

SCHEDULE 4

Transport and Highways

1 Bus Service Scheme

- 1.1 The Owner shall not Occupy or permit Occupation of any Dwelling until the Bus Service Scheme has been submitted to and approved by the Borough Council (in consultation with the County Council and City Council).
- 1.2 The Owner shall implement the Bus Service Scheme as approved and provide the Bus Services in accordance with the approved Bus Service Scheme and the Development shall thereafter be carried out and Occupied in accordance with the approved Bus Service Scheme PROVIDED THAT (subject to paragraphs 1.3 and 1.4 below) the cost to the Owner of any subsidy in implementing the Bus Service Scheme shall not exceed the Bus Service Subsidy Cap.
- 1.3 If pursuant to the Travel Plans and/or the Bus Service Scheme monitoring and review of bus passenger numbers using the Bus Services identifies that target bus passenger numbers are not being achieved, the Owner shall (in accordance with any relevant mechanisms outlined in the Travel Plans and/or Bus Service Scheme) identify with the Borough Council (in consultation with the County Council and the City Council) additional measures aimed at achieving such targets and the Owner shall implement such additional measures (which may differ from those identified by the Owner) as may be required by the Borough Council (following consultation with the County Council, City Council and the Owner).
- 1.4 Where the additional measures confirmed as being required pursuant to paragraph 1.3 above include continued subsidy of the Bus Services and the Owner has already committed an amount equal to the Bus Service Subsidy Cap in providing the Bus Services the Owner shall nonetheless continue to subsidise the Bus Services in accordance with such requirements subject to the proviso that the cost to the Owner of any additional subsidy incurred in so doing shall not exceed the Bus Service Subsidy Contingency.
- 1.5 The Owner, Borough Council, County Council and City Council shall each cooperate in relation to the implementation of the Bus Service Scheme (including monitoring and review) with a view to achieving targets set out therein and maximising the effectiveness of any subsidy to be paid by the Owner.
- 1.6 For the avoidance of doubt, the Bus Service Subsidy Cap and Bus Service Subsidy Contingency shall only relate to and apply in respect of bus subsidy for provision of the Bus Services and for no other purpose and shall not, for example, apply in relation or take account of costs payable in relation to Travel Plan or highways measures such as real time information and Travel Passes.

2 Highway Works

- 2.1 The Owner covenants with the County Council to carry out (or pay the costs to the County Council towards the provision of) the County Council's Highways Works in accordance with the further provisions of this paragraph 2 from time to time to mitigate the actual traffic impacts of the Development.
- 2.2 The Owner covenants with the City Council and Borough Council to carry out (or pay the costs to the City Council towards the provision of) the City Council's Highways Works in accordance with the further provisions of this paragraph 2 from time to time to mitigate the actual traffic impacts of the Development.
- 2.3 For the avoidance of doubt nothing in this Deed shall require the Owner to carry out any works on land outside the Site which is either:

- (a) not highway land maintainable at the public expense; or
 - (b) is otherwise not sufficiently within the County Council's, City Council's or the Owner's control in order to permit or otherwise enable such works to be undertaken.
- 2.4 The Owner shall enter into any Highways Agreements necessary to enable it to carry out the Highways Works and shall carry out the Highways Works in accordance with the delivery timescales set out in Annex 1 to this Schedule 4 unless otherwise agreed with the County Council or (as applicable) the City Council.
- 2.5 The Owner shall not Occupy or permit Occupation of more than 350 Dwellings until a Highways Delivery Strategy has been submitted to and approved by the County Council, City Council and Borough Council.
- 2.6 The Owner shall implement the approved Highways Delivery Strategy (subject to paragraph 2.9 below) and shall carry out such measures as are included within it in each case by the relevant Trigger Event and in each case shall not Occupy or permit Occupation of more Dwellings than the relevant Trigger Number until the relevant measure has been carried out to the satisfaction of the County Council and the City Council in respect of their respective administrative areas.
- 2.7 The Owner shall not Occupy or permit Occupation of more than 1,000 Dwellings until:
 - (a) it has carried out a Highways Delivery Review;
 - (b) it has submitted to the County Council, City Council and the Borough Council;
 - (i) the results of the Highways Delivery Review;
 - (ii) any proposed amendments to the Highways Delivery Strategy necessary and appropriate in light of the results of the Highways Delivery Review; and
 - (iii) any other relevant traffic assessments or information that form the basis for the proposed amendments; and
 - (c) the County Council, City Council and Borough Council have approved the Highways Delivery Review and any proposed amendments to the Highways Delivery Strategy or such other amendments as may be agreed between those Parties and the Owner.
- 2.8 The Owner shall submit further Highways Delivery Reviews to the County Council, City Council and Borough Council on Occupation of each further 600 Dwellings or at such higher Trigger Event as may be agreed with those Parties but in no case beyond the Occupation of the 4,000th Dwelling. Occupation of each such further 600 Dwellings (or as the case may be such higher Trigger Event as may be agreed) shall be a separate Trigger Event and in each case the Owner shall not Occupy or permit Occupation of any further Dwellings beyond those specified by the relevant Trigger Event until the process set out in paragraph 2.7(a) to (c) has been carried out in relation to the relevant Highways Delivery Review.
- 2.9 The Owner shall implement the approved Highways Delivery Strategy in accordance with any amendments agreed under paragraph 2.7(c) pursuant to a Highways Delivery Review and where as part of the approved Highways Delivery Review (including any amendments to the matters referred to in the definition of Highways Delivery Review) measures are to be taken no later than a Trigger Event then in each such case the Owner shall not Occupy or permit Occupation of more Dwellings than the relevant Trigger Number until the relevant measure has been carried out to the satisfaction of the County Council and City Council (in respect of their respective administrative areas).
- 2.10 In carrying out a Highways Delivery Review, or a number of Highways Delivery Reviews, regard shall be had to the cost estimates approved within the original Highways Delivery Strategy and

neither the County Council, City Council nor the Borough Council shall be entitled to insist under a Highways Delivery Review or otherwise on changes to those Highway Works and the delivery timescales listed in Annex 1 to Schedule 4 to the extent that such changes would result in a material increase beyond the estimated costs of those Highway Works listed in Annex 1 to Schedule 4 approved pursuant to the original Highways Delivery Strategy in accordance with paragraph 2.5 of this Schedule 4 (save for any increase in costs due to indexation which shall be applied in accordance with clause 12 to those approved estimated costs), but for the avoidance of doubt, the works set out within the approved Highways Delivery Strategy (as amended by any Highways Delivery Review) must thereafter be implemented in full in accordance with that Strategy and the terms of this Deed.

3 Travel Packs and Passes

3.1 The Owner shall:

- (a) submit to the County Council the Travel Pack for approval prior to the Occupation of the first Dwelling;
- (b) provide following the County Council's approval a Travel Pack for each Dwelling; and
- (c) pay the Travel Pass Contribution to the County Council in instalments to be agreed as provided for in and in accordance with paragraph 2.15 of the Bus Strategy PROVIDED THAT the first instalment shall not fall due prior to Occupation of the first Dwelling AND shall not exceed 15% of the total agreed Travel Pass Contribution sum,

and submission, provision and payment (as applicable) shall be in accordance with and subject to any relevant provisions of the Bus Strategy in each case (subject always to paragraph 1.6 of this Schedule 4).

4 Travel Plan Monitoring Fee

4.1 The Owner shall pay the Travel Plan Monitoring Fee to the County Council prior to the Occupation of any Dwelling.

5 Off Site Walking and Cycling Schemes Contributions

5.1 The Owner shall pay the First Off Site Walking and Cycling Scheme Contribution in full to the County Council prior to Occupation of the 3,400th Dwelling subject to the following:

- (a) in the event that prior to such date the County Council shall have secured further contributions to be applied to the implementation of the First Off Site Walking and Cycling Scheme from other developments whose impacts would also be mitigated by the implementation of the First Off Site Walking and Cycling Scheme and/or would derive benefit from the same, the First Off Site Walking and Cycling Scheme Contribution shall be reduced by a sum of up to £86,000;
- (b) in the event that prior to such date programmed works by Network Rail to the railway bridge that crosses over Melton Road shall have been carried out resulting in elements of the First Off Site Walking and Cycling Scheme no longer being required to be implemented by the Owner, the First Off Site Walking and Cycling Scheme Contribution shall be reduced by the sum of £232,000.

5.2 The Owner shall not Occupy or permit Occupation of more than 3,400 Dwellings until and until it has paid the First Off Site Walking and Cycling Scheme Contribution to the County Council in accordance with paragraph 5.1 above.

5.3 The Owner shall pay the Second Off Site Walking and Cycling Scheme Contribution in full to the County Council prior to Occupation of the 2,800th Dwelling subject to the following:

- (a) in the event that prior to such date the County Council shall have secured further contributions to be applied to the implementation of the Second Off Site Walking and Cycling Scheme from other developments whose impacts would also be mitigated by the implementation of the Second Off Site Walking and Cycling Scheme and/or would derive benefit from the same, the Second Off Site Walking and Cycling Scheme Contribution shall be reduced by a sum of up to £182,000; and
 - (b) in the event that prior to such date programmed works by Network Rail to the bridge that crosses over Barkby Thorpe Lane shall have been carried out resulting in elements of the Second Off Site Walking and Cycling Scheme no longer being required to be implemented by the Owner, the Second Off Site Walking and Cycling Scheme Contribution shall be reduced by the sum of £70,000.
- 5.4 The Owner shall not Occupy or permit Occupation of more than 2,800 Dwellings unless and until it has paid the Second Off Site Walking and Cycling Scheme Contribution to the County Council in accordance with paragraph 5.3 above.
- 5.5 Subject to paragraph 5.6 below the Owner shall pay the Third Off Site Walking and Cycling Scheme Contribution in full to the County Council prior to Occupation of the 3,000th Dwelling.
- 5.6 In the event that prior to Occupation of the 3,000th Dwelling the County Council shall not have been able to secure sufficient control of the land necessary to implement its preferred option for that part of the Third Off Site Walking and Cycling Scheme comprising replacement of the existing stepped access to the western approach to the footbridge adjacent to Eastfield Primary School, the Third Off Site Walking and Cycling Scheme Contribution shall be reduced by the sum of £97,000.
- 5.7 The Owner shall not Occupy or permit Occupation of more than 3,000 Dwellings unless and until it has paid the Third Off Site Walking and Cycling Scheme Contribution to the County Council in accordance with paragraphs 5.5 and 5.6 above.
- 5.8 The Owner shall pay the Fourth Off Site Walking and Cycling Scheme Contribution to the County Council prior to Occupation of the 3,250th Dwelling and shall not Occupy or permit Occupation of more than 3,250 Dwellings unless and until it has paid the Fourth Off Site Walking and Cycling Scheme Contribution to the County Council.
- 5.9 The Owner shall pay the Fifth Off Site Walking and Cycling Scheme Contribution to the County Council prior to Occupation of the 3,400th Dwelling and shall not Occupy or permit Occupation of more than 3,400 Dwellings unless and until it has paid the Fifth Off Site Walking and Cycling Scheme Contribution to the County Council.
- 6 **PRoW Improvements Contribution**
- 6.1 The Owner shall pay the PRoW Improvements Contribution to the County Council prior to the Occupation of 575 Dwellings and shall not Occupy or permit Occupation of more than 575 Dwellings until it has paid the PRoW Improvements Contribution to the County Council in full.
- 7 **Off Site Traffic Management Measures Contribution**
- 7.1 The Owner shall pay the Off Site Traffic Management Measures Contribution to the County Council in the following instalments
 - (a) prior to the Occupation of 300 Dwellings the sum of £10,000; and
 - (b) prior to the Occupation of 500 Dwellings the sum of £41,400.

8 **Junction Improvements Contribution**

8.1 The Owner shall pay the Junction Improvements Contribution to the County Council prior to the Occupation of the 1,000th Dwelling and shall not Occupy or permit Occupation of more than 1,000 Dwellings until it has paid the Junction Improvements Contribution to the County Council in full.

9 **Cycling Routes**

9.1 The Owner shall not Occupy or permit Occupation of:

- (a) more than 325 Dwellings unless it has made a request in writing to the City Council (copied to the Borough Council) for the City Council to issue a Cycling Route Notice in respect of Cycling Route 3;
- (b) more than 1,250 Dwellings unless it has made a request in writing to the City Council (copied to the Borough Council) for the City Council to issue a Cycling Route Notice in respect of Cycling Route 1;
- (c) more than 1,500 Dwellings unless it has made a request in writing to the City Council (copied to the Borough Council) for the City Council to issue a Cycling Route Notice in respect of Cycling Route 2 .

9.2 Where a Cycling Route Notice has not been received by the Owner from the City Council by the time that the relevant Cycling Route Contribution would otherwise have fallen due for payment pursuant to the following paragraphs (despite the Owner requesting this in accordance with paragraph 9.1 above), then the Owner shall pay the relevant Cycling Route Contribution within 25 Business Days of receipt of the Cycling Route Notice when such a notice is finally issued by the City Council and received by the Owner and shall not Occupy or permit Occupation of any further Dwellings following expiry of such deadline until the relevant Cycling Route Contribution has been paid. Where the Owner makes representations in relation to the Cycling Route Notice then the relevant Cycling Route Contribution shall be paid within 25 Business Days of receipt of either an updated Cycling Route Notice or confirmation from the City Council that the Cycling Route Notice remains unchanged following the procedure set out in paragraph 3.6 of Schedule 9.

9.3 The Owner shall not Occupy or permit Occupation of more than 1,500 Dwellings unless and until it has paid the Cycling Route 1 Contribution (the actual quantum of which shall be as confirmed in the relevant Cycling Route Notice) to the City Council and shall not Occupy or permit Occupation of any further Dwellings once the deadline for payment of the Cycling Route 1 Contribution has been reached unless and until the Cycling Route 1 Contribution has been paid in full.

9.4 The Owner shall not Occupy or permit Occupation of more than 1,750 Dwellings unless and until it has paid the Cycling Route 2 Contribution (the actual quantum of which shall be as confirmed in the relevant Cycling Route Notice) to the City Council in full

9.5 The Owner shall not Occupy or permit Occupation of the number of Dwellings set out below unless and until it has paid the Cycling Route 3 Contribution (the actual quantum of which shall be as confirmed in the relevant Cycling Route Notice) to the City Council in the following instalments:

- (a) 50% prior to Occupation of the 575th Dwelling; and
- (b) 50% prior to Occupation of the 1,000th Dwelling.

ANNEX 1

Highway Works

Part 1: County Council's Highway Works

Item No.	Description of Works	Delivery Timescale
1	Closure of a section of Hamilton Lane, north of Keyham Lane and its diversion through the Development which shall result in traffic currently travelling between Barkby Thorpe and North Hamilton/Scraptoft being diverted through the Development.	Occupation of 2,800 th Dwelling
2	Introduction / extension of 20mph speed limits through Barkby and Barkby Thorpe.	Occupation of 500 th Dwelling
3	Gateway features at each end of Barkby and Barkby Thorpe villages, where not already provided, and at Beeby Road, Scraptoft.	Occupation of 500 th Dwelling
4	Speed limit reductions on Barkby Thorpe Lane and Barkby Thorpe Road between the Development and Barkby Thorpe.	In accordance with the approved Highways Delivery Strategy (and any relevant approved Highways Delivery Reviews).

Part 2: City Council's Highway Works

Item No.	Description of Works	Delivery Timescale
1	Junction of A6030 Victoria Road East / Gipsy Lane. Alterations to signal timings and SCOOT implementation	Occupation of the 3,725 th Dwelling
2	Junction of A6030 Victoria Road East / Tailby Ave. Alterations to signal timings and SCOOT implementation	Occupation of the 3,725 th Dwelling
3	Junction of A563 Hamilton Way / Maidenwell Avenue. Alterations to signal timings and SCOOT implementation	Occupation of the 1,725 th Dwelling
4	Junction of A563 Thurmaston Lane / Victoria Road East minor improvements to existing signalised roundabout including localised widening works to south west bound Hamilton Way, island alterations on Sandhills Avenue arm and rationalisation of white lining scheme wide	Occupation of the 3,725 th Dwelling
5	A563 Troon Way/ Humberstone Lane, 2 new toucan or similar crossings on the A563 arms of the roundabout and ancillary cycleway works	Occupation of the 1,725 th Dwelling
6	Barkbythorpe Road/ Humberstone Lane improvements to crossing facilities.	Occupation of the 1,725 th Dwelling

ANNEX 2
Bus Strategy

North East of Leicester SUE

Bus Strategy

Report

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1 Introduction

The Development Proposals

- 1.1 Full development descriptions are provided in the Planning Statement and the Design and Access Statement report. In summary, the key aspects of the North East of Leicester SUE will include:
- approximately 4,500 residential units, including affordable homes;
 - up to 13 hectares of employment land - Use Classes B1, B2 and B8;
 - two local centres and one district centre - including a foodstore up to 4,500sqm gross with associated car parking; and
 - provision for school facilities - including a 'reserve' site for a secondary school.
- 1.2 For the purpose of estimating total trips to the site, and hence bus passenger numbers, it has been assumed that the schools and local/district centres will predominantly draw trips from within the development site and not generate bus passengers. If a secondary school is delivered, it is acknowledged that good accessibility to public transport will need to be provided. In terms of retail, there will be strong competition from existing food stores, and the retail element of the site is targeted at local use.
- 1.3 A housing trajectory has been agreed with Charnwood Borough Council which covers the first 12 years of development, delivering 3,250 new homes. Beyond Year 12, it has been estimated that a further 4 years will be required to complete delivery of the full proposals for 4,500 new homes. A summary is provided in Table 1.1.

TABLE 1.1 AGREED HOUSING TRAJECTORY

Year	1	2	3	4	5	6	
Cumulative completions	25	200	450	750	1050	1375	
Year	7	8	9	10	11	12	13-16
Cumulative completions	1700	2025	2350	2650	2950	3250	4500

- 1.4 The first Local Centre and part of the District Centre will likely be delivered during Years 4 to 9, with the remaining local and district centre and employment uses delivered beyond Year 8.
- 1.5 More detail on phasing is provided in Chapter 14 of the Design and Access Statement, including indicative locations of each phase within the development site.

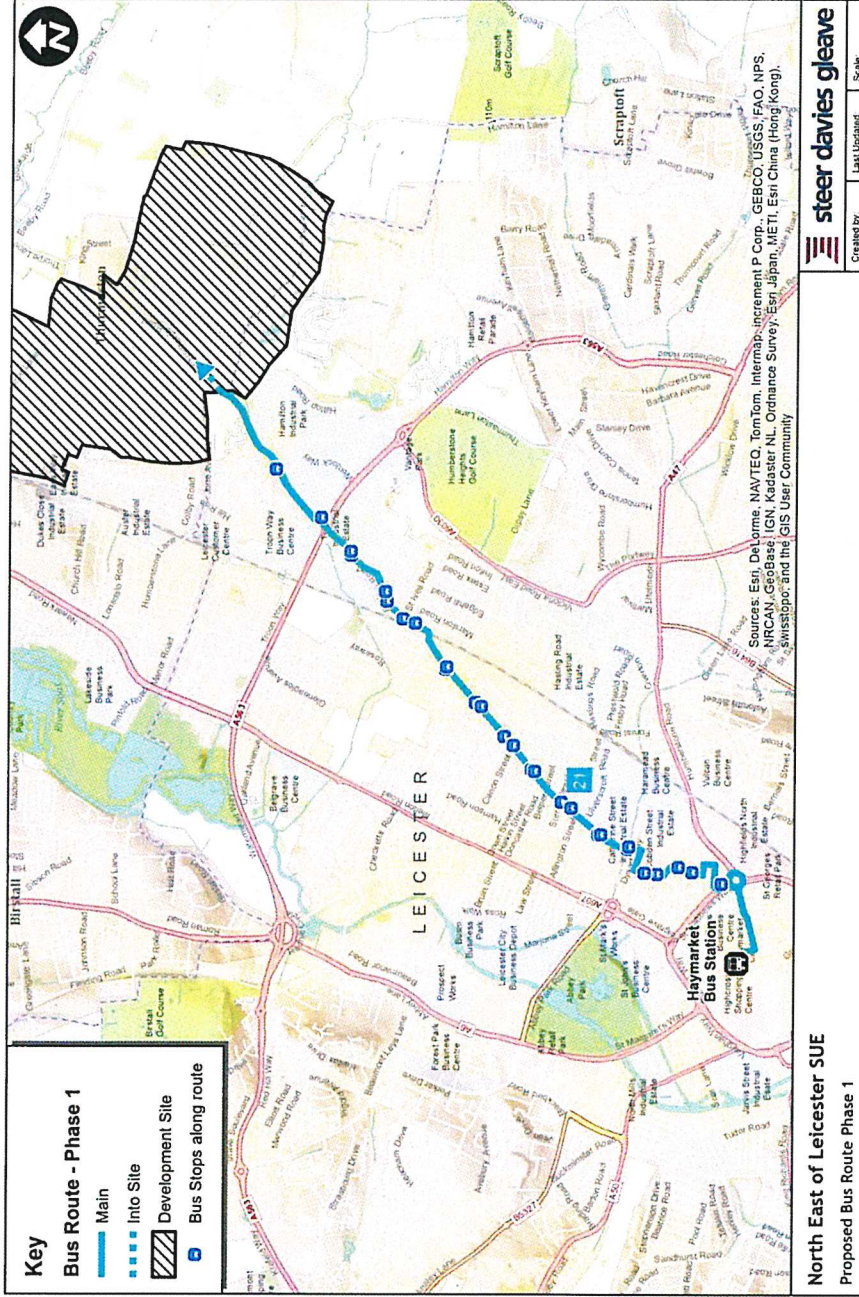
2 Bus Service Proposals

Proposed Routes

- 2.1 The first part of the site to be delivered will be either side of Barkbythorpe Road which would naturally be served via buses operating along Barkbythorpe Road, not only serving the site but also providing a new service to existing residents and businesses along this route. Depending on the level of demand generated by existing residents/employees, there would be an opportunity to divert services to the proposed southern link road once completed.
- 2.2 For Barkbythorpe Road, buses would then connect to the city centre via Barkby Road and Catherine Street, replicating the current 21 route, as a new dedicated service. This route is shown in Figure 2.1.
- 2.3 As the site develops in line with the agreed Phasing Plan, the service would be extended to connect to the district centre with the option to form a loop through the site to connect to the existing 21 service which terminates in the Blount Road area. As such, future bus provision to the city would be more likely delivered through extensions or diversions of existing services.
- 2.4 Again as the site develops northwards towards Barkby Thorpe Lane, a new service will be provided linking the site to Queniborough, via ASDA, Roundhill Community College, Syston railway station and Syston centre, as shown in Figure 2.2. This will likely be delivered as a continuation of the route into the city described above, and will maximise potential for passengers through providing attractors at each end of the route, ie Syston - site - Barkbythorpe Road - City Centre.
- 2.5 Ultimately each part of the site will have a minimum 15 minute frequency bus service. As the site expands, opportunity to extend services to penetrate more of the site will be taken up. It is acknowledged that a service will need to be provided in the early days of the site's development. This service will provide a limited stop route direct to the city centre, observing selected stops along the route and thus enabling shorter run times between the development site and the city centre than the 25 minutes currently timetabled between Blount Road and Humberstone Gate.
- 2.6 Starting in Year 2, or at the latest on occupancy of the 175th dwelling, the service will commence with a half hour frequency, with the service frequency increasing to provide 4 buses per hour prior to completion of the 575th new home.
- 2.7 These routes are illustrated in Figures 2.1 and 2.2.
- 2.8 The targets for bus provision to the site include the principle that each property will be within 400m of a bus stop, implying that route penetration will need to expand as the site develops. The developer will fund the provision of high quality bus stops with shelters within the site, and real time passenger information will be displayed.

Further detail relating to site access and public transport routing within the site is provided in Chapter 11 of the Design and Access Statement.

FIGURE 2.1 PROPOSED BUS ROUTE - CITY CENTRE



Bus Priority

- 2.9 Although the impact of additional bus flow will have no material effect on the junction assessment work undertaken for the Transport Assessment, there is a need to ensure that buses run relatively freely to and from the site.
- 2.10 This is more of an issue for routes between the site and the city centre and potential pinch points along the route have been considered.

Catherine Street Route towards the City Centre

■ A563/Humberstone Lane

- southbound buses currently cross the left turn lane when exiting the bus stop
- potential to allow buses to use the nearside lane on approach to the roundabout, and then go straight ahead, converting the existing hatched area on the roundabout to bus only use. However, the single lane exit to the south of the roundabout would introduce conflict between cars and buses for the north-to-south movement
- better to discontinue use of the lay by and to incorporate the bus stop into the nearside left turn lane, delivering buses to the front of the queue on exit from the bus stop. Left turn traffic would queue behind the bus

■ Railway bridge

- constrained geometry - potential for bus detection

- 2.11 Implementation of advanced bus detection at signalised junctions along routes into the city are likely to provide the most cost effective measure to minimise delay to buses.

Encouraging Bus Use

- 2.12 A level of appropriate funding will be agreed between the developer and the County Council both to fund future bus services at the North East of Leicester site and to encourage bus use.
- 2.13 While the majority of this allocation is intended to be used to introduce and to encourage the use of new bus services, an allocation will also be used to provide site-specific special livery on a sample of buses such that the new routes are readily identified with the proposed development.
- 2.14 In addition to subsidising new or expanded liveried services, new residents will be encouraged to choose bus over the private car through the offer of free travel passes. New residents will be offered two free 6-month bus passes per household to encourage bus use.
- 2.15 A total cost for the provision of bus passes will be agreed between the developer and the County Council on the basis that two adult passes will be offered to the first occupants only of each dwelling. A total of 15% of the agreed cost will be paid to the County Council prior to occupation of the first dwelling, to be used purely towards the provision of bus passes on request from residents. Further phased

Bus Strategy

payments will be agreed between the developer and the County Council depending on the take up of the offer.

- 2.16 To complement the offer of travel passes, delivery of the Travel Plan will also promote awareness of available bus services through the provision of Travel Packs containing timetables and route maps, the community website and the promotion of wider local and national initiatives to encourage bus use. In addition, residents will be offered personalised journey planning advice to further encourage and support the use of sustainable modes of travel.
- 2.17 The developer is committed to providing bus services to the site and to encouraging the use of those services.
- 2.18 The following section provides initial forecasts of bus use, potential revenue and indicative levels of subsidy required (“Cap”) to deliver a level of service best suited to the proposed development.
- 2.19 The success of the Travel Plan in achieving targets of bus passenger numbers will be monitored annually and reported, via the Steering Group, to the County and City Councils. The Travel Plan then outlines a mechanism for identifying additional measures that the developer will need to introduce if targets are not being met. These additional measures could include continued subsidy of service beyond the current estimates (“Contingency”), but this cannot be confirmed until the site is operational.

3 Commerciality

Forecast Bus Passenger Demands and Revenues

Passenger demands

- 3.1 The Transport Assessment, and Travel Plan, provides forecasts of the overall number of trips the completed site is forecast to generate, along with the target mode splits associated with those forecasts. These forecasts are summarised in Table 3.1.

TABLE 3.1 FORECAST TRIPS BY MODE

Mode	%mode	AM in	AM out	PM in	PM out
Train	0.6%	8	11	12	9
Bus	13.5%	172	251	261	202
Taxi	0.3%	4	6	6	4
Motorcycle	0.6%	8	11	12	9
Car Driver	54.6%	697	1016	1055	817
Car Passenger	8.3%	106	154	160	124
Cycle	12.0%	153	223	232	179
Walk	10.1%	129	188	195	151
<i>Total Person Trips</i>		1277	1860	1933	1495

- 3.2 Based on the development phasing outlined in Chapter 1, these forecasts for bus users can be broken down by year.
- 3.3 It is reasonable to assume that trips out of the site in the morning, and back in the evening, will relate to the cumulative delivery of housing numbers. However, it is acknowledged that trips in the opposite direction will be largely reliant on provision of employment on site which will not be delivered until later years.
- 3.4 To account for this, subsequent calculations assume that, year on year, only 10% of potential trips in the 'opposite direction' will be achieved.

TABLE 3.2 FORECAST PEAK HOUR BUS TRIPS PER YEAR

Year	No. of Houses	Cumulative Houses	Bus trips in/out of site			
			AM in	AM out	PM in	PM out
1	25	25	0	1	1	0
2	175	200	1	11	12	1
3	250	450	2	25	26	2
4	300	750	3	42	44	3
5	300	1050	4	59	61	5
6	325	1375	5	77	80	6
7	325	1700	7	95	99	8
8	325	2025	8	113	118	9
9	325	2350	9	131	136	11
10	300	2650	10	148	154	12
11	300	2950	11	165	171	13
12	300	3250	12	182	189	15
13	300	3550	14	198	206	16
14	300	3850	15	215	223	17
15	300	4150	16	232	241	19
16	350	4500	17	251	261	20

3.5 As previously discussed, Table 3.2 indicates that the greatest demand for bus passengers will be inbound to the site in the PM peak, with similar forecasts outbound in the AM peak. If we assume that one bus will provide capacity for around 40 passengers, we can use the PM peak inbound forecasts to define how many buses per hour will be required to accommodate new demand from the NEoL SUE development.

- 1 new bus would provide for 3 years
- 2 new buses would provide for 6 years
- 3 new buses would provide for 8 years
- 4 new buses would provide for 10 years
- 7 new buses would be required to provide sufficient peak hour capacity to cater for the completed development

3.6 These results tie in with our proposals to ultimately provide 4 buses/hour to the early phases of the site, and a further 4 per hour to serve the northern parts of the site in later years. These figures are based on 40 passengers per bus, and do not necessarily correlate with revenues required to fund the service.

Passenger revenues and subsidy cap

3.7 To convert these annual forecasts of bus passenger numbers to annual revenue forecasts, and to understand when revenues might realistically be at a level to self-support the proposed service levels, a number of assumptions need to be made.

- Peak (AM+PM) to day factor 4
- Weekday to year factor 300
- Average fare per journey £1.50 **

■ Cost per bus per year £165,000

** This is based on a Weekly First ticket costing £16/week (Feb'14), used 10 times per week and with a further reduction concessions.

3.8 Applying the above factors to the year by year forecasts in Table 3.2 we can derive the following revenue forecasts by year for new bus passenger demand to and from the site, based on a bus mode share target of 13.5%, reduced to only 10% of that value in the non-peak direction.

3.9 The final column in Table 3.3 shows the number of buses that would be self-financed by revenues collected. By year 12 of the development it is predicted that revenues from the site would make a 4 bus/hour service commercially viable. Beyond year 12, additional services should be delivered commercially to meet continued demand, up to a point where a total of 6 per hour are serving the completed site, at profit.

3.10 On this basis, it is fair to assume that subsidy will be required during years 2 to 12. The anticipated costs, to support a service level of 2 per hour in the first phase of development and up to 4 per hour in year 12, are as follows

■ Years 2-7	2 buses per hour	£1,980,000
■ Years 8-9	1 additional bus per hour	£330,000
■ Years 10-12	1 additional bus per hour	£495,000
■ TOTAL		£2,805,000

3.11 These costs do not take account of any revenue that the new services will generate. These revenues will offset overall costs and, during negotiation with a preferred bus operator, a net cost will be agreed to deliver the service. This net cost, or subsidy, will not only account for expected revenues but also provide an operating profit for the operator. Leicestershire County Council suggested that 8% would be a minimum profit margin expected by operators and agreed that this figure could be used for subsidy calculations.

3.12 Although revenue will offset costs throughout the life of the agreed subsidy, the subsidy calculations presented here only account for 'revenue share' during Years 2-7 of the agreement. That is, the cost of providing the additional 3rd and 4th buses during Years 8 to 12 is fully covered by the developer.

3.13 Based on the figures in Table 3.3 and accounting for the operator's 8% profit margin, the revenue during Years 2 to 7 is calculated as £1,118,000. Subtracting this from the total cost of provision leaves a subsidy requirement of **£1,687,000**.

3.14 This is referred to as the subsidy "cap" and a more detailed breakdown of these calculations is provided in Appendix A.

TABLE 3.3 FORECAST PASSENGER REVENUES PER YEAR - 13.5% TARGET MODE SHARE

Year	Bus trips to/towards Leicester					Daily	Annual Revenue £		No. buses
	AM in	AM out	PM in	PM out					
1	0	1	1	0	12	3667	0	0.00	
2	1	11	12	1	98	29336	44004	0.27	
3	2	25	26	2	220	66006	99009	0.60	
4	3	42	44	3	367	110010	165015	1.00	
5	4	59	61	5	513	154014	231021	1.40	
6	5	77	80	6	672	201685	302528	1.83	
7	7	95	99	8	831	249356	374035	2.27	
8	8	113	118	9	990	297028	445541	2.70	
9	9	131	136	11	1149	344699	517048	3.13	
10	10	148	154	12	1296	388703	583054	3.53	
11	11	165	171	13	1442	432707	649060	3.93	
12	12	182	189	15	1589	476711	715066	4.33	
13	14	198	206	16	1736	520715	781072	4.73	
14	15	215	223	17	1882	564719	847078	5.13	
15	16	232	241	19	2029	608723	913085	5.53	
16	17	251	261	20	2200	660061	990092	6.0	

Contingent subsidy

- 3.15 At this stage it is only possible to provide estimates of the level of subsidy required based on current passenger forecasts. Prior to commencing the delivery of a new service to the site, the developer will enter negotiations with local operators to agree levels of subsidy required to deliver the proposed service levels. These negotiations will take account of anticipated revenues, as well as confirming assumptions regarding average fares and annual costs per bus. Once the first service is in operation, patronage levels will be reviewed and future subsidy levels agreed between the developer and the chosen operator to ensure that the proposed service levels continue to be delivered.
- 3.16 Following discussions with officers from the County, City and Borough Councils, it has been agreed that a further sensitivity be assessed to judge the level of additional funding that may be required to deliver comparable service levels in the event that bus passenger forecasts, and hence passenger revenues, are not achieved.
- 3.17 The difference between this additional level of funding and the subsidy cap described above is defined as the “contingency”.
- 3.18 The main driver of passenger numbers in the previous calculations is the target mode share of total trips to and from the site made by bus. As shown in Table 3.1, our target mode share for a sustainable urban extension to the north east of Leicester is 13.5%
- 3.19 To calculate the contingency, it has been agreed that a mode share of 7% should be tested even though it is noted that this is lower than achieved by neighbouring communities at Thurmaston (Census 2011, 10.1%) and Hamilton (Census 2011, 8.5%), where levels of travel planning and incentives to consider using sustainable modes of transport are limited.

- 3.20 The main issue to arise when testing only 7% mode share is that passenger numbers, and associated revenues, will only support a bus service operating 3 buses per hour, even on completion of the full site. As such, the contingency will only cover delivery of a 3/hour service.
- 3.21 The forecast passenger revenues by year, equivalent to Table 3.3, is provided below.

TABLE 3.4 FORECAST PASSENGER REVENUES PER YEAR - 7% CONTINGENCY

Year	Bus trips to/towards Leicester				Daily	Annual Revenue £		No. buses
	AM in	AM out	PM in	PM out				
1	0	1	1	0	6	1901	0	0.00
2	0	6	6	0	51	15211	22817	0.14
3	1	13	14	1	114	34225	51338	0.31
4	1	22	23	2	190	57042	85563	0.52
5	2	30	32	2	266	79859	119789	0.73
6	3	40	41	3	349	104578	156866	0.95
7	3	49	51	4	431	129296	193944	1.18
8	4	59	61	5	513	154014	231021	1.40
9	5	68	71	5	596	178733	268099	1.62
10	5	77	80	6	672	201550	302324	1.83
11	6	85	89	7	748	224366	336550	2.04
12	6	94	98	8	824	247183	370775	2.25
13	7	103	107	8	900	270000	405000	2.45
14	8	112	116	9	976	292817	439226	2.66
15	8	120	125	10	1052	315634	473451	2.87
16	9	130	135	10	1141	342254	513381	3.1

- 3.22 With fewer bus passengers and lower revenues, the agreement between developer and operator in terms of the share of revenues used to offset costs will be critical. For this contingency test, it has been assumed that revenue share will continue throughout the life of the subsidy and that the operator will retain a constant 8% as profit margin.
- 3.23 Contingency calculations are based on delivery of a half hourly frequency in Years 2 to 7, as before, increasing to a 20 minute service from Year 8 until completion of the development.
- 3.24 Detailed calculations are provided in Appendix B and show that the difference between costs and revenue for the life of the subsidy is a total of £2,782,000.
- 3.25 This represents a contingency, above the agreed subsidy “cap” of **£1,095,000**.

Summary

- 3.26 In summary, the subsidy is defined in two parts; a “cap” representing the level of subsidy expected to be required to deliver an agreed service pattern, and a “contingency” which will only be called upon if forecast passenger numbers are not achieved. If forecasts are exceeded, and services can be delivered for less than the subsidy cap, then both the remaining subsidy and the contingency will be retained by the developer.
- 3.27 Monitoring of passenger numbers will be carried out through delivery of the Travel Plan and the Steering Group that is proposed to be established pursuant to the

Bus Strategy

relevant Travel Plan will review results on an annual basis. As the site develops, the Steering Group will be fully aware of any shortfall in passenger numbers, or whether passenger numbers are in excess of forecasts, and will advise on how much of the agreed bus subsidy needs to be spent. The Steering Group will include representatives from the Borough, City and County Councils as well as the developer.

3.28 The following assumptions are integral to the subsidy calculations.

- The proposed housing trajectory is consistent with Charnwood Borough Council requirements
- Year on year revenue forecasts are derived from cumulative housing delivery numbers, with a conservative estimate applied for bus passenger numbers associated with employment uses
- The annual cost to cover the cost of running a bus is £165,000
- Revenues will be used to offset costs, with the operator retaining 8% of revenue as a profit margin

3.29 The resulting subsidy values are:

- | | |
|---------------|------------|
| ■ Cap | £1,687,000 |
| ■ Contingency | £1,095,000 |

APPENDIX

A

SUBSIDY CALCULATIONS - "CAP"

|

APPENDIX

B

SUBSIDY CALCULATIONS - "CONTINGENCY"

North East of Leicester SUE - Bus Service Subsidy Proposal
 Calculation of Bus Demand, Service Requirements and Potential Revenue Streams

The following table provides total person trip forecasts, agreed for the Transport Assessment, along with the target mode splits for achieving those forecasts. The table then shows how these two elements of information combine to provide person trips by mode.

Total car trips	TA Calculations - Trips by Mode		TA Calculations - Trips by Mode	
	AM in	PM out	AM in	PM out
Train	0.0%	0	0	0
Bus	10.2%	130	107	153
Motorcycle	0.6%	8	6	4
Car Driver	68.2%	870	1039	1318
Car Passenger	3.2%	41	52	69
Cycle	10.1%	129	188	265
Walk/Person Trips	10.1%	129	188	265
		1277	1524	1451

Bus Trips by Year

No. of hours	Year	Cumulative % of total		Bus trips (thous of est)	
		AM in	PM out	AM in	PM out
25	2017	25	1%	0	1
25	2018	50	4%	4	6
25	2019	75	6%	8	11
25	2020	100	8%	12	16
25	2021	125	10%	16	21
25	2022	150	12%	20	27
25	2023	175	14%	24	32
25	2024	200	16%	28	38
25	2025	225	18%	32	43
25	2026	250	20%	36	49
25	2027	275	22%	40	54
25	2028	300	24%	44	60
25	2029	325	26%	48	65
25	2030	350	28%	52	71
25	2031	375	30%	56	76
25	2032	400	32%	60	82
25	2033	425	34%	64	87
25	2034	450	36%	68	93
25	2035	475	38%	72	99
25	2036	500	40%	76	105
25	2037	525	42%	80	111
25	2038	550	44%	84	117
25	2039	575	46%	88	123
25	2040	600	48%	92	129
25	2041	625	50%	96	135
25	2042	650	52%	100	141
25	2043	675	54%	104	147
25	2044	700	56%	108	153
25	2045	725	58%	112	159
25	2046	750	60%	116	165
25	2047	775	62%	120	171
25	2048	800	64%	124	177
25	2049	825	66%	128	183
25	2050	850	68%	132	189
25	2051	875	70%	136	195
25	2052	900	72%	140	201
25	2053	925	74%	144	207
25	2054	950	76%	148	213
25	2055	975	78%	152	219
25	2056	1000	80%	156	225
25	2057	1025	82%	160	231
25	2058	1050	84%	164	237
25	2059	1075	86%	168	243
25	2060	1100	88%	172	249
25	2061	1125	90%	176	255
25	2062	1150	92%	180	261
25	2063	1175	94%	184	267
25	2064	1200	96%	188	273
25	2065	1225	98%	192	279
25	2066	1250	100%	196	285
25	2067	1275		200	291
25	2068	1300		204	297
25	2069	1325		208	303
25	2070	1350		212	309
25	2071	1375		216	315
25	2072	1400		220	321
25	2073	1425		224	327
25	2074	1450		228	333
25	2075	1475		232	339
25	2076	1500		236	345
25	2077	1525		240	351
25	2078	1550		244	357
25	2079	1575		248	363
25	2080	1600		252	369
25	2081	1625		256	375
25	2082	1650		260	381
25	2083	1675		264	387
25	2084	1700		268	393
25	2085	1725		272	399
25	2086	1750		276	405
25	2087	1775		280	411
25	2088	1800		284	417
25	2089	1825		288	423
25	2090	1850		292	429
25	2091	1875		296	435
25	2092	1900		300	441
25	2093	1925		304	447
25	2094	1950		308	453
25	2095	1975		312	459
25	2096	2000		316	465
25	2097	2025		320	471
25	2098	2050		324	477
25	2099	2075		328	483
25	2100	2100		332	489

LECC every level of AM inbound PM inbound trips that can be achieved, particularly in years leading up to employment delivery. What few only achieve 10.6% of these 'anti-ramp' passenger forecasts?

Year	Bus Service (thous of est)	
	AM in	PM out
2017	0	1
2018	1	1
2019	1	1
2020	1	1
2021	1	1
2022	1	1
2023	1	1
2024	1	1
2025	1	1
2026	1	1
2027	1	1
2028	1	1
2029	1	1
2030	1	1
2031	1	1
2032	1	1

New we need to provide estimates for 2 things...
 1. What is the likely revenue stream from new passenger and hence subsidy requirement?
 2. What is the likely revenue stream from new passenger and hence subsidy requirement?

Assume an additional bus would provide additional capacity for 40 new passengers

- 1 new bus to Leicester would provide for 5 years
- 2 new bus to Leicester would provide for 10 years
- 3 new bus to Leicester would provide for 15 years
- 4 new bus to Leicester would provide for 16 years
- 5 new bus to Leicester would provide for 16 years
- 6 new bus to Leicester would provide for 16 years
- 7 new bus to Leicester would provide for 16 years
- 8 new bus to Leicester would provide for 16 years
- 9 new bus to Leicester would provide for 16 years

Essential result: A number of assumptions are required to predict annual revenue forecasts

peak (AM/PM) to day factor 4
 average per year factor 1.50 £
 based on hourly fare of 1.50 £
 Cost per bus per year 152,000 £

Applying the above factors to the 'by year' forecasts we can derive revenue forecasts by year for trips to/within Leicester.

Year	AM in		PM out		Annual Revenue £	No. buses
	AM in	PM out	AM in	PM out		
2017	0	1	0	0	0.00	0
2018	1	1	1	1	1500	1
2019	1	1	1	1	3000	2
2020	1	1	1	1	4500	3
2021	1	1	1	1	6000	4
2022	1	1	1	1	7500	5
2023	1	1	1	1	9000	6
2024	1	1	1	1	10500	7
2025	1	1	1	1	12000	8
2026	1	1	1	1	13500	9
2027	1	1	1	1	15000	10
2028	1	1	1	1	16500	11
2029	1	1	1	1	18000	12
2030	1	1	1	1	19500	13
2031	1	1	1	1	21000	14
2032	1	1	1	1	22500	15
2033	1	1	1	1	24000	16
2034	1	1	1	1	25500	17
2035	1	1	1	1	27000	18
2036	1	1	1	1	28500	19
2037	1	1	1	1	30000	20
2038	1	1	1	1	31500	21
2039	1	1	1	1	33000	22
2040	1	1	1	1	34500	23
2041	1	1	1	1	36000	24
2042	1	1	1	1	37500	25
2043	1	1	1	1	39000	26
2044	1	1	1	1	40500	27
2045	1	1	1	1	42000	28
2046	1	1	1	1	43500	29
2047	1	1	1	1	45000	30
2048	1	1	1	1	46500	31
2049	1	1	1	1	48000	32
2050	1	1	1	1	49500	33
2051	1	1	1	1	51000	34
2052	1	1	1	1	52500	35
2053	1	1	1	1	54000	36
2054	1	1	1	1	55500	37
2055	1	1	1	1	57000	38
2056	1	1	1	1	58500	39
2057	1	1	1	1	60000	40
2058	1	1	1	1	61500	41
2059	1	1	1	1	63000	42
2060	1	1	1	1	64500	43
2061	1	1	1	1	66000	44
2062	1	1	1	1	67500	45
2063	1	1	1	1	69000	46
2064	1	1	1	1	70500	47
2065	1	1	1	1	72000	48
2066	1	1	1	1	73500	49
2067	1	1	1	1	75000	50
2068	1	1	1	1	76500	51
2069	1	1	1	1	78000	52
2070	1	1	1	1	79500	53
2071	1	1	1	1	81000	54
2072	1	1	1	1	82500	55
2073	1	1	1	1	84000	56
2074	1	1	1	1	85500	57
2075	1	1	1	1	87000	58
2076	1	1	1	1	88500	59
2077	1	1	1	1	90000	60
2078	1	1	1	1	91500	61
2079	1	1	1	1	93000	62
2080	1	1	1	1	94500	63
2081	1	1	1	1	96000	64
2082	1	1	1	1	97500	65
2083	1	1	1	1	99000	66
2084	1	1	1	1	100500	67
2085	1	1	1	1	102000	68
2086	1	1	1	1	103500	69
2087	1	1	1	1	105000	70
2088	1	1	1	1	106500	71
2089	1	1	1	1	108000	72
2090	1	1	1	1	109500	73
2091	1	1	1	1	111000	74
2092	1	1	1	1	112500	75
2093	1	1	1	1	114000	76
2094	1	1	1	1	115500	77
2095	1	1	1	1	117000	78
2096	1	1	1	1	118500	79
2097	1	1	1	1	120000	80
2098	1	1	1	1	121500	81
2099	1	1	1	1	123000	82
2100	1	1	1	1	124500	83

Year	Bus Service (thous of est)		Annual Revenue £	Subsidy assumes 'revenue share deal' based on profit target of 8%	1st cost
	AM in	PM out			
2017	0	1	0	0	0
2018	1	1	1500	1380	1170
2019	1	1	3000	2760	2340
2020	1	1	4500	4140	3510
2021	1	1	6000	5520	4680
2022	1	1	7500	6900	5850
2023	1	1	9000	8280	7020
2024	1	1	10500	9660	8190
2025	1	1	12000	11040	9360
2026	1	1	13500	12420	10530
2027	1	1	15000	13800	11700
2028	1	1	16500	15180	12870
2029	1	1	18000	16560	14040
2030	1	1	19500	17940	15210
2031	1	1	21000	19320	16380
2032	1	1	22500	20700	17550
2033	1	1	24000	22080	18720
2034	1	1	25500	23460	19890
2035	1	1	27000	24840	21060
2036	1	1	28500	26220	22230
2037	1	1	30000	27600	23400
2038</					

