

Transport Innovation Fund
Bid for Supplementary Pump Priming
Funding

Durham County Council

July 2006

Introduction

Durham City has a unique character and contains many fine buildings and is famous for the quality of its architecture and townscape. The Norman Cathedral and Castle in their spectacular setting on the Peninsular above the banks of the River Wear are acknowledged as being of international importance by their designation as a World Heritage Site. The quality of the landscape surrounding the City Centre afford it a unique setting amongst the historic Cities of England and it has become a major tourist attraction (more than 500,000 visitors a year) and an attractive place in which to live and work.

The City contains a very high proportion of total District employment, including many major national and regional employers. It has remained a centre of economic activity in an area blighted by the decline of traditional industries such as mining. It is an educational centre containing Durham University (12,000 students) and a number of major colleges and secondary schools serving the district and region. The City itself has some 38,000 residents (excluding students), with a further 42,000 in the small towns and villages of the surrounding district.

Following the implementation of major road building in Durham City during the late 1970's land use patterns have hardly changed. As the towns and cities around changed significantly, Durham generally remained the same and the problems of an old established City Centre in the late twentieth century compounded year on year –access and parking, the requirements of modern retailers, changing expectations of tourists, the needs and demands of students, the implications of a burgeoning evening economy, a City divided by significant traffic routes.

Justification

- a) ***“that there is a significant current or emerging congestion problem and that the package has the potential to tackle it effectively”***

(i) **The Road Network**

The city owes its origins to the defensible high ground of the central peninsula area which is bounded by the meandering River Wear. This is the area on which the Cathedral and Castle stand. Whereas the river once provided protection against attack it now forms a transport barrier that divides the main body of the City into two parts: east and west. Although there are several bridges crossing the river there is only one major road crossing linking the two parts and this route passes through and severs the northern section of the central shopping area. This road bridge (Millburngate) forms part of the A690 and A691 Primary Routes: Sunderland to Crook and A1(M) to Consett respectively. The bridge is single carriageway with four lanes of sub-standard width and carries some 40,000 vehicles a day.

The A1(M) motorway runs north-south to the east of the city is only some 3km from the city centre and there is a good connection between the two via 2.8 km length of dual carriageway (A690) . Whilst having the motorway so close is of great benefit it does form a man-made barrier to the east similar to the natural one of the river in the centre. The A167, a former trunk road, is another north-south route but this is to west of the city. This is a single carriageway road with frontage access and through the city it intercepts the routes to/from the west and is particularly congested on those sections where it additionally transfers traffic as if it was a ring road at that point.

(ii) **Key Points – Existing Congestion**

- Lack of road space –with the exception of the motorway link there is only 600m of dual carriageway in the study area. The remainder of the roads are single carriage way with frequent junctions and frontage access. The historic nature of the city and the river valley topography mean that road widening is not a realistic option.
- The provision of bus and cycle lanes - although it has been possible to introduce some of these facilities the rollout is being limited by the lack of available road space.
- All the radial routes are currently congested in the morning and evening peak periods.
- Most junctions are operating at over capacity and the network is unstable. As a result some unsuitable sensitive alternative routes are more heavily trafficked than their status should allow.
- Total gridlock is only avoided in the very central area because the traffic is held back and stored on the approach routes.

b) “the proposal includes consideration of demand management measures which are a step change from those approaches currently used by the bidding authority or authorities”

The currently accepted proposals being studied are for:-

- (i) A point user charge located at the key bridge crossing as described above (See Plan A in Appendix A) and
- (ii) A cordon charging scheme based on the sensitive central areas (See Plan B in Appendix A)

The County Council has already successfully delivered Congestion Charging in Durham City Centre, controlling access to the Peninsula containing the World Heritage Site. However, the peninsula was a relatively low trafficked cul-de-sac which was unsuitable for the traffic it was taking. These proposals would affect traffic numbers in excess of 40,000 per day.

Although all options to effectively manage traffic will be considered, two of the most likely charging options will include;

- The implementation of a point charge on the through road with traffic potentially being diverted onto improved infrastructure; or
- Introduction of an increased cordon charge with a reliance on improved Park and Ride and public transport.

Both options present challenges in terms of offering sustainable alternatives to all sectors of society especially in an area which mixes travel to employment, education and a popular tourist centre with a significant flow of through traffic. This is set against a backdrop of a historic road network which has severe constraints and limitations. However, if these obstacles can be addressed they a demonstration project will have been produced which will be of benefit to a large number of towns and small cities through the UK.

c) “the proposal is new (i.e. it has not received significant Government funding already);”

This is a bid for additional funding for an already approved and ongoing project supported through the first round of the Transport Innovation Fund.

d) “all appropriate stakeholders are involved (Districts, bus operators, Highways Agency etc).”

The City has benefited from the successful introduction of a series of integrated transport improvements following the Durham City Travel Study undertaken in 1997. However, much more needs to be done to revive the fortunes of the City and help to realise its greater regional significance. Delivery of innovation in transport has been well established through the Country’s first ever congestion charge scheme and the unique way in which parking controls and park and ride have been combined into a joint demand management model and financial package

To move forward the County Council, City Council, One North East, The University of Durham and the Chapter of the Cathedral have joined forces to prepare a Development Framework to guide the future of Durham City Centre over the next 15 years.

The City Centre could undergo significant change during this period. A Development Framework will help make sure that this change will make the city centre a better place for its citizens and its visitors. The main proposals of the Development Framework for the City Centre will be the basis of a new Local Plan for the city – the Local Development Framework. The City Council has already started work on this new plan and the City Centre will be the first part to be drawn up.

The plan will take about 2 years to prepare, and will need the participation of the public throughout this period to ensure that the plan reflects the genuine concerns and needs of local people. This process of participation has now begun and will help shape the way in which transport services can assist the development and can be delivered as part of an overall strategy for improvement.

The timing of the visioning exercise and the way in which it has been undertaken gives Durham City a unique opportunity to take best advantage of the Transport Innovation fund.

e) how well the proposal fits with the Local Transport Plan/local transport strategy, and any additional benefits the scheme could bring to the strategy

The Durham Transport Strategy emerges as a natural consequence of the problems and constraints analysed as part of the Visioning exercise. Whilst traffic problems are largely confined to the peak periods, there are capacity constraints on the City throughout the day. The strategy for improving transport and accessibility is therefore twofold;

- To significantly reduce the amount of the through traffic using the A690 thus creating capacity for more significant changes to the balance of vehicular and pedestrian needs and providing major improvements to the environment in the City Centre. To provide better alternatives to the private car and examine further restrictions or disincentives to its use.

With the introduction of the Park and Ride sites the implementation of the short and medium term measures identified in the Durham City Travel Study (1997) will have been completed. However some areas of demand remain unaffected within the City. In particular access to a significant amount of Private Non Residential (PNR) parking and the use of the City Centre by through traffic, helps to undermine traditional transport solutions.

The next stage will be to perhaps move on from the “soft options” of parking control and Park and Ride and with the possible introduction of a wider congestion charge. Although there are numerous difficulties to delivering an effective demand management model it is believed that a successful demonstration in Durham City could be readily applied to numerous other areas of the Country.

A strategy for the future development of Durham City has already been outlined in Section 5.7 of the Local Transport Plan based broadly on the principles outlined above. Whilst the proposals would generally meet the category for an individual smaller town or historic city, it is anticipated that the accessibility improvements created would have an impact and bring benefits across a much larger geographic area. As has already been demonstrated by the interest being shown in the road charging initiative implemented in the City, it is considered that by undertaking further innovative measures the City would be an exemplar for other similar areas throughout the UK and abroad.

f) “the public transport ideas and potential for public transport patronage growth and modal shift”

In producing a demand management transport solution it is crucial that the underlying principles of the Durham City Vision are met and that any reduction in congestion helps promote wider economic growth, social inclusion and environmental objectives. The challenge will now be to combine effective demand management, including the consideration of further road user charging, with the provision of appropriate alternative infrastructure and public transport improvements. The balanced implementation of such a combination of measures will provide improved accessibility by public transport and other modes than the car by reducing congestion whilst maintaining the vitality and viability of the City Centre. With the City as the hub of the public transport network in the County, such improvements will also be fundamental to delivering better accessibility over a much wider area than the City Centre itself.

Consequently, a combination of demand management and infrastructure improvements are necessary to cope with future transport demands and maintain the viability of the City where road space is at a premium. However, as well as tackling congestion the environment and the street scene in the City Centre will be significantly improved and better facilities made available for pedestrians and cyclists. Such measures will also provide substantial improvements in accessibility for a much wider area of the local transport networks, assisting the delivery of economic growth, social inclusion and improved environmental objectives.

The future development and sustainability of Durham City and the wider area of the County will be dependent upon the implementation of a carefully balanced and deliverable package of measures. The County Council has already fully demonstrated its ability and commitment to delivering challenging policies, including the only road user charging scheme to be implemented outside London. Fundamental to the implementation of these policies has been both the commitment of Members and the ability of the authority to undertake effective and meaningful public consultation.

g) “the extent to which the scheme fits with the Government's strategic aims and objectives for road pricing, through improved understanding of scheme design, technology, implementation and operation”

The County Council is currently in discussion with Durham University with a view to exploring the use of emerging technologies that could be used in road user charging. These are reasonably well advanced and the practical research will be carried out concurrent with the data collection consultations and modelling work.

It is intended to ascertain local attitude and perceptions of road user charging during the consultation phase.

New modelling methodologies are being evolved to cope with the complexities of the new socioeconomic priorities. It is particularly important to try to comply with the ever emerging advice in these areas whilst maintaining the perspective and context that Durham is a relatively small city. It is felt important from the transferable knowledge point of view that other small cities on a limited budget are not put off by having to produce surveys and models to the scale and complexity of a large conurbation. These conurbations have already benefited from extensive Government funding and smaller cities will be effectively starting from scratch. The County Council is very grateful to our neighbours in Tyne and Wear for their help in sharing their household data and their earlier pioneering work on model building. It was hoped that Durham could produce a “model Model” proportionate to the smaller city.

h) “the extent of coverage of the scheme proposed. (We expect, all other things being equal, to give priority to schemes which cover a larger part of the local transport network)”

The area of the study is described in section f) above shown in Plan C. However, because this central area is a transport hub it does affect the wider area of the County. This is particularly true of the public transport system where all of the routes to and from the satellite settlements are focused on the city centre.

i) “how innovative the scheme is, and the potential for the ideas/approaches to be transferred elsewhere”

We are convinced that establishing good practice is not enough in its own right and are determined to share our successes and failures with others and similarly learn from their experience. We have achieved this in a number of ways from supporting professional institutions to giving evidence through the scrutiny process to other highway authorities. More specific examples are the ways in which we have shared our experiences of introducing the Country's first congestion charge in Durham City. To date we have spoken at over 20 conferences on the subject both in the United Kingdom as well as other European Union States as well as hosting numerous formal visits ranging from neighbouring local authority members to consular visits from Malta and Japanese academics.

We firmly believe that front line services are best improved if all parts of the authority are willing to debate the issues of the day and share in best practice. We currently actively seek out opportunities for dialogue whether this is giving evidence to a Parliamentary Select Committee or providing briefing materials for the technical press.

j) “what are the long term financial impacts of the scheme and does the scheme have the potential to become self-funding”

It is too early to be able realistically assesses as this is an essential outcome of the study. There are some 40,000 vehicle per day that currently pass the possible single charging point and some 105,000 vehicles per day which cross the possible cordon. There is potential for making a modest charging scheme self financing starting with this level of traffic.

k) “how long would it take for a successful TIF scheme to get up and running, including different timescales for different parts of the package if necessary”

The business case for the preferred option would be ready for end of October 2007 thereafter subject to a subsequent successful substantive bid for Transport Innovation Funding it is likely the a scheme could be delivered in 2010/11.

l) “details of their current programme for TIF pump priming work including evidence that the funds that were allocated in the first round of pump priming are being spent effectively and in ways that offer good value for money”

In assessing the ‘value for money’ aspects of the proposals it is envisaged that the following factors would need to be considered.

- A practical and deliverable package of measures would have to be developed and the County Council has already successfully demonstrated its ability to both formulate practice proposals and ensure their delivery within a demanding timescale.
- Public acceptability of the schemes is already being canvassed through a consultation being undertaken in connection with the development of a future vision for the City.
- By creating improvements for public transport in conjunction with alternatives for the car it is considered that a more equitable distribution of impacts will be achieved.
- Significant capital investment will be required to provide the infrastructure improvements (including a northern relief road) that are essential if demand restraint is to be implemented in the City Centre. However, charging income and the creation of a more attractive and commercially viable public transport system would create a more financially sustainable system.
- By incorporating a charging regime, the proposals would be meeting both local and regional objectives by controlling car use where capacity constraint is inevitable to manage demand effectively.
- The problems that have to be resolved have already been clearly identified by previous studies, although further analysis is necessary to develop the various elements of the proposals in more detail.

As can be seen from the current programme, attached in Appendix 2, we remain on track to produce a business case for substantive TIF funding and have completed the initial tasks of information gathering. We have also ensured that the work undertaken within Durham complements the work within Tyne and Wear and reduces duplication and abortive effort.

m) “an indication of the further work that could be completed beyond this should further funding be made available”

The original bid was made and is being progressed in good faith based on the best DfT advice available at the time. This advice has changed during the course of the project and because of the evolving nature of Road Pricing may change yet again. The implication of this now current advice (WebTAG units 2.12 , 3.10 and 3.12) is more onerous than anticipated and the additional work required is quite significant. Therefore, the current budget is no longer sufficient to see this project through to the standard and detail now required.

If additional budget was made available Durham based household surveys could be undertaken and this would supplement our modelling approach. Our approach for Durham incorporates a sophisticated methodology for deriving base matrices (developed in conjunction with the Tyne and Wear TIF project by Jacobs Consultancy) using local and national data. Road Site Interviews have been carried out in the study area and (up-to-date) public transport service and usage data from Durham, as well as household surveys undertaken in the neighbouring area of Tyne and Wear and also Darlington. Such an approach was required in order to meet the TIF criteria for strategic fit and Value for Money

It has been necessary to trade off between available budget and effective data for transport modelling. Household surveys provide a rich source of data for examining and analysing travel patterns against socio demographic characteristics. Whereas, intercept surveys, such as Road Site Interviews, by necessity are less rich in terms of travellers characteristics but provide a very efficient and rich source of establishing and updating travel patterns. It had been thought that the income data included in the RSIs might have satisfied the socioeconomic criteria

Additional data collection would include:-

- Durham based household surveys could be undertaken and this would supplement our modelling approach. In addition, it would provide evidence relating to the social research issues raised in the most recent road pricing advice (WebTAG 2.12 and 3.12).

Additional modelling would include:-

- Time of Day choice modelling, sometimes referred to as the fifth stage in transport modelling. However, current plans for congestion charging schemes in the City of Durham do not include variations by time of day.
- Transport modelling with income: This is a complex issue that is recommended in the most recent road pricing guidance. The advantages in modelling and testing of congestion charging scenarios have been

discussed in the above guidance. We are currently considering how to practically incorporate it in our approach by including it in model utility formulation, model segmentation and possible sensitivity testing.

- Modelling concessionary fares for public transport: It is recognised that the North East has a relatively high level of bus use compared with the rest of the country and the use of concessionary fares is higher. We have developed proposals for adding a further segmentation in the model to address this issue.

n) “The name of the authority submitting the proposal”

Durham County Council

o)” the amount of funding (or, in the case of bidders for further funding, the additional amount of funding) sought in each of 2006/07 and 2007/08 from DfT for scheme development and the contribution this represents to total development costs, and how it will be used”

This bid for additional funding is not a soft option for the County Council in that additional matched funding to any TIF grant is not that readily available. However, the new requirements and the overall financial situation have been reviewed with our Consultant and the consensus view is that a worthwhile outcome can be achieved with additional funding of £100,000. This represents the additional identified costs outlined below together with a saving that could be made in area of the technological evaluation of £15,000.

Item	Justification	Cost estimate
1. Transport modelling with income for route choice and other demand choices (e.g. mode choice)	New DfT guidance, equity impacts of schemes better behavioural modelling	£30,000
2. Modelling concessionary fares for public transport	High use in NE England	£10,000
3. Modelling non-motorised modes	New DfT guidance	£10,000
4. Social impacts of RUC	Special emphasis in new DfT guidance: Traffic impacts analysed by GIS against deprivation indices and other socio demographic data	£5,000
5. Business agglomeration benefits	New DfT guidance	£20,000
6. Social research	DfT guidance – household surveys demographic analysis, attitudes and perception to road pricing, behavioural issues. (1,000 household telephone survey),	£40,000
Total Anticipated Additional Cost		£115,000

For various reasons mostly beyond our control the planned spend of £100,000 on 2005/6 did not take place. This bid is also to enable that unspent commitment to be carried over into the 2006/7 financial year

Original Approved Spend Profile

	2005/06 £	2006/07 £	2007/08 £	Total
TIF	50,000	200,000	50,000	£300,000
DCC	50,000	200,000	50,000	£300,000

Proposed Revised Spend Profile

	2005/06 £	2006/07 £	2007/08 £	Total
TIF	£17,000	263,000	70,000	350,000
DCC	£17,000	263,000	70,000	350,000

p) The names of the signing Officers or Members;

Roger Elphick , Head of Highways Management , Environment
Stuart Crowe , County Treasurer

q) “an initial proposition for the governance arrangements that would be put in place to manage the bid should it be successful”

Transport improvements in Durham City have a long history of including stakeholder groups from policy to implementation. A Durham City Travel Plan Steering Group was first established in 1997 following the production of the previous travel plan by Colin Buchanan and Partners. This Steering Group comprising both District and County Councils, Durham Cathedral, University, Chamber of Trade, Durham City Centre Forum and Police, has helped to implement an impressive range of transport improvements. This group is now tasked with overseeing the development of the Durham City Demand Management Study, supported through TIF.

The group is supported by an Officer Working group which initially includes County Transport officers, Consultants and representatives from the DfT, but will later be expanded to include other areas of speciality as required.

Additional areas reflecting the governance of this project are as set out in the original offer letter sent by the DfT and signed by this Authority.

r) “the names of both a policy and a communications contact for DfT to liaise with about the bid “

Roger Elphick Tel No 0191 3833465 email roger.elphick@durham.gov.uk

Dave Wafer Tel No 0191 3833442 email dave.wafer@durham.gov.uk

s) “a brief assessment of their current capacity to carry out transport modelling, the models available to them and a suitable contact (including e-mail address)”

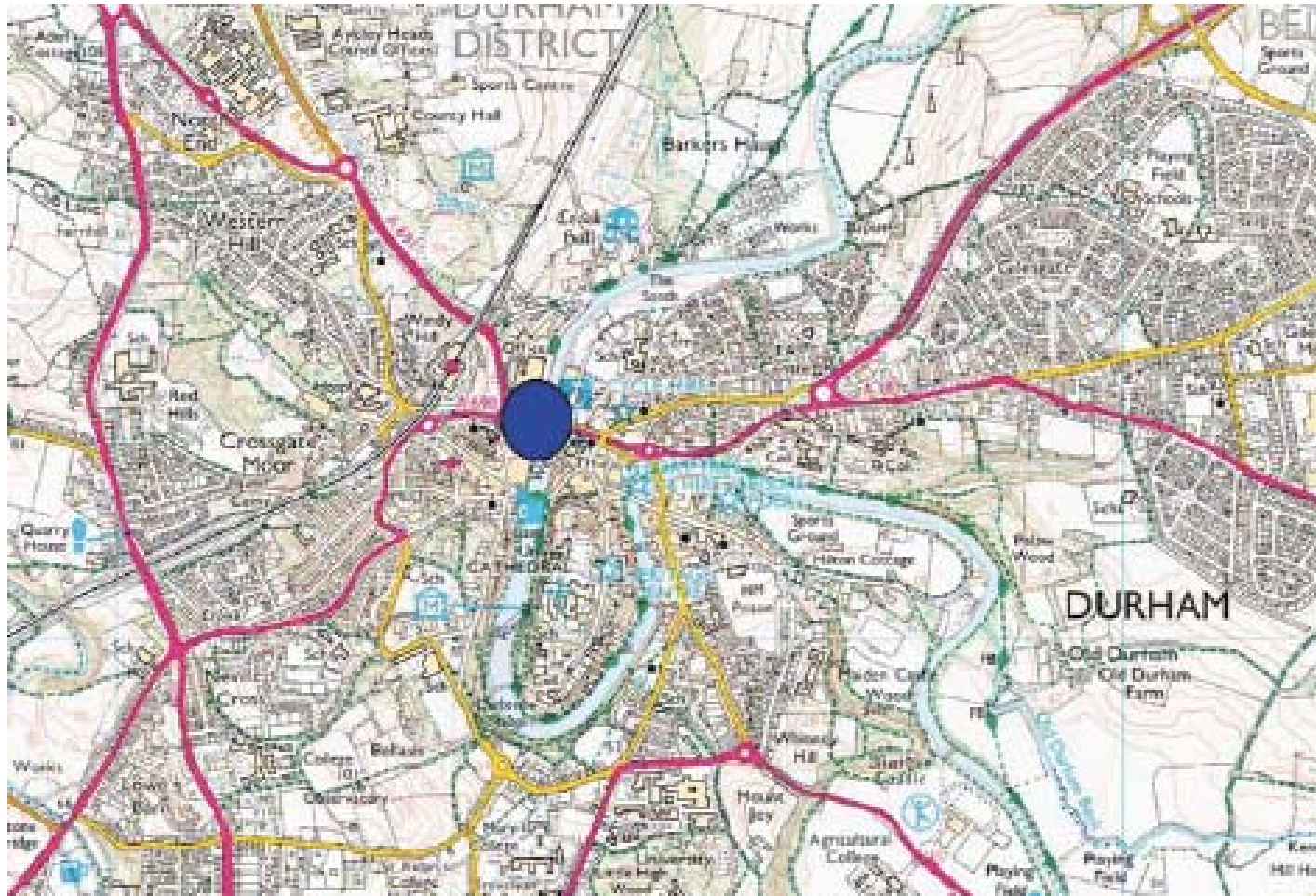
There is already an s-Paramics model available for the study area. The production of the transport/socioeconomic model is on programme and is currently being built by our consultants Jacobs Consultancy.

The contact is George Terzis Tel no 00270878707 email george.terzis@jacobs.com

t) “confirmation that the authority is happy for the Department to put the bid into the public domain”

This is confirmed.

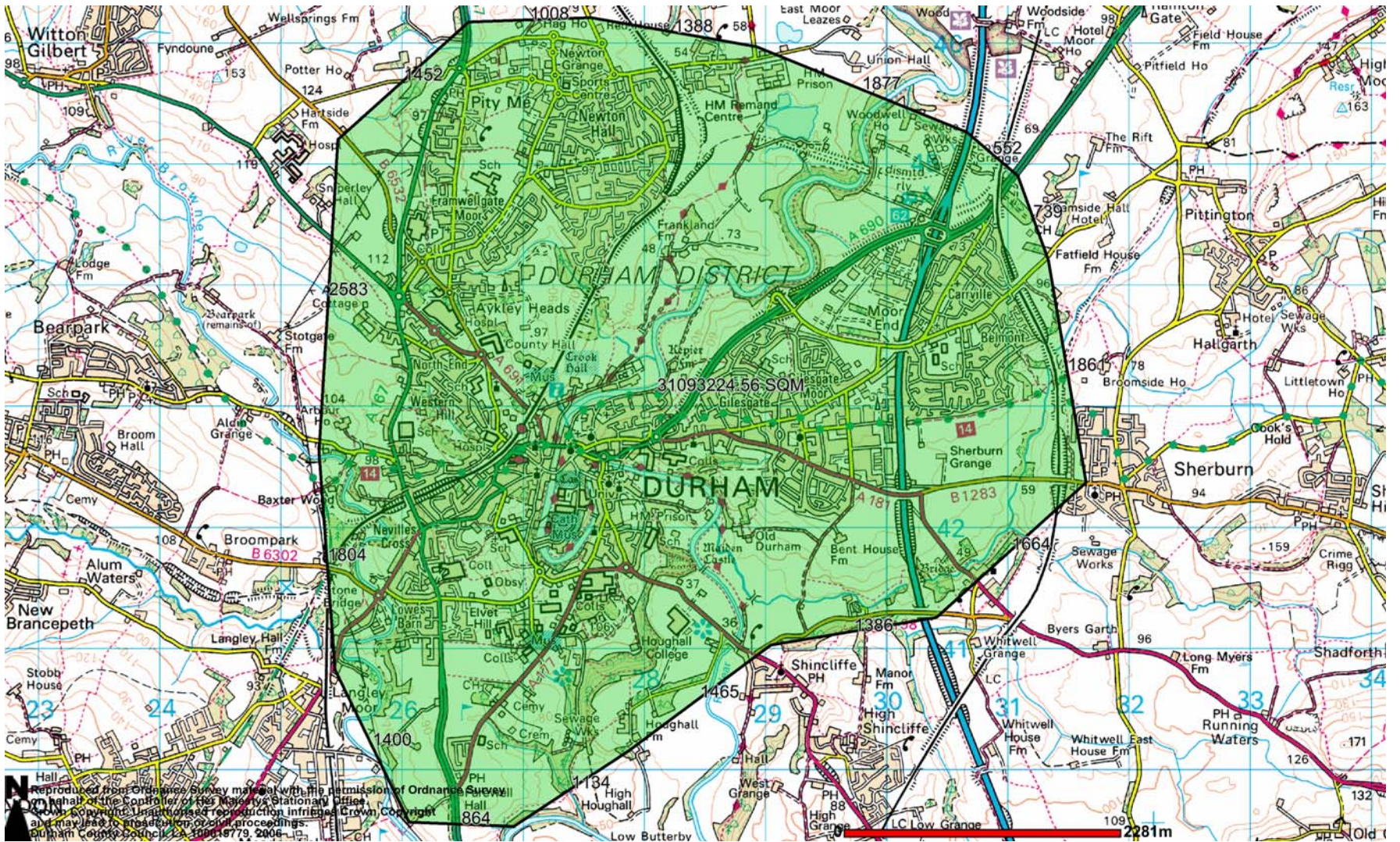
Appendix A



Plan A



Plan B



Plan C

Appendix B

