference using a larger vehicle, with a medium estimate of passengers (double the low estimate used above). This is based on the fact that the response rate for the schools varied from 8% to 54%, and therefore for most schools at least twice as many children are likely to use the service after allowing for some withdrawals once parents are required to commit to the service. Consequently the actual numbers of passengers would be higher than those plotted when designing the outline bus routes.

Table 8: Predicted Weekly Revenue and Costs of Proposed School Bus Services using purpose built school buses

School	Start Location	Daily passengers (medium to high estimate)	Weekly Revenue	Costs	Difference
Loreto NS	Prospect Estate	48	€480	€592	-€112
Scoil Naomh Padraig	Prospect Estate	40	€400	€592	-€192
St. Colmcilles (J & S)	Parklands Road	42	€420	€633	-€213
St. Colmcilles (J & S)	Orlagh View	30	€300	€604	-€304
Scoil Aine	Monestary Gate Close	54	€540	€598	-€58
Scoil Mhuire	Willsbrook Road	46	€460	€708	-€248
St. Thomas	Liffey Valley Park roundabout	40	€400	€644	-€244
St. Anne	Ballyowen Road	42	€420	€633	-€213
Lucan Educate Together	Esker Road	42	€420	€674	-€254
Weekly totals		384	€3,840	€5,677	-€1,837
Annual totals		14,208	€142,080	€210,057	-€67,977

- 6.7.5 If more children committed to use the school bus services, thus warranting the use of larger vehicles, then it would become more feasible to specify newer, purpose built school buses as used in the UK and the USA. In addition the operating deficit would be the lowest of the three vehicle options considered.
- 6.7.6 The annual subsidy for the highest cost option, using a new Optare Solo or equivalent would be approximately €129,000. However, using a lower cost minibus or a refurbished mid life midibus would reduce the annual subsidy to €75,000. A service with purpose built school buses would require an annual subsidy of just under €68,000.
- 6.7.7 The main options to reduce or eliminate the predicted deficit would be to:
- eliminate on-bus supervision;
 - use older vehicles;
 - increase fares to parents; and
 - stagger school times to allow buses to serve more than one school in both morning and afternoon.

- 6.7.8 The first three options of the above would significantly reduce the attractiveness of the school bus service to parents, and a significant reduction in likely take up would undermine the whole objective of the project to produce modal shift
- 6.7.9 Staggering school start and finish times to allow better use to be made of the vehicles and drivers would result in significant cost savings. For example, if the nine proposed services could be operated with five rather than nine buses then the annual deficit using purpose built school buses (with the same number of passengers) would reduce from €69,000 to €5,200.
- 6.7.10 It is likely that the services will incur an operational deficit, even if staggered school start and finish times were available to reduce the vehicle requirement, and consequently the cost. However the main cost of providing the service will be the vehicles. Capital grants could potentially be used to purchase the buses for the initial schemes as part of a pilot project, and these could then be used by the contracted operators. Any non-capital operating surplus could then be used to fund part of the capital allocation for future purchases.
- 6.7.11 The use of capital funds as the main source of subsidy would assist in long term planning. For example, if a certain number of buses were purchased every year and they had a ten year operational life (with some value on resale) then the annual capital requirement could easily be assessed. This would also assist in expanding the scheme if it were self financing apart from the cost of the buses.
- 6.7.12 In addition to funding from South Dublin County Council it was indicated to us that the DTO might be able to support a pilot scheme. An approach to the Department of Education and Science should also be considered.
- 6.7.13 A policy decision to subsidise the service would allow incorporation of the features which would persuade parents to use the service. This would result in significant modal shift away from cars and towards more sustainable forms of transport. The recommended option using larger purpose built school buses would have an annual subsidy cost of €121 per year per child, but this compares to over €400 in the USA, where the service is generally free to use.

7.1 Outline of Benefits

- 7.1.1 In the UK studies have been undertaken to quantify the benefits to the wider community of introducing school bus services with the intention of reducing traffic levels on the 'school run' journeys that are prevalent in South Dublin. We have used the figures produced by these studies as a base, but when more appropriate figures directly relevant to Ireland or South Dublin are available we have used these instead to reflect actual conditions.
- 7.1.2 As the overwhelming majority of passengers for the proposed services would transfer from cars, and the majority of cars carry only one child, we have used the following assumptions when looking at benefits from transfer from cars to school bus:
- 90% of school bus users formerly travelled by car; and
 - an average of 1.3 children in each car.

7.2 Traffic Congestion

- 7.2.1 One of the main benefits of an expanded school bus provision would be the reduction in traffic congestion, and the subsequent time savings to all road users (motorists, bus users). These are calculated from the volume and speed of traffic - the greater the volume and the lower the speed of traffic, the higher the benefits that accrue.
- 7.2.2 Our July 1995 study in Surrey calculated these benefits at 16.81 cents per vehicle kilometre, which updated to 2007 prices by reference to Irish CSO statistics gives a current value of 22.5 cents per vehicle kilometre.
- 7.2.3 A report for the Department of Transport in the UK (see section 7.4) assessed the costs of traffic congestion in urban areas as approximately 50% greater than this level (approximately 35 cents per vehicle kilometre). The car dependency, general traffic congestion and consequently the benefits of reducing congestion in South Dublin would be greater than in Surrey due to its mainly urban nature. As a result we have used the 35 cents per vehicle kilometre figure to more accurately reflect the situation in South Dublin.

7.3 Accident Reduction

- 7.3.1 It is also possible to calculate the benefits of accident reduction through a similar measure. This is based on the level of accidents and the average cost of accidents of different types. According to the most recent Irish statistics available (2004) the overall cost of all road accidents was €1.22 billion. With

22,306 reported accidents in 2004 this equates to an average of €54,694 per road accident, though there are great differences between those where there are fatalities and those that result only in minor damage.

- 7.3.2 The collision rate for Co. Dublin as reported in the same statistical bulletin³ was 1.6 collisions per ten million vehicle kilometres and results in a cost benefit from accident reduction of 8.75 cents per vehicle kilometre.

7.4 Pollution

- 7.4.1 A UK Department of Transport report in 2001 (Surface Transport Costs and Charges – Great Britain) updated work from Sweden and attempted to place a monetary value on the different types of pollution in the context of transport pricing. These were mainly derived from the cost of health problems caused by pollution (chronic bronchitis, cancers) and non health impacts in terms of environment. Climate change costs were also calculated.

- 7.4.2 The overall costs for cars in an urban area similar to South Dublin were calculated at the following for each vehicle kilometre:

- .98 cents for air pollution;
- .03 cents for noise pollution; and
- .25 cents for climate change.

These total 1.26 cents per vehicle kilometre.

- 7.4.3 The emissions produced by the bus services were subtracted from the benefits and were calculated on a basis of 2.2 times the car emissions (assuming a Euro 3 standard bus or better).

7.5 Other benefits

- 7.5.1 Other benefits, which are harder to quantify in terms of cost, include:

- better attendance at school;
- children's physical health improved; and
- enhanced social cohesion between the community and the school.

- 7.5.2 The Sutton Trust report on the UK Yellow School bus schemes attempted to quantify these on a UK wide level, but there was no measure that could be applied to individual schemes, which makes valuation difficult.

³ Road Collision Facts 2004, NRA

7.6 Summary of benefits

- 7.6.1 As a general rule road safety in Ireland has been improving significantly in recent years and consequently the benefits of accident reduction are not as great as they would have been even five years ago. Car emissions have also reduced, consequently lowering the benefits of pollution reduction. However, the increase in traffic and in traffic congestion has generally offset any improvements in road safety and pollution and this is now, by far, the most significant category of wider benefits.
- 7.6.2 Table 9 summarises the annual benefits of the proposed school bus services to the wider community. Two sets of figures were produced, with the first assuming low use with smaller vehicles and the second a medium to high use of the services using purpose built school buses.

Table 9: Summary of Wider Benefits of School Bus Services (Annual)

Take Up	Daily Passengers	Car Kms. Saved	Traffic Decongestion Benefits	Accident Reduction Benefits	Pollution Reduction Benefits	Total Benefits	Benefits - Subsidy
Low	192	960	€62,166	€15,541	€1,646	€79,354	€4,615
Medium to High	384	1,920	€124,332	€31,083	€3,884	€159,299	€91,322

- 7.6.3 In terms of benefits related to the subsidy costs, the lower use option benefits are slightly greater than the direct subsidy costs of €74,739. However the benefits of the medium to high take up option of almost €160,000 are well above those of the direct subsidy of €67,977, resulting in a net benefit of over €90,000 annually.
- 7.6.4 If the pilot services were successful, the benefits would increase significantly with the expansion of provision. It is clear that the use of larger vehicles with higher loadings provide substantially greater benefits than use of smaller vehicles with lower load factors. Our recommendations are therefore geared towards ensuring the success of the option with the lowest net cost and the highest benefits.

8.1 Conclusions

- 8.1.1 At present most travel between home and school in South Dublin is either on foot or by car. In recent years the balance has shifted towards car use and in the three areas where we have examined school travel in detail more than half of children are now driven to school. This has immediate implications for traffic congestion in the community, road safety and pollution, and longer term implications for children's health and sustainable lifestyles.
- 8.1.2 In order to combat these problems authorities in Great Britain are introducing yellow school buses on the model that operates in the USA, despite significant operational, legislative and cultural differences between the two countries.
- 8.1.3 Current bus services in South Dublin are generally unsuitable for transporting primary school children due to various reasons, the most significant of which are:
- the distance between the bus stops and the child's home and/or school;
 - the frequency of the services;
 - unsuitable timings; and
 - concerns about safety.
- 8.1.4 Our survey has shown that parents at most of the schools are interested in school bus services, and that most of the parents who are interested currently drive their children to and from school. In the majority of schools examined there was a sufficient concentration of parents who expressed interest to allow us to plan a bus service using a reasonably direct route to the school in question.
- 8.1.5 The main priority for parents in considering whether to use a service was the safety of their children and they strongly supported the provision of seat belts and the presence of a supervisor on the bus to deter bullying and other poor behaviour. The operation of dedicated buses was also supported.
- 8.1.6 The costs of operation depend on the size of the bus, with the larger and newer vehicles generally having a higher cost due to the initial purchase costs of the vehicles. As the services operate only for approximately two hours on schooldays the depreciation costs of the services are unusually high.
- 8.1.7 Parents are generally willing to pay up to €2 return per day, so there is a requirement for subsidy if newer buses are used and a supervisor provided. This subsidy is minimised if new purpose built school buses are used and they carry 40 or more children on each service.

- 8.1.8 In spite of the need for public subsidy there is a strong net benefit from the operation of the proposed school bus services. This benefit would be highest if the model of using larger purpose built school buses were used, and would produce a net annual benefit of over €90,000.

8.2 Impact on Existing Bus Network

- 8.2.1 The impact on the existing network would be minimal as almost no school children use the existing bus services in Rathfarnham whilst use in Lucan is limited. Some children use Dublin Bus services in Clondalkin to travel to and from school, but even here the overwhelming number of children whose parents expressed interest in dedicated school services travel by car. The removal of a small number of children from the network at peak times might help to resolve capacity problems on some existing Dublin Bus services, and the services would also become more attractive to adults for commuting and other purposes.

8.3 Recommendations

- 8.3.1 Once the general idea of the pilot project has been approved by the council we propose that parents in the schools are asked to commit to using the services. In parallel we recommend that the council makes a formal approach to the DTO and the Department of Education and Science for seed money to launch the project. The DTO has indicated that they may be willing to support a pilot project, but would not be able to provide ongoing revenue support.
- 8.3.2 Once the interest of parents has been confirmed we recommend that tenders are issued and operators are invited to bid to operate the services. Prior to tenders being issued the basis of operation needs to be determined and we suggest the following approach:
- a) If a grant can be obtained for €1 million or more, we recommend that SDCD buys the buses and invites operators to bid on the basis of operating and maintaining the buses only.
 - b) If this grant is not forthcoming, or a smaller amount is received then we recommend that the operators purchase and supply the buses and that their depreciation costs are passed on as part of the operating cost.
- 8.3.3 The tenders should be circulated to all known bus and coach operators having a base within 15 kilometres of South Dublin in order to contact the maximum number of operators possible. PAMBO could assist in this process, but a list of licensed operators can also be obtained from the Department of Transport and the operators contracted directly.
- 8.3.4 Once bids have been received the successful operators would be chosen on the basis of best value, taking into account other considerations, such as the

type of vehicle proposed if this is appropriate. At this point the routes would be finalised with the operators by reference to the list of parents who have signed up for the services.

- 8.3.5 If the services did not have enough passengers (generally 40 or more) to justify a purpose built school bus (suggested model is a BMC 1100) then they could be operated with a refurbished midi or mini bus with similar features. As would be the case with the purpose built bus any such vehicles would only be used for the transport of school children and a condition to this effect would be included in the contract.
- 8.3.6 Once the routes are finalised we recommend that SDCC hires and trains the on-bus supervisors.
- 8.3.7 Subject to the vehicles being available we suggest that the first services are introduced at the start of the new school year in September 2007. SDCC would be responsible for fare collection, with this task being part of the duties of the on-board supervisors, although schools could assist if they are willing to do so.
- 8.3.8 The performance of the services would be monitored and adjustments made as required. Parents who did not sign up for the service initially would have the opportunity to do so at the start of the next term, and similarly parents who no longer wished to have their children use the service would be able to withdraw their children at the end of a term. Parents who wish to have their children use the service occasionally (less than once a week) would be required to book with the on-bus supervisor at least one day in advance of their journey.
- 8.3.9 We propose that the services for a second group of schools are introduced as a second stage in the following January (these schools are analysed in Appendix C). In subsequent years two or three schools could be added until the longer term vision of providing one or more services at each suitable school is realised.
- 8.3.10 If SDCC is buying the buses an annual capital replacement programme for a certain number of buses each year would be required. The operations would break even or generate a small profit, and, as direct operational profits increase through economies of scale and (potentially) the staggering of school start and finish times, the contribution towards the capital requirements would increase.
- 8.3.11 In the longer term the goal would be to encourage a policy change by the Department of Education and Science to facilitate the provision of non-statutory school buses and to fund the capital required. Even if the services are not funded completely, as occurs in the USA, the financing of the capital requirement on a large scale, with a consequently lower unit price through economies of scale, would result in a relatively low subsidy per pupil.

- 8.3.12 We also recommend that in the short term on-bus supervisors are provided for the statutory school bus from Palmerston to Gaelscoil and that SDCC work with both Bus Eireann and the operator of the service to improve vehicle quality. In the longer term we believe that this service should be transformed into a yellow school bus on the same model as the services in the pilot project.

8.4 Longer term vision

- 8.4.1 Our longer term vision is that all school buses operating to, from and within South Dublin are of the same standard, and that this will be equivalent to those of the pilot project. We feel that as part of this vision buses should be offered to primary schools in all locations where there is a demand for services - in practice this could account for a third to a half of the 96 primary schools in South Dublin. Buses operating to and from secondary schools would also be upgraded, to the standard of the bus services to and from primary schools.
- 8.4.2 There would no longer be a distinction between bus services provided on a statutory basis and those to which parents make a contribution. The integration of statutory school transport would be facilitated by offering the payments that would formerly have been received by the bus operator going instead to SDCC to fund additional dedicated school buses, which SDCC would then organise. There would be no payment collected from parents whose children are entitled to free school transport, but other parents would continue to pay unless the national policy on school transport was changed.
- 8.4.3 The expansion of dedicated school bus services would permit the integration of special needs transport with mainstream school transport where possible (e.g. physically disabled pupils attending normal schools). Clearly there would be some cases where special transport would still be required, but if some special needs children could be carried on regular school buses then some of the existing payments for special needs transport could be used to support the school bus services, thus further increasing their viability.

School Transport System – South Dublin County Council

Appendix A Parent Questionnaire

School Transport Survey

Global Action Plan and the TAS Partnership Ltd have been asked by South Dublin County Council to look at bus services to schools. The objective is to reduce traffic congestion and improve the safety of school children.

One idea under consideration is a dedicated school bus service to and from your child's school.

This survey is intended to find out what you think about this idea. We want to know about how your child travels to school at present, what you think about current travel arrangements, what sort of features would attract you in a new bus service, and finally a bit about your household.

All information is being collected anonymously and will only be used to provide a general picture of travel patterns and opinions at each school.

We would ask that you complete this questionnaire and return it to the school by 2 February 2007.

As a token of appreciation to the schools cooperating in the survey we are donating €150 of book tokens to the school that achieves the highest percentage of questionnaires returned.

If you have any questions or problems, please telephone Caitriona at GAP on 086 382 2751 and we will be happy to help. Alternatively, Email: caitriona@globalactionplan.ie

About Your Son or Daughter and Their Travel

- 1.1 This section applies to the child that brought home the questionnaire from school.

What school does your child attend?

How many brothers and sisters attend the same school?

How old is your child?

How far from school is your home?

metres

How do they travel **to** school at the moment?

Car ☐ Walk ☐ Cycle ☐ Dublin Bus ☐ School Bus ☐ Other ☐

How to they travel **from** school?

Car ☐ Walk ☐ Cycle ☐ Dublin Bus ☐ School Bus ☐ Other ☐

If a school bus service was provided to and from your son or daughter's school would you consider using it?

Yes ☐ No ☐

If yes, please go to question 7. If no, please give reason (s) below.

Your views

How important do you rate the following aspects of travel to school in terms of influencing your choice of whether your son or daughter would travel to school by a new school bus service? Please score each feature between 1 (irrelevant) and 10 (very important)

Dedicated vehicles, only used to transport children

Seat Belt on every seat

Same driver every day

Stop within 200 metres of your home

☐
☐

Short travel time

Provision of supervisor on the bus

☐
☐

Worries about the safety of your son or daughter because of heavy traffic

Worries about the personal security of your son or daughter

☐

Reduced traffic congestion and environmental pollution

☐

Comfort and cleanliness of vehicles

☐

Reserved seat for each child

☐

Ability to contact supervisor during journey

☐

Discount for second and subsequent children

☐

What fare (return, per day) do you think would offer value for money for your child to travel on a new school bus service that would only transport children to and from their school

I would not be willing to pay for my child to use the service ☐

Would you prefer:

Having your child pay on the bus every day

☐

(thus allowing maximum flexibility)?

Having the whole cost of travel collected at the beginning of

☐

the term, and only allowing children who are registered to travel?

A prepaid system with a register, but with some facility for

☐

children to use the service occasionally unless the bus is full?

Would it be useful to offer a facility for your child to be dropped off at another location, such as another parent's house or child minders, on the return from school?

Yes ☐ No ☐

If you are interested in having your child use a dedicated school bus service (even on an occasional basis), please write the name of your street in the box

below. This will only be used to plan potential routes for a bus service if enough parents are interested in establishing such a service at this school.

Thank you for completing this survey.

School Transport System – South Dublin County Council

Appendix B

Maps of Outline School Bus Services

Figure B: Scoil Naomh Padraig Proposed Bus Route

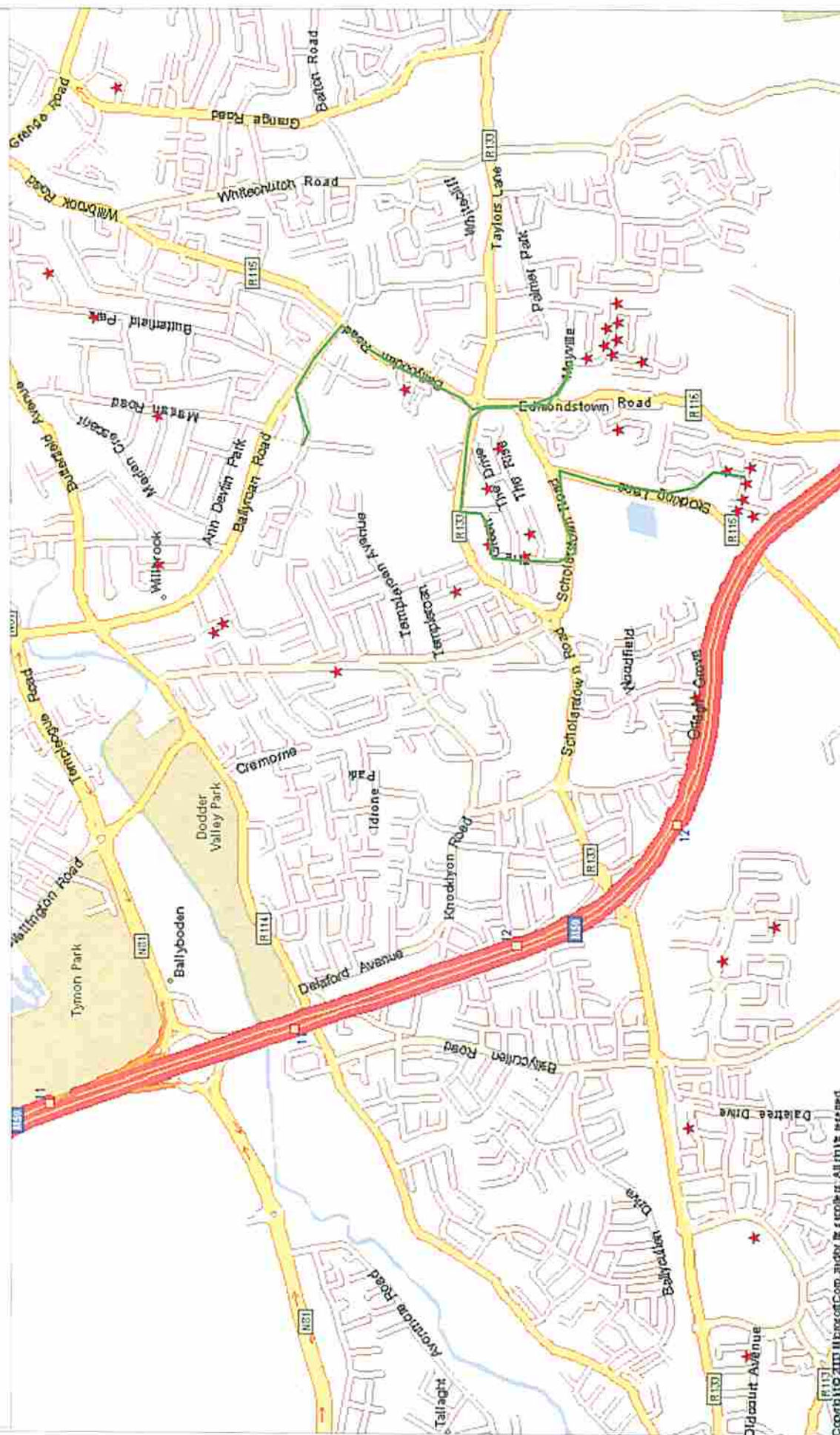


Figure C: St. Columcilles Proposed Bus Routes

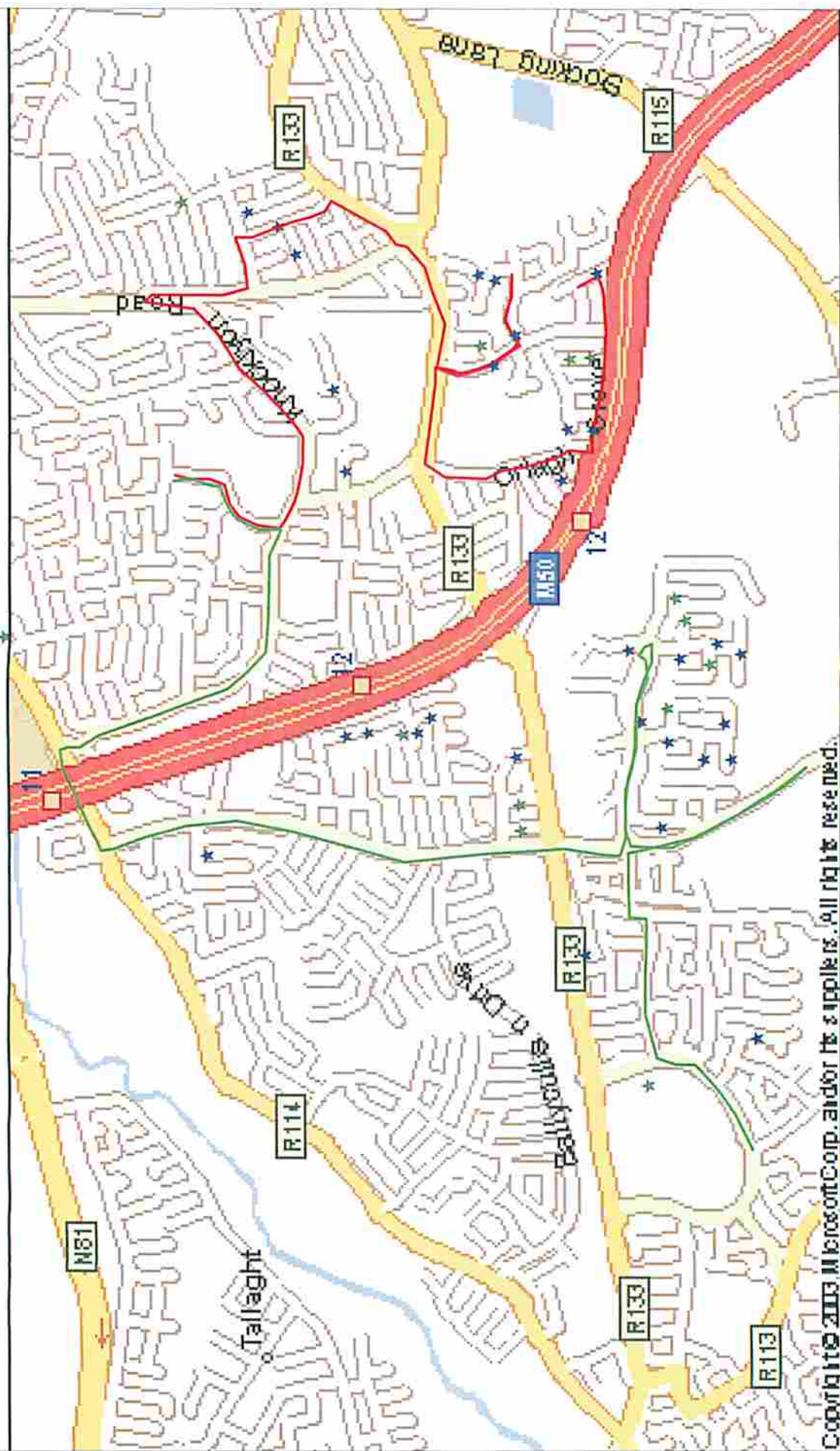


Figure D: Scoil Aine Proposed Bus Route

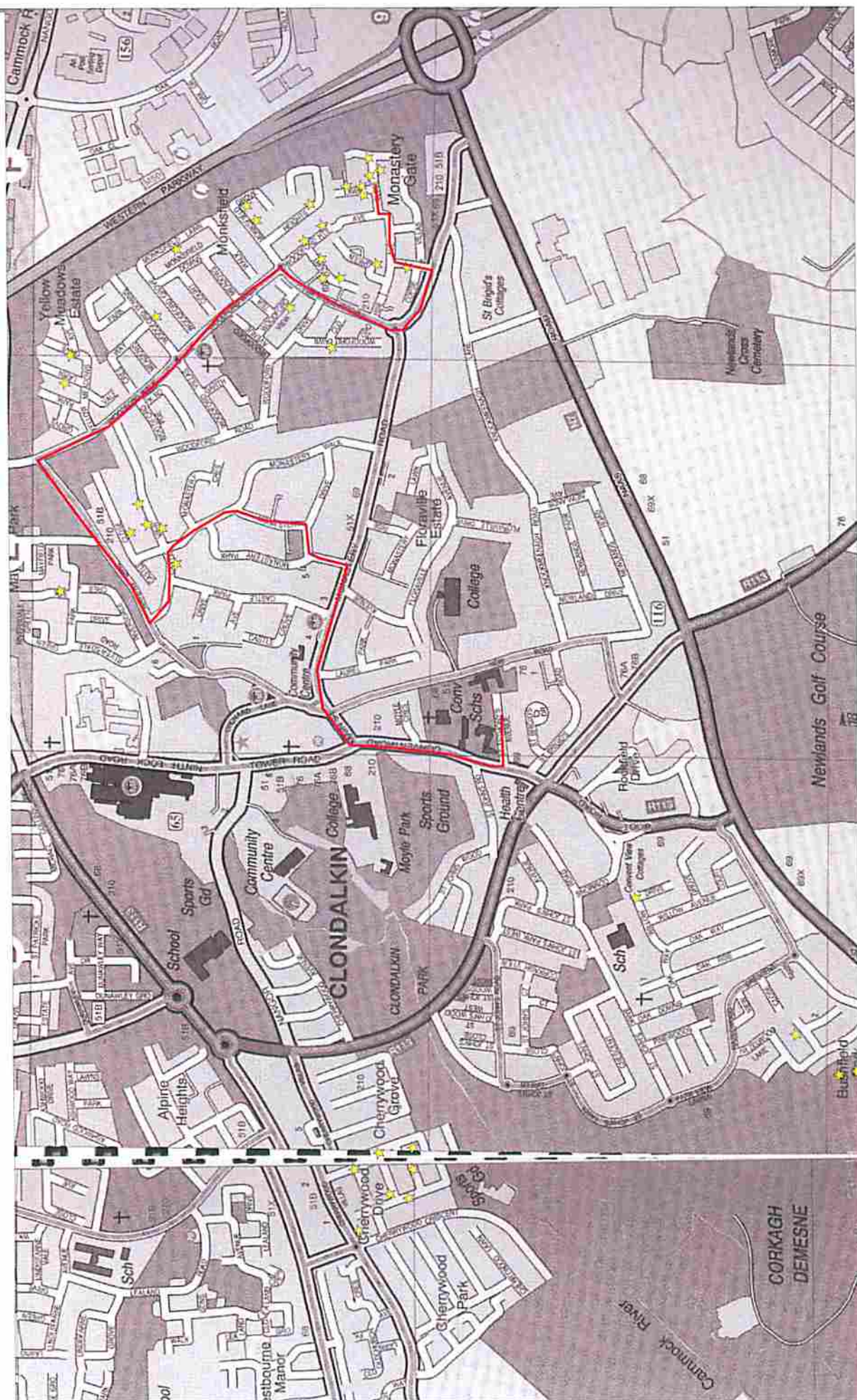


Figure E: Scoil Mhuire Lucan Proposed Bus Route

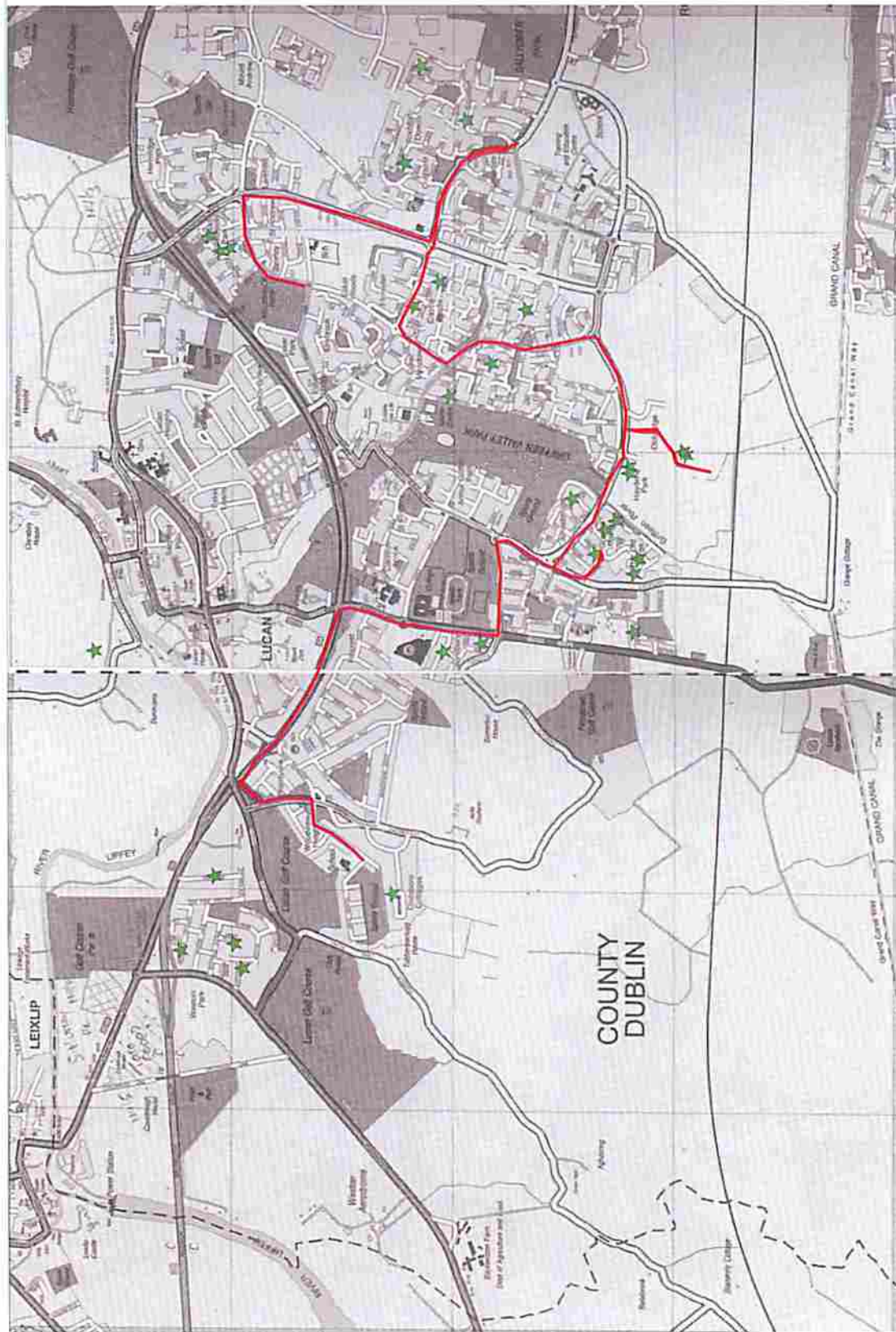


Figure F: St. Thomas's Proposed Bus Route

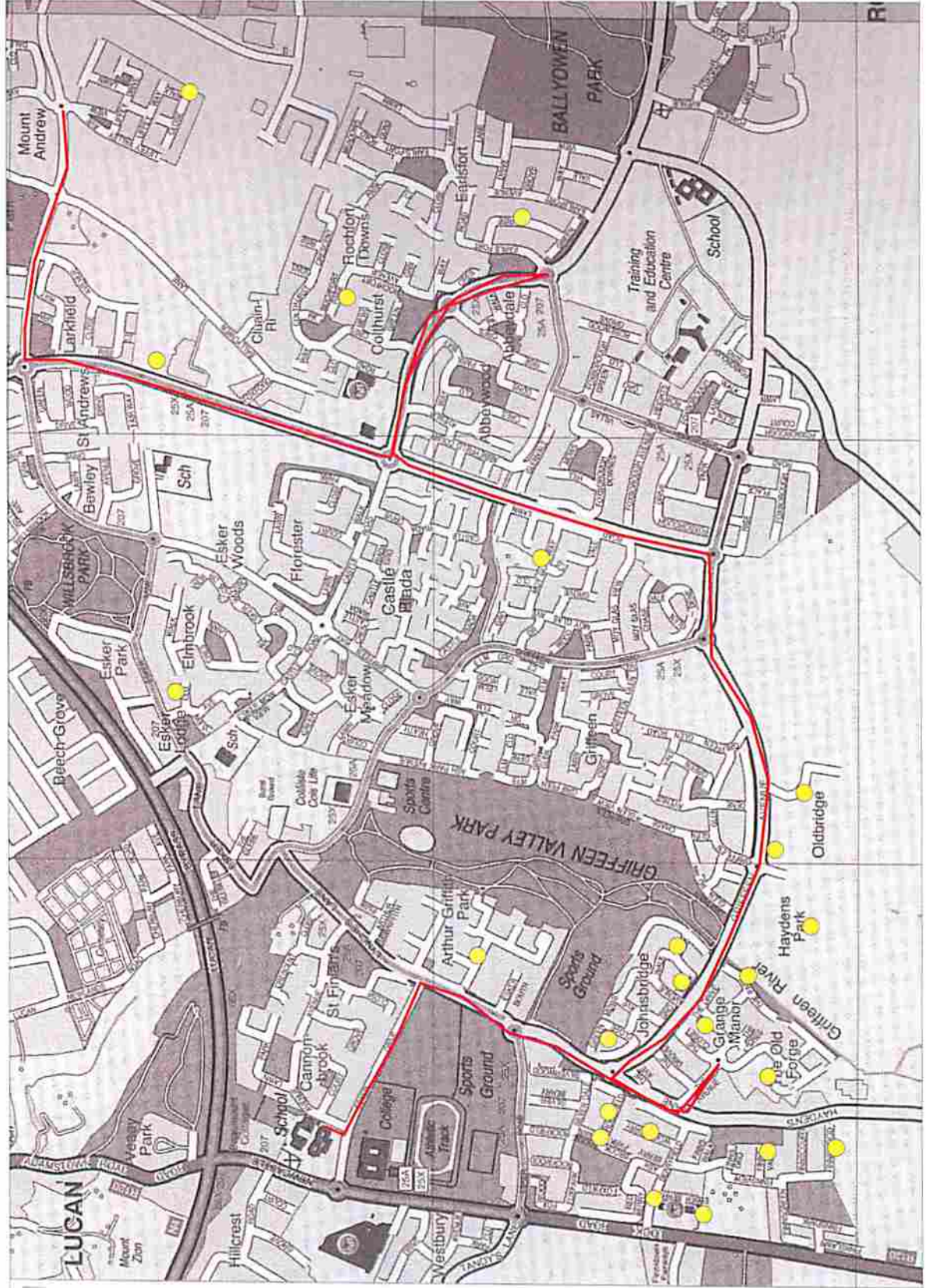
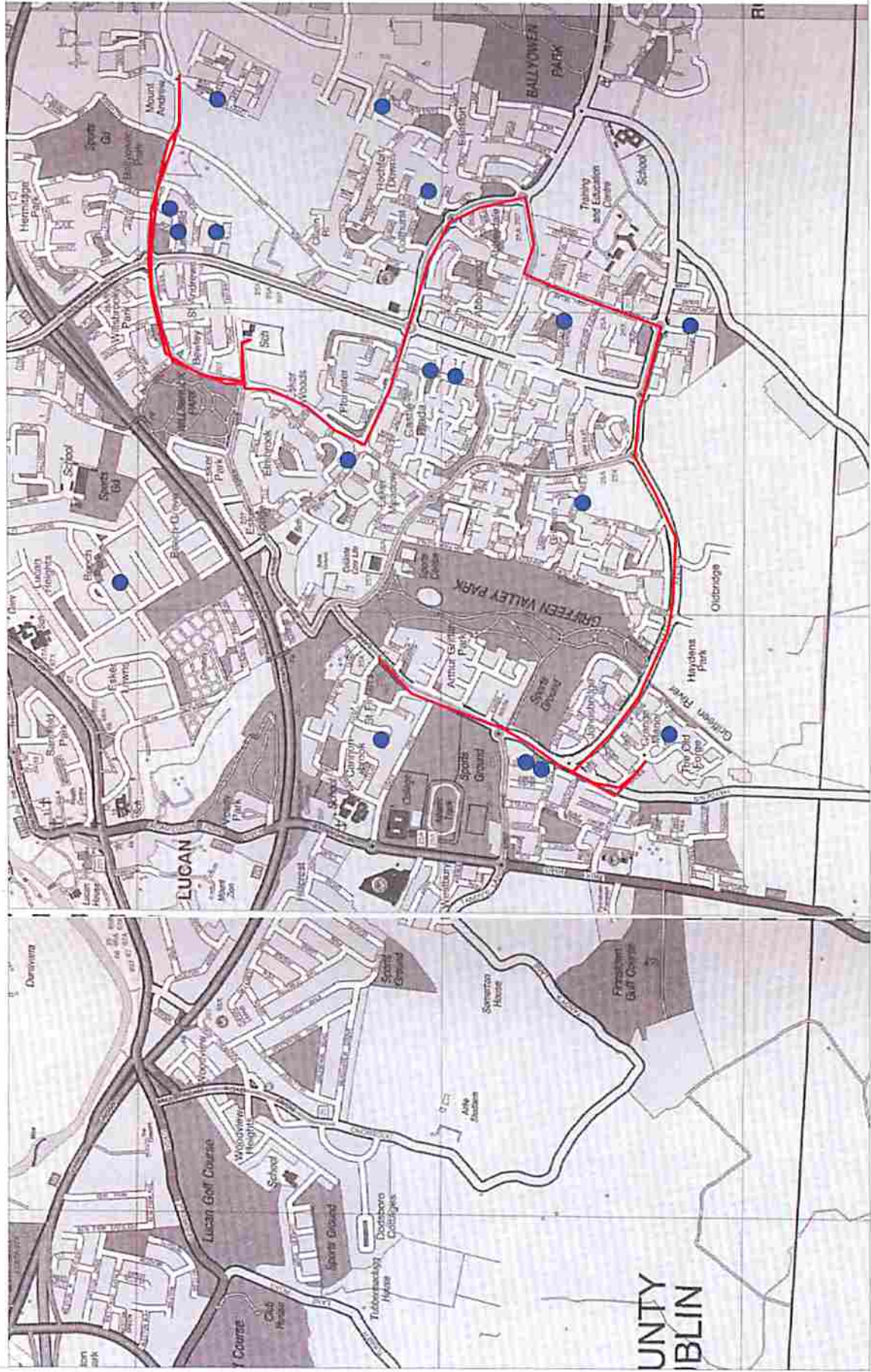


Figure H: Lucan Educate Together Proposed Bus Route



School Transport System – South Dublin County Council

Appendix C Analysis of Additional Schools

1. Additional Schools

- 1.1 In our main report we concentrated on an analysis of the ten schools which returned the parent's survey to our partners Global Action Plan in time for a complete analysis. Subsequent to our initial analysis four more schools returned the survey to GAP and these completed survey forms were analysed to determine the interest in the dedicated school buses.

2. Response Rate

- 2.1 Table 1 shows the percentage of respondents at each school by comparing the number of surveys returned to the number of children at the school using the most recent numbers from the Department of Education and Science. Although proportionally more surveys were distributed at some schools than at others the response rate may be seen as a general indicator of the interest of the school administration and the parents in the project.

Table 1: Responses from schools

School	Area	No. of Pupils (latest)	No. Of Respondents	% Response
St. Mary's BNS	Rathfarnham	423	26	6%
Holy Spirit BNS	Ballyronan	264	62	23%
St. Joseph's Boys NS	Clondalkin	379	55	15%
Gaelscoil Chluan Dolcain	Clondalkin	294	27	9%

- 2.2 Compared the original sample the response rate was relatively low, but it was 23% of Holy Spirit BNS, which was a fairly good sample. However, it was only 6% at St. Mary's BNS.
- 2.3 Table 2 outlines the modal split in each school, as well as if parents were interested in a school bus service.

Table 2: Current Travel to/from Schools and Interest in School Bus Services

School	Area	Car	Walk	Cycle	Dublin Bus	School Bus	Interested
St. Mary's BNS	Rathfarnham	73%	23%	0%	0%	4%	54%
Holy Spirit BNS	Ballyronan	54%	31%	15%	0%	0%	40%
St. Joseph's Boys NS	Clondalkin	46%	35%	9%	9%	0%	64%
Gaelscoil Chluan Dolcain	Clondalkin	63%	30%	0%	7%	0%	66%

- 2.4 The highest percentage of car use was at St. Mary's BNS in Rathfarnham, with 73%. Walking percentage was relatively low among these schools, with the highest only being 35% at St. Joseph's BNS in Clondalkin. Cycling was 15% at Holy Spirit BNS in Ballyronan and 9% at St. Joseph's, while the pattern previously seen of some Dublin Bus use in Clondalkin and almost none elsewhere continues in this sample.
- 2.5 The schools where the parents appeared most interested in having a school bus service were the two schools in Clondalkin with 64% and 66%.
- 2.6 Table 3 outlines the relative attributes for each potential aspect of school bus services as outlined in the questionnaire.

Table 3: Relative Scores for Attributes for School Bus Services (10=highest)

School	Dedicated Bus	Seat Belt	Same Driver	Stop 200m	Travel Time	Super-visor	Safety Traffic	Personal Security	Traffic Conges- tion	Comfort	Reserved Seat	Contact Super.	Discount
St. Mary's BNS	7.9	8.6	7.9	6.9	7.1	8.0	6.7	7.7	8.0	7.2	7.4	7.3	6.0
Holy Spirit BNS	6.8	8.7	7.6	7.6	7.2	7.6	7.4	9.0	8.2	7.2	7.1	6.9	6.0
St. Joseph's Boys NS	7.1	7.6	6.5	7.0	5.6	7.3	7.0	7.5	7.0	6.7	6.7	7.3	5.9
Gaelscoil Chluan Dolcain	9.3	9.6	9.4	8.1	7.9	8.9	8.4	9.1	9.1	8.9	9.0	9.2	8.5

- 2.7 The major difference between these schools and the main survey was that parents at Gaelscoil Chluan Dolcain have a high importance of being able to contact the supervisor on the bus, In general safety related attributes, such as seat belts, scored highest among these schools as with the main group of schools.
- 2.8 Table 4 outlines the maximum fare parents would be willing to pay for a return journey by school, as well as their preferences for fare collection and the interest in alternative drop off points.

Table 4: Fares and Alternative Drop Off Locations

School	Maximum Fare	Not Willing to Pay	Pay on bus	Term Only	Term, but able to use occasion-ally	Alternative drop off location
St. Mary's BNS	€1.84	0%	14%	64%	50%	50%
Holy Spirit BNS	€1.96	8%	44%	28%	32%	40%
St. Joseph's Boys NS	€2.20	3%	33%	58%	42%	61%
Gaelscoil Chluan Dolcain	€1.95	0%	33%	50%	28%	56%

- 2.9 The average fare that parents were willing to pay was around the €2 mark, as was the case in the main group of schools, and relatively few parents said they were not willing to pay.
- 2.10 In terms of payment preferences, Term Only was the preferred option at two schools, with pay in the bus being the favoured by one whilst the other school had a preference for term fare collection but with others being able to use the service as needed. As was the case previously some parents ticked more than one box making the totals greater than 100%.
- 2.11 Parents again seemed very interested in the option of having an alternative drop off locations, and this would be if the child was to be dropped off at a child minders or at an after school activity.

3. Potential for services at the additional schools

- 3.1 At St. Mary's BNS there appears to be limited potential for school bus services. There is a lack of interest from the school, not enough interested parents, and those who are interested are too dispersed for a bus service to operate successfully.
- 3.2 With Holy Spirit BNS there appears to be potential from the Prospect Estate, Moyville, and Boden Park areas. As these are similar areas to those which the proposed Scoil Naomh Padraig bus would cover there could be potential for

sharing a bus with Scoil Naomh Padraig if there were not enough children for a bus on its own.

- 3.3 A school bus from St. Joseph's BNS would have a similar route to that to and from Scoil Naomh Aine. There would probably be enough children for a bus to each school but if this were not the case then there would be potential for sharing a bus with Scoil Naomh Aime.
- 3.4 There is not really enough demand from western areas of Clondalkin and other areas that the children come from for a bus. For the eastern areas the village centre schools are the nearest schools and as most parents feel that it is too far to walk a large demand for school buses exists from this area.
- 3.5 Gaelscoil Chluan Dolcain has a widely dispersed clientele, but the small sample size has inhibited the development of any logical bus routes. If school bus services were to be developed here there would have to be a complete survey of parents for interest, but an initial sample shows that there may be potential for a western area route on the lines of the current Dublin Bus 51B route. The eastern areas, as was the case of the village centre schools, also show potential for a bus service, and possibly one of the village centre school buses could also serve Gaelscoil Chluan Dolcain en route if there were not enough children for a bus for this school on its own.