Harborough District Council Infrastructure Delivery Plan

Final Report August 2017

On behalf of Harborough District Council

Project Ref:37058

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Contents

Executive summary **1**
1 Study scope approach and policy **4**
1.1 Introduction 4
1.2 Research, developer engagement and consultations 4
1.3 Study approach 4
1.4 National policy on infrastructure 5
PART 1 GROWTH PLANS **8**
2 PLANNED GROWTH NEEDING SUPPORTING INFRASTRUCTURE **9**
2.1 Introduction 9
2.2 The Local Plan housing and employment growth requirements 9
3 APPROACH TO INFRASTRUCTURE ASSESSMENT **17**
3.1 Introduction 17
3.2 Planning Act definition of infrastructure 17
3.3 Guiding principles to assessing infrastructure requirements 17
3.4 When is infrastructure required? 18
3.5 What are the infrastructure priorities? 19
3.6 Categories of infrastructure outside the scope of this assessment 19
4 UTILITIES INFRASTRUCTURE **20**
4.1 Introduction 20
4.2 How this study deals with utilities infrastructure? 20
4.3 Interpreting the critical path analysis 21
5 UTILITIES POTABLE WATER **22**
5.1 Introduction 22
5.2 How is the infrastructure structured? 22
5.3 Asset Management Plan 2015 – 2020 25
5.4 Critical path assessment 28
5.5 Potable water infrastructure supporting the SDAs 28
5.6 How will the infrastructure be funded? 29
5.7 Issues and recommendations 30
6 UTILITIES WASTE WATER **31**
6.1 Introduction 31
6.2 Asset Management Plan (AMP6) 2015 – 2020 33
6.3 Critical path assessment 34
6.4 Waste water infrastructure supporting the SDAs 38
6.5 Land north of Scraptoft SDA 40
6.6 How will the waste water infrastructure be funded? 40
6.7 Issues and recommendations 41
7 UTILITIES ELECTRICITY **42**
7.1 Introduction 42

7.2 How is the infrastructure structured? 42
7.3 Critical path assessment 44
7.4 Issues and recommendations 50
8 UTILITIES GAS 52
8.1 Introduction 52
8.2 How is the infrastructure structured? 53
8.3 Asset management plans include some new infrastructure 53
8.4 Approach to assessing growth related requirements 54
8.5 Critical path assessment 54
8.6 Issues and recommendations 55
9 UTILITIES TELECOMMUNICATIONS 56
9.1 Introduction 56
9.2 Superfast broadband initiative by Leicestershire County Council 56
9.3 BT Community Fibre Team 58
9.4 Virgin Media 58
9.5 Issues and recommendations 59
10 TRANSPORT 61
10.1 Introduction 61
10.2 Transport infrastructure context 62
10.3 Infrastructure requirements and cost assumptions 64
10.4 Summary of transport infrastructure costs 71
10.5 Cross border infrastructure considerations 74
11 EDUCATION INFRASTRUCTURE 75
11.1 Introduction 75
11.2 Education infrastructure context 75
11.3 Infrastructure requirements and cost assumptions 77
11.4 Summary of education infrastructure costs 80
11.5 Cross border infrastructure considerations 84
12 HEALTH INFRASTRUCTURE 86
12.1 Introduction 86
12.2 Health infrastructure context 86
12.3 Infrastructure requirement and cost assumptions 87
12.4 Summary of GP infrastructure costs 89
13 CEMETERY AND BURIAL INFRASTRUCTURE 91
13.1 Introduction 91
13.2 Infrastructure requirement and cost assumptions 91
13.3 Summary of cemetery and burial infrastructure costs 92
14 OPEN SPACE, SPORT AND RECREATION 94
14.1 Introduction 94
14.2 Infrastructure requirement and cost assumptions 94
14.3 Summary of open space, sport and recreation costs 95

15 LIBRARY INFRASTRUCTURE 97
15.1 Introduction 97
15.2 Infrastructure requirement and cost assumptions 97
15.3 Summary of library costs 97
16 COMMUNITY FACILITIES INFRASTRUCTURE 99
16.1 Introduction 99
16.2 Infrastructure requirement and cost assumptions 99
16.3 Summary of community facilities infrastructure costs 101
17 WASTE AND RECYLING INFRASTRUCTURE 102
17.1 Introduction 102
17.2 Waste infrastructure context 102
17.3 Summary of waste and recycling infrastructure costs 107
18 SURFACE WATER DRAINAGE AND FLOOD DEFENCE 109
18.1 Introduction 109
18.2 Water drainage and flood defence infrastructure context 111
18.3 Summary of water drainage and flood defence infrastructure costs 116
19 Strategic development area infrastructure assessment 118
19.1 Introduction 118
19.2 Delivery of planned growth at the East of Lutterworth SDA 118
19.3 Delivery of planned growth at the Scraptoft North SDA 120
PART 3: INFRASTRUCTURE Costs and FUNDING 122
20 INFRASTRUCTURE FUNDING 123
20.1 Introduction 123
20.2 Public sector funding 123
20.3 National policy on developer funding 124
20.4 Developer funding 125
21 INFRASTRUCTURE COSTS and funding gap 129
21.1 Introduction 129
21.2 Summary of estimate infrastructure costs 129
21.3 Non SDA estimate infrastructure costs 129
21.4 SDA estimate infrastructure costs 130
21.5 Total estimated infrastructure costs for the SDAs and Non SDAs 131
21.6 The infrastructure funding gap 132
21.7 East of Lutterworth SDA infrastructure funding gap 133
21.8 Scraptoft North SDA infrastructure funding gap 134
21.9 Market Harborough infrastructure funding gap 135
21.10 Rest of District growth infrastructure funding gap 137
21.11 Summary of total estimated infrastructure funding gap 139
PART 4: STUDY RECOMMENDATIONS 140
22 study conclusions AND RECOMMENDATIONS 141
22.1 Introduction 141

22.2 The Infrastructure Delivery Plan 141
22.3 A deliverable and developable plan 143
22.4 Utility infrastructure findings 145
22.5 Study recommendations 145

Appendices

Appendix A Stakeholder consultations
Appendix B Summary of all IDP infrastructure projects

EXECUTIVE SUMMARY

1. Peter Brett Associates (PBA) LLP was commissioned by Harborough District Council to prepare this Infrastructure Delivery Plan (IDP) 2017 as an evidence base to support the new Harborough District Local Plan (2011 – 2031).

2. The scope of this study is to assess the infrastructure requirements, costs priorities and funding relating to the planned growth in the Harborough District Local Plan. The study has considered a range of infrastructure such as utilities, transport, education, health, open space, sports, cemetery and burial grounds, community village hall facilities, waste, flood and drainage infrastructure and library facilities.

3. The approach adopted in preparing the IDP is in accordance with the requirements of the National Planning Policy Framework. This IDP has been prepared in parallel with the work to prepare the Harborough District Viability Study. The findings of the IDP have been informed by the emerging Viability Study (June 2017) findings, which in turn has been informed by the IDP Study - thus an iterative process has been adopted.

4. The plan growth is to be met at two Strategic Development Areas - Scraptoft North -1,200 dwellings, and East of Lutterworth 1,500 dwellings during the plan period and 1,250 dwellings post plan period. Market Harborough has 1,126 dwellings and the rest of the District is expected to provide 1060 dwellings. Various employment sites are proposed in the local plan, there is potential for additional strategic distribution development adjoining Magna Park and some retail mainly in Market Harborough and Lutterworth.

5. As part of this IDP study a number interviews were undertaken with infrastructure service providers (see Appendix A). The IDP is based on available assessments, service provider and site promoter inputs.

6. The bulk of the service provider consultations were undertaken during 2016 and supplemented with further consultations in summer of 2017. In between this time, further assessments, particularly relating to transport have been undertaken by site promoters and HDC to inform the scale of infrastructure likely to be required. Indeed, various assessments will continue to be undertaken to refine the understanding and requirements for the planned growth up to the point of delivery.

7. Table 1 overleaf provides a summary of the total identified plan period infrastructure costs. This shows a total estimated infrastructure cost of approximately £155m for the plan period. Infrastructure planning is not static, and the IDP assessment presented in table 1 is based on information available at a point in time and will be continuously changing.

8. The study has found that there are currently no identifiable issues with the provision of infrastructure requirements that would prevent the delivery of the two SDAs, the aggregation of the various development sites proposed for Market Harborough and the rest of the District. Though much of the infrastructure, particularly utilities infrastructure, is nearing capacity and will need close liaison with service providers to ensure timely upgrades and delivery.

9. There are some matters that will be require further investigation, (e.g. waste water treatment discharge permits, transport capacity of Frank Whittle roundabout, public transport, and cross boundary infrastructure requirements) for the East of Lutterworth SDA/Magna Park and (off site transport infrastructure and provision of land for a cemetery) for the Scraptoft North SDA. The land ownership and the relocation of the Scraptoft Golf Course introduces a slight complication to the Scraptoft North SDA scheme, but we understand there are plans in hand to manage this. Similarly, in the case of East of Lutterworth SDA, there is a need to acquire some land to support the delivery of the M1 road crossing, but again, we understand plans are in place to accommodate this. Whilst not presently believed to be insurmountable these matters will need considerable engagement by all of the relevant parties to resolve and as much forward planning as possible.

Table 1 Estimated infrastructure costs[1]

Total plan and post plan costs, phasing and priority	Cost phase 1: 2016 to 2020	Cost phase 2: 2021 to 2025	Cost phase 3: 2026 to 2031	Plan period total cost (2016 - 2031)	Post plan period cost
Critical					
Drainage and flood mitigations	£3,844,958	£3,844,958	£3,119,958	£10,809,875	£3,053,292
Land preparation / profiling	£10,867,419	£166,667	£166,667	£11,200,752	£0
Strategic site landscaping	£583,333	£333,333	£583,333	£1,500,000	£0
Strategic site noise mitigation	£462,500	£462,500	£0	£925,000	£0
Transport - pedestrian routes / public realm	£0	£1,200,000	£0	£1,200,000	£0
Transport - pre adoption costs and fees	£10,258,494	£1,128,494	£1,128,494	£12,515,482	£728,494
Transport highways	£7,474,151	£5,154,167	£4,666,667	£17,294,984	£2,000,000
Utilities, connections and diversions	£2,083,333	£2,083,333	£2,083,333	£6,250,000	£1,250,000
Critical Total	**£35,574,188**	**£14,373,452**	**£11,748,452**	**£61,696,093**	**£7,031,786**
Essential					
Community space	£69,946	£2,083,097	£2,911,115	£5,064,158	£1,481,250
Drainage and flood mitigations	£15,000	£0	£0	£15,000	£0
GP facilities	£61,491	£1,511,782	£2,044,955	£3,618,229	£937,365
Primary school new build	£0	£10,676,000	£943,722	£11,619,722	£4,397,970
Primary school extension	£209,071	£2,705,820	£2,662,748	£5,577,639	£0
Primary school SEND	£6,965	£176,408	£231,616	£414,989	£106,168
Secondary school extension	£297,135	£5,533,237	£5,939,080	£11,769,453	£0
Secondary school SEND	£21,827	£552,873	£725,895	£1,300,596	£332,735
Strategic site landscaping	£0	£250,000	£0	£250,000	£0
Transport cycleways	£1,136,667	£1,036,667	£1,036,667	£3,210,000	£0
Transport highways	£8,564,197	£12,321,667	£2,006,667	£22,892,530	£0
Transport public transport & travel demand	£733,333	£733,333	£733,333	£2,200,000	£500,000
Cemeteries	£10,750	£272,295	£357,510	£640,555	£163,875
Civic amenity and waste management	£5,860	£144,565	£207,293	£357,718	£100,000
Open space, sports, allotments, parks, natural and semi natural space	£350,478	£11,899,998	£10,688,477	£20,217,407	£4,511,250
Essential Total	**£11,482,720**	**£49,897,743**	**£30,489,077**	**£89,147,994**	**£12,530,613**
Desirable					
Drainage and flood mitigations	£13,333	£13,333	£13,333	£40,000	£0
library expansion	£2,255	£57,118	£74,993	£134,365	£34,375
Tranport traffic management	£83,333	£83,333	£83,333	£250,000	£0
Transport - pedestrian routes / public realm	£250,000	£250,000	£250,000	£750,000	£0
Transport cycleways	£30,000	£30,000	£30,000	£90,000	£0
Transport highways	£666,667	£666,667	£666,667	£2,000,000	£0
Transport public transport & travel demand	£296,667	£296,667	£296,667	£890,000	£0
Desirable Total	**£1,342,255**	**£1,397,118**	**£1,414,993**	**£4,154,365**	**£34,375**
Grand Total	**£48,399,163**	**£65,668,312**	**£43,652,522**	**£154,998,451**	**£19,596,774**

10. With the identified infrastructure requirements and estimated costs, and by reference to the interim findings of the viability assessments undertaken by Aspinall Verdi in June 2017, the proposed SDAs appear capable of being viable and hence deliverable. For the purpose of the IDP, it has been agreed with the HDC that the two SDA's are able to meet the identified infrastructure costs and any further viability iterations will be set out in the final Harborough District Viability Study by Aspinall Verdi.

11. Table 2 overleaf provides a summary of the estimated infrastructure funding gap after taking account of the estimated developer contributions based on the emerging Harborough Viability

[1] See section 3.5 for an explanation of the infrastructure catefories.

Study (June 2017) findings. At the Plan and Post plan level assessment, the findings set out in table 2 show that the SDAs are able to meet all their estimated infrastructure costs, as is the planned growth in the rest of the District.

Table 2 Estimated infrastructure funding gap

Location	Total planned growth (plan period)	Total estimated cost	Estimated developer contributions	Infrastructure funding gap
Lutterworth East SDA	1,500dwellings	£84,385,044	£84,385,044	£0
Scraptoft North SDA	1,200 dwellings	£28,577,379	£28,577,379	£0
Market Harborough	1126 dwellings	£27,692,425	£23,646,000	£4,046,425
Rest of District	1060 dwellings	£14,343,602	£14,343,602	£0
Totals	**6136 dwellings**	**£154,998,451**	**£150,952,026**	**£4,046,425**

12. The identified funding gap of approximately £4m identified in table 2 above relates primarily to transport infrastructure requirements identified for Market Harborough. In discussion with officers from Leicestershire County Council (LCC), these costs have been classified as 'desirable' and are not likely to prevent the delivery of planned growth from proceeding. The costs making up this funding gap relate to projects which cannot be directly related to any specific planned growth and cannot be levied as a S106 planning obligation. This infrastructure will therefore be dependent on funding and grant bids from mainstream public sector sources for the time being.

13. The funding gap analysis is based largely on all growth related infrastructure costs being met by developer contributions linked to the planned growth. This is because the emerging viability evidence indicated there was sufficient overage to contribute towards the identified costs and also because there is very limited known mainstream public sector funding currently available to support the delivery of growth related infrastructure.

14. Some mainstream infrastructure funding is likely to become available to supplement the needs of planned infrastructure, and similarly new innovative mechanisms for funding infrastructure via third party investments may also be identified in the future (e.g. for health for instance). Service providers should not assume that all infrastructure identified in this IDP will necessarily be funded by developers. At site specific delivery level, account will be taken of any existing capacity, viability and other infrastructure funding that might be available to support the delivery of the infrastructure.

15. This study of infrastructure is to support a strategic process. The IDP should be treated as a sketch plan rather than a detailed route map to delivery. As development plans are advanced, then more specific assessments will need to be carried out to provide more precision on the infrastructure needs and costs having regard to circumstances at the time.

16. The IDP should be refined and updated, possibly on an annual basis, and treated as a 'live toolkit'. It has the potential as a tool to add value beyond the preparation of the Local Plan in supporting the delivery of growth and securing prioritised infrastructure.

1 STUDY SCOPE APPROACH AND POLICY

1.1 Introduction

1.1.1 Peter Brett Associates (PBA) LLP was commissioned by Harborough District Council to prepare this Infrastructure Delivery Plan (IDP) 2017 as an evidence base to support the new Harborough District Local Plan (2011 – 2031).

Study scope

1.1.2 This IDP responds to the following questions:

- What are the infrastructure requirements and costs of meeting the Local Plan growth and when is the infrastructure likely to be needed;
- What is the estimated developer and mainstream infrastructure funding available to meet the infrastructure costs;
- How should infrastructure be prioritised to support delivery of planned growth;
- What other funding sources, efficiency/innovative service delivery measures are needed to help support infrastructure delivery; and
- What else might assist the delivery of infrastructure to support the planned growth.

Previous work

1.1.3 Prior to commencing work on the IDP, PBA supported HDC during May – June 2016 in assessing the deliverability of three shortlisted Strategic Delivery Areas by facilitating a series of developer workshops and infrastructure service provider interviews with stakeholders representing transport, utilities, and education. This reviewed the infrastructure evidence (where provided by promoters), highlighted key infrastructure requirements, sought clarification and agreement on approach to assessing cost assumptions, identified potential areas of concerns, and landownership considerations, trajectory and start date considerations, overall site opening cost and S106 cost analysis.

1.1.4 The assessment findings were presented to a HDC officer group in detail and a summary outline was presented to the Executive Member Working Group at its meeting on 17th June 2016. The final assessment and choices informing the preferred SDA sites was undertaken by HDC.

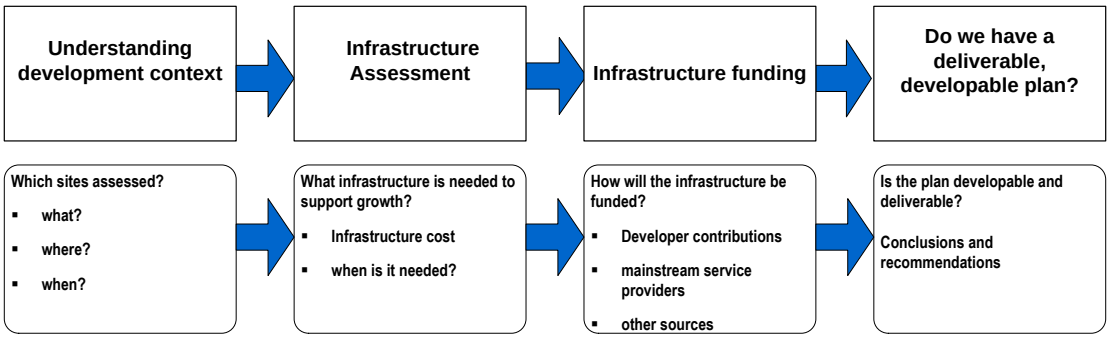
1.2 Research, developer engagement and consultations

1.2.1 The bulk of the research informing this IDP study was undertaken during autumn of 2016. As part of this IDP study a number interviews were undertaken with infrastructure service providers (see Appendix A for a list of consultees).

1.3 Study approach

1.3.1 Figure 1.1 illustrates the study approach to assess the deliverability of the planned growth.

Figure 1.1 Study approach process diagram



PBA 2016

1.3.2 The study approach is outlined below.

PART 1: Understanding of the development context

1.3.3 The starting point of the study is to establish an understanding of the planned growth. The quantum and timing of development in the local plan will influence the amount of infrastructure required at a given point in time.

PART 2: Infrastructure assessment

1.3.4 This section of the study sets out what infrastructure is required to support the unconsented planned growth. This looks at how much that infrastructure costs, and when it is needed.

PART 3: Infrastructure funding

1.3.5 This section investigates how the plan growth related infrastructure will be funded. This investigates whether public sector mainstream funding might help pay for development, and what the estimated level of developer funding there is to support the requirements.

1.3.6 The developer funding estimation for this IDP have been informed by the Whole Plan Viability assessment by Aspinall Verdi that is taking place in parallel with this study.

PART 4: Delivery recommendations

1.3.7 This section pulls together the findings from the infrastructure assessment to inform the conclusions and recommendations for the study.

1.4 National policy on infrastructure

Infrastructure planning is a strategic priority

1.4.1 Infrastructure planning needs to be part of the 'strategic priorities' for the Local Plan preparation. The NPPF requires authorities to demonstrate that infrastructure will be available to support development.

1.4.2 The NPPF states '*Local Plans should '… plan positively for the development and infrastructure required in the area to meet the objectives, principles and policies of this Framework*' (paragraph 157).

1.4.3 Paragraph 162 of the NPPF highlights the need for joint working with infrastructure service providers to assess the quality and capacity of infrastructure and forecast demands, taking account of strategic infrastructure including nationally significant infrastructure.

1.4.4 The NPPF also states '*It is equally important to ensure that there is a reasonable prospect that planned infrastructure is deliverable in a timely fashion. To facilitate this, it is important that local planning authorities understand district-wide development costs at the time Local Plans are drawn up*.' (paragraph 177)

Deliverability and developability considerations of the Plan

1.4.5 The NPPF also requires considerations of deliverability to be taken account of. Paragraph 177 states:

'It is equally important to ensure that there is a reasonable prospect that planned infrastructure is deliverable in a timely fashion. To facilitate this, it is important that local planning authorities understand district-wide development costs at the time Local Plans are drawn up.'

1.4.6 Specifically, in relation to housing, NPPF (paragraph 47) requires local planning authorities to:

- Identify and update annually a supply of specific deliverable sites sufficient to provide five years' worth of housing against their housing requirements and
- Identify a supply of specific, developable sites or broad locations for growth, for years 6-10 and, where possible, for years 11-15;

1.4.7 The NPPF uses the two concepts of 'deliverability' (which applies to residential sites in Years 0-5 of the plan) and 'developability' (which applies to year 6 onwards of the plan). The NPPF defines these two terms as part of paragraph 47 footnote 11 as follows:

- To be deliverable, 'sites should be available now, offer a suitable location for development now, and be achievable, with a realistic prospect that housing will be delivered on the site within five years and in particular that development of the site is viable.' Paragraph 47 footnote 11
- To be developable, sites expected in Year 6 onwards should be able to demonstrate a *'reasonable prospect that the site is available and could be viably developed at the point envisaged'*. Paragraph 47 footnote 12

1.4.8 The NPPF advises that a more flexible approach may be taken to the sites coming forward in the period after the first five years.

1.4.9 Based on the preliminary conclusions of the Inspectors examining Local Plans, it is also important to demonstrate that a strong plan is in place to support the delivery of strategic infrastructure needed to support the longer term planned growth.

Community Infrastructure Levy and strategic sites

1.4.10 The Community Infrastructure Levy (CIL) is a planning charge that became available to local authorities on 6 April 2010. The levy allows local authorities in England and Wales to raise contributions from development to help pay for infrastructure that is needed to support planned development. Local authorities who wish to charge the levy must produce a draft charging schedule setting out CIL rates for their areas.

1.4.11 The purpose of CIL is to enable the charging authority to carry out a wide range of infrastructure projects. CIL is not expected to pay for all infrastructure requirements but could make a significant contribution. However, development specific planning obligations (commonly known as S106) to make development acceptable will continue with the introduction of CIL. In order to ensure that planning obligations and CIL operate in a complementary way, CIL Regulations 122 and 123 place limits on the use of planning obligations.

1.4.12 The impact of higher development costs sometimes associated with strategic sites is recognised by the CIL guidance; this states that a charging authority should take development costs into account when setting its levy rates, particularly those likely to be incurred on strategic sites or brownfield land. A realistic understanding of site specific infrastructure requirements for strategic sites is essential to the proper assessment of viability and any CIL charge setting.

1.4.13 The CIL Review Team published its findings in a report titled 'A new Approach to developer Contributions' in February 2017. This paper presents a comprehensive review of the current operation of CIL and its relationship to s106 and makes a number of recommendations which could significantly change the current CIL system if accepted by the Government.

1.4.14 The Housing White Paper published by the Government in February 2017 postponed consideration of the future of the CIL and s 106 funding regimes to Autumn 2017 at which time the Government will respond to the paper prepared by

1.4.15 The assessment of the infrastructure requirements has taken account of the latest legislation relating to developer contributions. However, the Council may need to review the findings of this IDP in respect to developer contributions to take account of any changes to regulations relating to developer funding.

PART 1 GROWTH PLANS

This stage of the assessment is important, because the amount and timing of planned development in the area will influence the amount of infrastructure required at a given point in time.

2 PLANNED GROWTH NEEDING SUPPORTING INFRASTRUCTURE

2.1 Introduction

2.1.1 This section outlines the planned growth to inform the infrastructure assessment. The amount and timing of development in the area will influence the amount of infrastructure required at a given point in time. This IDP assessment is based on the known growth information provided by HDC as at May 2017. It should be noted that the final quantum and location of growth will be continuously refined as further information becomes available and refinements are made to the trajectory.

2.2 The Local Plan housing and employment growth requirements

2.2.1 Table 2.1 overleaf sets out the housing trajectory used to inform this IDP assessment. Table 2.1 shows a total trajectory of 4,886 dwellings during the plan period and 1,250 dwellings to be provided during the post plan period. This trajectory of planned and post plan growth forms the basis of informing this IDP study assessment.

2.2.2 The scale and distribution of growth reflects the settlement hierarchy prepared by HDC. The distribution of the planned growth across the District is shown in figure 2.1 overleaf.

2.2.3 The bulk of the plan growth is to be met at two Strategic Development Areas (SDA) known as land to the Scraptoft North SDA with 1,200 dwellings, and East of Lutterworth SDA with 1,500 dwellings during the plan period and 1,250 dwellings to be delivered during the post plan period (total 2,750 dwellings).

2.2.4 Market Harborough has 1,126 dwellings identified across a number of sites throughout the town. Various locations in the rest of the District including an allowance for windfall growth is expected to provide 1060 dwellings.

2.2.5 Note the trajectory informing this IDP is based on the known growth as at May 2017. It is likely that as the Local Plan moves towards Examination there will be slight amends to this trajectory as the IDP is a point in time assessment.

2.2.6 Figure 2.2 overleaf sets out the location of the allocated and potentially allocated employment and retail uses informing the IDP assessment. Table 2.2 overleaf sets out the general location and indicative distribution of the planned / potential allocation of employment, strategic distribution and retail growth.

Table 2.1 Proposed housing growth trajectory informing the IDP

Settlement hierarchy	Location	Phase 1: 2016 to 2020	Phase 2: 2021 to 2025	Phase 3: 2026 to 2031	Total plan growth	Total post plan	Total growth 2016 - 2031 + post plan
Plan wide - windfall	Windfall	0	100	125	225	0	225
Key Centre	East of Lutterworth SDA	0	412	1088	1500	1250	2750
Principal Urban Area	Scraptoft North SDA	0	526	674	1200	0	1200
Sub Regional Centre	Market Harborough	62	472	592	1126	0	1126
Rural Centre	Billesdon	0	12	0	12	0	12
Rural Centre	Fleckney	0	100	195	295	0	295
Rural Centre	Great Glen	0	0	35	35	0	35
Rural Centre	Houghton on the Hill	0	50	13	63	0	63
Selected Rural Village	Bitteswell	0	30	0	30	0	30
Selected Rural Village	Church & East Langton	0	30	0	30	0	30
Selected Rural Village	The Claybrookes	0	50	0	50	0	50
Selected Rural Village	Dunton Bassett	0	40	0	40	0	40
Selected Rural Village	Foxton	10	0	0	10	0	10
Selected Rural Village	Gilmorton	0	27	0	27	0	27
Selected Rural Village	Great Easton	0	31	0	31	0	31
Selected Rural Village	Hallaton	0	35	0	35	0	35
Selected Rural Village	Lubenham	0	35	0	35	0	35
Selected Rural Village	Medbourne	0	31	0	31	0	31
Selected Rural Village	North Kilworth	0	0	0	0	0	0
Selected Rural Village	South Kilworth	0	21	0	21	0	21
Selected Rural Village	Swinford	0	40	0	40	0	40
Selected Rural Village	Tilton	0	35	0	35	0	35
Selected Rural Village	Tugby	10	0	5	15	0	15
Total unconsented plan growth to inform IDP 2017		**82**	**2077**	**2727**	**4886**	**1250**	**6136**

Source: Harborough District Council (May 2017)

Figure 2.1 Planned housing growth informing the IDP assessment

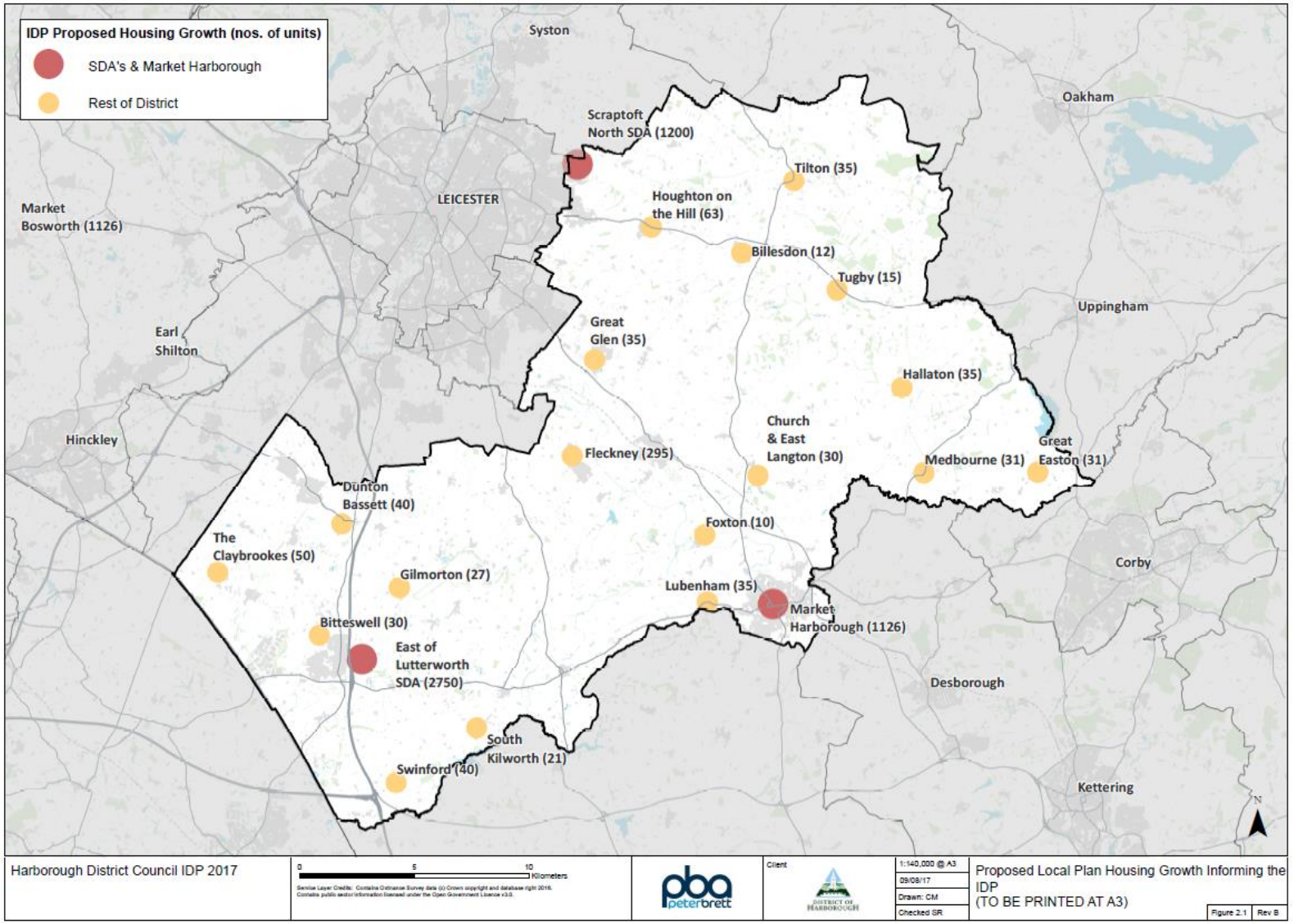
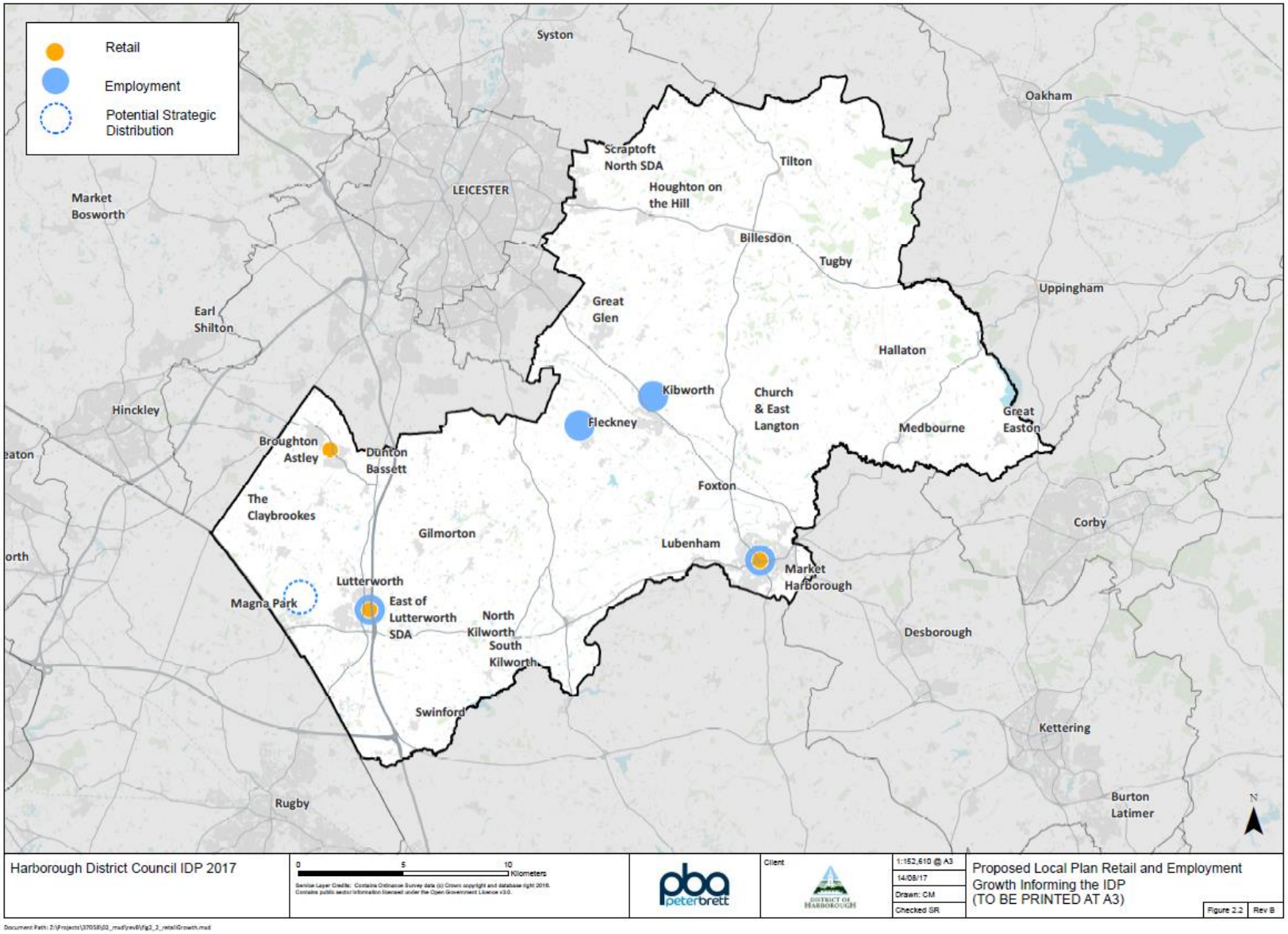


Table 2.2 Planned and potential employment, strategic distribution and retail growth informing the IDP

Employment provision – Office, industrial and non-strategic storage and distribution	
Market Harborough - a minimum of 24 ha	▪ Land at Airfield Farm (North West Market Harborough SDA) – approximately 13 hectares; ▪ Airfield Business Park, Leicester Road - approximately 6 hectares; and ▪ Compass Point Business Park, Northampton Road - approximately 5 hectares.
Lutterworth - a minimum of 26 ha	▪ 10 hectares of business use (B1 and B2) as part of the East of Lutterworth Strategic Development Area (SDA); ▪ 13 hectares of storage and distribution use on land to the south of the A4303 as part of the East of Lutterworth SDA; Land south of Lutterworth Road/Coventry Road – approx. 3 hectares.
Fleckney – approximately 3 ha	▪ Land off Marlborough Drive, Fleckney - approximately 3 hectares
Kibworth – approximately 6 ha	▪ Land south and west of Priory Business Park, Kibworth - about 6 hectares
Strategic distribution as an extension to or well related to Magna Park	
Magna Park – potential strategic distribution provision of up to 175 ha	
Retail provision – of up to 4,300 sq.m (gross) convenience and 10,100 sq.m (gross) of comparison floorspace	
Market Harborough	▪ 3,100 sq.m (gross) convenience and 8,000 sq.m (gross) comparison
Lutterworth	▪ Lutterworth town - 1000 sq.m (gross) comparison ▪ Lutterworth SDA - 1,000 sq.m (gross) of convenience floorspace and approx. 500 sq.m (gross) of comparison floorspace
Broughton Astley	▪ Broughton Astley: 200 sq.m (gross) convenience and 200 sq.m (gross) comparison.

Source: HDC (August 2017)

Figure 2.2 Planned and potential employment and retail growth informing the IDP



This study is assessing unconsented planned growth

2.2.7 To avoid double counting, this study assesses the infrastructure requirements for growth without planning permission ('unconsented growth'). This is because it is assumed that if jobs and homes already have permission, then sufficient infrastructure to cope with new demand is in place or developer contributions have been secured. Any other approach would risk double-counting infrastructure requirements, and therefore arriving at an artificially high infrastructure requirement for growth in the area.

2.2.8 Existing completions and consented commitments represent some 7,526 dwellings[2].

2.2.9 Whilst this study does not formally cost infrastructure delivered or secured as part of consented growth plans, account is taken of it, in terms of impact on existing infrastructure capacity. The Five Year Housing Land Supply Position Statement dated 12th July 2017, provides some background on where the completions have taken place and on those sites classed as 'allocated with planning consent'.

2.2.10 Significant consented sites included in the five-year housing land supply position statement are summarised below.

a. Market Harborough Strategic Development Area

- Land at Airfield Farm, west of Leicester Road and north of Lubenham Hill – representing total permitted dwellings of 1,500 dwellings to be built out during the plan period.

b. 2001 Local Plan site allocations including:

- Land at Farndon Road, Market Harborough – representing total permitted units of 629 dwellings forecast to be completed by 2019;
- Land at Warwick Road, Kibworth - representing total permitted units of 549 dwellings forecast to be completed by 2018; and
- Land at Stretton Road, Great Glen - representing total permitted units of 281 dwellings forecast to be completed by 2018.

c. Additional large commitments:

- Land at Charity Farm, Bushby – 275 dwellings to be completed by 2019;
- Land at Farndon Road, Market Harborough – an additional 230 dwellings as an extension to the existing site above;
- Land off Beeby Road, Scraptoft – 178 dwellings to be completed by 2023;
- Land at Coventry Road and Broughton Way, Broughton Astley – 187 and 310 dwellings to be completed by 2023 and 2025 respectively;
- Land at Coventry Road, Lutterworth – 250 dwellings expected to be completed by 2025; and
- Land at Warwick Road and Fleckney Road, Kibworth – 110 and 195 dwellings consented.

[2] As at 31st March 2017 based on HDC 5-year housing supply position statement dated 12th July 2017

Assumed average household size

2.2.11 Based on assumptions included in the Leicester and Leicestershire Housing and Economic Development Needs Assessment (HEDNA), 2017 and confirmation by the District Council, where required, this study has assumed 2.3 people as the average household size. In reality, this assumption will vary, it is based on the latest available information.

Settlement hierarchy to support sustainable development

2.2.12 The vision for the new Harborough District Local Plan seeks to ensure that new development is located in the most sustainable locations, with the market towns of Market Harborough and Lutterworth, along with the edge of Leicester settlements, Broughton Astley and the rural centres as the focus for development.

2.2.13 There is a settlement hierarchy which includes the Principal Urban Area (PUA) for settlements which form part of the built up area of Leicester, the sub regional centre of Market Harborough, and Key Centres of Lutterworth and Broughton Astley, through to Rural Centres such as Billesdon, Fleckney, Great Glen, etc. and Selected Rural Villages such as Tugby, Great Bowden, and Church Langton.

2.2.14 The settlement hierarchy informed the IDP assessment, however, this was then refined to reflect the locations where the bulk of the growth is proposed, including the two Sustainable Development Areas (East of Lutterworth and Scraptoft North), general development in Market Harborough and the rest of the District.

PART 2 INFRASTRUCTURE ASSESSMENT

This section sets out the detailed infrastructure assessment to support the unconsented planned growth. The assessment is presented for each infrastructure category.

3 APPROACH TO INFRASTRUCTURE ASSESSMENT

3.1 Introduction

3.1.1 Here we set out our approach to the infrastructure assessment.

3.2 Planning Act definition of infrastructure

3.2.1 The 2008 Planning Act section 216 (2) provides an inclusive list of infrastructure as follows:

- roads and other transport facilities;
- flood defences;
- schools and other educational facilities;
- medical facilities;
- sporting and recreational facilities; and
- open spaces.

3.2.2 As this list is 'inclusive', the Act effectively gives a very broad definition of infrastructure, covering all generally understood meanings of the term and certainly those items listed. The Planning Act 2008 and subsequent CIL regulations are deliberately drafted to give local authorities as much discretion as possible over deciding what is included in their definition of infrastructure.

3.2.3 The infrastructure assessed as part of this this study includes the following[3]:

- Transport;
- Education;
- Outdoor leisure, green infrastructure, allotments;
- Cemeteries;
- Community facilities and libraries;
- Health;
- Waste and recycling;
- Flood mitigation; and
- Utilities and drainage.

3.3 Guiding principles to assessing infrastructure requirements

3.3.1 This section sets out some guiding principles informing the infrastructure requirements.

[3] An attempt was also made to include the emergency service (police, fire and ambulance) infrastructure – however, due to staff changes and resources these service providers were unable to engage with this IDP and inputs will be captured at future updates of the IDP.

Infrastructure requirements of future unconsented growth

3.3.2 This infrastructure assessment will focus on the infrastructure requirements of housing and jobs growth arising from the planned growth for the period 2017 to 2031[4]. The assessment focuses on infrastructure requirements of unconsented growth. As those sites with planning permission have already been subject to negotiated developer contributions or an assessment of capacity in existing infrastructure.

Transport infrastructure is treated differently

3.3.3 A slightly different approach is used to assessing transport requirements. We take account of schemes intended to address existing deficiencies and planned growth in the IDP as often it is difficult to disaggregate the two. Incremental S106 agreements on undeveloped sites with planning permission can often mitigate very local transport impacts of growth but can fail to capture the cumulative impacts of growth on strategic transport infrastructure[5]. To deal with transport requirements, the assessment has included all requirements (growth related and existing deficit).

Published data and service provider inputs

3.3.4 The IDP assessment has relied on service providers' calculation of population projections to inform future infrastructure requirement estimates. Understandably these will need to be monitored to ensure the projections reflect actual requirements. Where possible, this assessment has used service providers' own estimates of the cost of their infrastructure requirements based on their knowledge of delivery and recent examples. These cost estimates are based on current prices.

Approach to infrastructure requirements

3.3.5 It is not desirable to load an infrastructure assessment with a gold-plated "wish list" of perceived needs. The NPPF is clear about ensuring a balance is struck between infrastructure requirements and the need to ensure deliverable plans:

> '*The plan should not be subject to such a scale of obligations and policy burdens that their ability to be developed viably is threatened....*' NPPF paragraph 173.

3.3.6 A pragmatic approach has been adopted that balances deliverability with providing sufficient infrastructure to ensure that sustainable growth is properly catered for. It has not been the purpose of this study to negotiate with service providers in order to strip unrealistic infrastructure requirements out of their plans, but inevitably there will be greater clarity on infrastructure that is required to make development acceptable at the planning application stage.

3.4 When is infrastructure required?

3.4.1 Where available, we have used the site promoters' and service providers' inputs to inform the assessment of when infrastructure might be required to support different sites and phases of development. We caution that this is not always an exact science. This very much depends on actual take up, economic cycles, the scale of 'pain or stress' that might be considered acceptable by service providers, technological change and so on. In some instances, more detailed assessments may be needed closer to delivery timescales to inform thresholds levels for when capacity will be reached.

[4] Note in some instances post plan growth infrastructure requirements have also been assessed.

[5] This is less of a problem with infrastructure such as schools or primary care, because growth impacts are generally confined within catchment areas.

3.5 What are the infrastructure priorities?

3.5.1 The final decisions on priorities will rest with elected representatives and informed by their officers. This study starts to provide a professional input to assist the process of making these decisions. We have categorised different infrastructure costs into three levels of priority, in the expectation that subsequent work will review the choices made.

3.5.2 The following categorisation has been adopted for this study:

- Critical enabling this category would apply to infrastructure which would be required as a direct result of the proposed growth and would have to be implemented if the development was to go ahead (for instance utilities, sewerage, drinking water, site access);
- Essential mitigation this category includes all infrastructure that we believe is necessary to mitigate the impacts arising from the development. The usual examples of essential mitigation are projects which mitigate impacts from trips or population associated with a development, including school places, health requirements and public transport (service) projects; and
- Desirable this defines all projects that are deemed to be of benefit but would not prevent, on balance, the development from occurring or from being acceptable if they were not taken forward.

3.5.3 The final decisions on future spending priorities and classification will rest with HDC; this study provides a starting point to inform the process. Ultimately, it will be necessary to prioritise both within theme areas (say, prioritising the most important transport projects) and also between theme areas (say, deciding to invest in transport facilities, rather than education facilities).

3.6 Categories of infrastructure outside the scope of this assessment

3.6.1 The following categories of infrastructure are excluded from this study:

- Nationally provided infrastructure is outside our scope (e.g. courts, prisons, hospitals);
- Care homes. These are excluded from infrastructure costs. Whilst there may be an aspiration to support their delivery, care homes are part of a quasi-private market in older people's residential care. Social care budgets pay for some places, whereas others are privately purchased;
- Hospitals. Some of the latest NHS asset options being considered could include significant primary health care provision within local community extended GP facilities as part of a remodelling of service delivery and to take the pressure of routine work at hospitals. However, as the assessment of this is at an early stage, the costs of acute / primary health care provision has not been included in the IDP. These costs can be significant and will be part of a government review of NHS service provision;
- Pharmacies and optometrists. The NHS does not financially support the initial provision or ongoing costs of pharmaceutical and optometric premises. This is a classed as a private sector function, and is therefore excluded from our study; and
- Dental Premises. Dentists are contracted by the NHS to provide an agreed level of units of dental activity. For this they receive an income. Running costs are charged against this income.

4 UTILITIES INFRASTRUCTURE

4.1 Introduction

4.1.1 Utilities infrastructure is categorised as 'critical enabling infrastructure' because this type of infrastructure is usually required as a direct result of the proposed growth and would have to be implemented if the development was to go ahead (for instance sewerage infrastructure, drinking water, and energy supply).

4.1.2 The section includes an assessment of the following utilities infrastructure:

- Potable water;
- Waste water;
- Electricity;
- Gas; and
- Telecommunications and broadband.

4.2 How this study deals with utilities infrastructure?

4.2.1 Utilities infrastructure assessment has been treated as follows:

- This assessment has investigated the extent to which utilities infrastructure may represent an obstacle to jobs and housing growth. It may be, for example, that utility provision is at capacity, and that further growth is impossible until further investment takes place.
- The focus for the utilities infrastructure assessment is to understand if there are likely to be any technical or licensing problems in servicing the planned growth with utilities infrastructure in a timely manner aligned to the planned growth trajectory.
- The general principle involved is that the utility companies as required will meet the cost of strategic investment with capital raised through private debt or equity capital as they see fit, and in return for the income generated from sales to domestic and commercial customers.
- However, in some instances additional infrastructure may be required to create connections to existing plant. In these instances, the cost of any additional infrastructure may be paid for by either the developer and / or the utility provider depending on the individual specific circumstances. Utility costs can vary depending on capacity at a point in time and length of connection needed.
- For the non SDA's areas, it is assumed that the developer will deduct any additional utility costs incurred, off the value they offer for the land – this cost will be reflected in the viability assessment and it is not duplicated in the IDP.
- For the SDA's, the scheme promoters have provided estimate utility costs (see Part 3 Infrastructure Costs and Funding Gap), and these have been included in the IDP which in turn informs the cost inputs for the SDA viability assessments (undertaken by Aspinall Verdi) to inform the residual land value.

4.3 Interpreting the critical path analysis

4.3.1 Where available, the findings for the utilities assessment have been set out in a critical path analysis tables using red, amber and green bars for each infrastructure category. This helps to provide a quick visual presentation of any infrastructure capacity issues for the strategic sites assessed as part of this study. The traffic lights for the critical path analysis can be interpreted as follows:

- A red bar indicates a need for some immediate infrastructure before growth can take place. It is important to note that in some instances, there may be planned solutions to address the capacity deficit in the imminent future and the red bar could soon change to green or amber once the solution is implemented. Development may be possible during this period, but may result in some services being 'stretched or facing congestion'.

- An amber bar indicates that a capacity limit to growth is expected, and there is a need to proceed with caution and plan for additional capacity.

- A green bar indicates that there is sufficient capacity to deliver growth.

5 UTILITIES POTABLE WATER

5.1 Introduction

5.1.1 This section sets out the findings for potable (drinking) water infrastructure. The responsibility for the operational and maintenance of the existing potable water network across the Harborough District is Severn Trent Water plc (STW).

5.1.2 This section has been informed by consultation with STW and a list of the consultees may be found in Appendix A.

5.1.3 A review has been undertaken of the following documents:

- Severn Trent Water: Final Water Resources Management Plan 2014; and
- Severn Trent Water: Strategic Direction Statement 2010-2035.

5.2 How is the infrastructure structured?

5.2.1 STW currently provide clean water to 7.7 million people. The STW potable infrastructure network comprises the following:

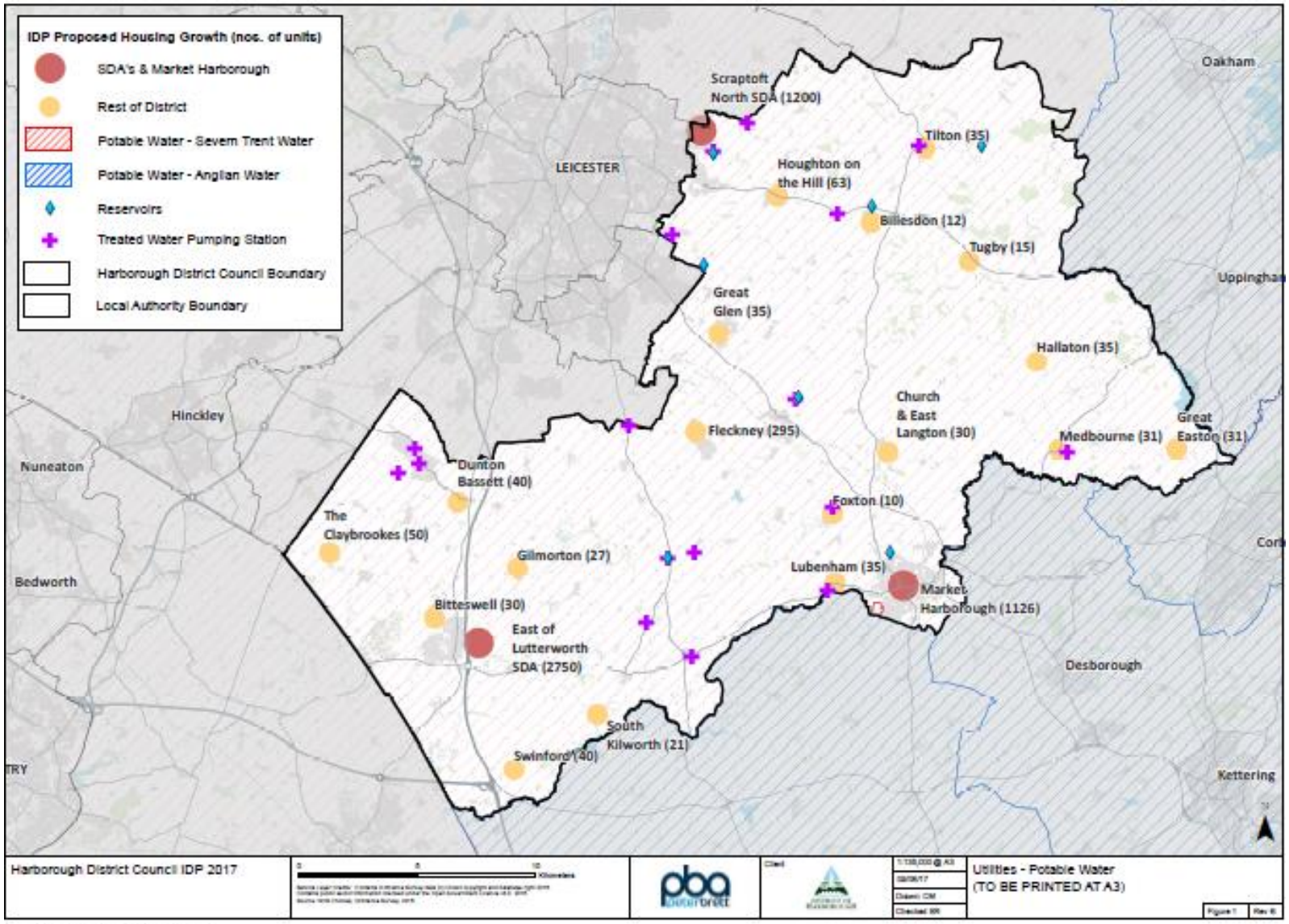
- 126 potable water treatment work; and
- 47,000 kilometres network of water mains.

5.2.2 A plan showing the potable water boundaries and existing potable treatment infrastructure is set out in figure 5.1 overleaf. The Harborough District is served by STW, with their potable water boundary aligning with the south and east boundaries of the district, which is the border between the area served by STW and that served by Anglian Water Services Ltd.

5.2.3 The STW supply area is divided into 15 water resources zones. These zones vary widely in scale, with Harborough falling within the largest of these, known as the ‘Strategic Grid Water Resource Zone’, which supplies the majority of STW customers.

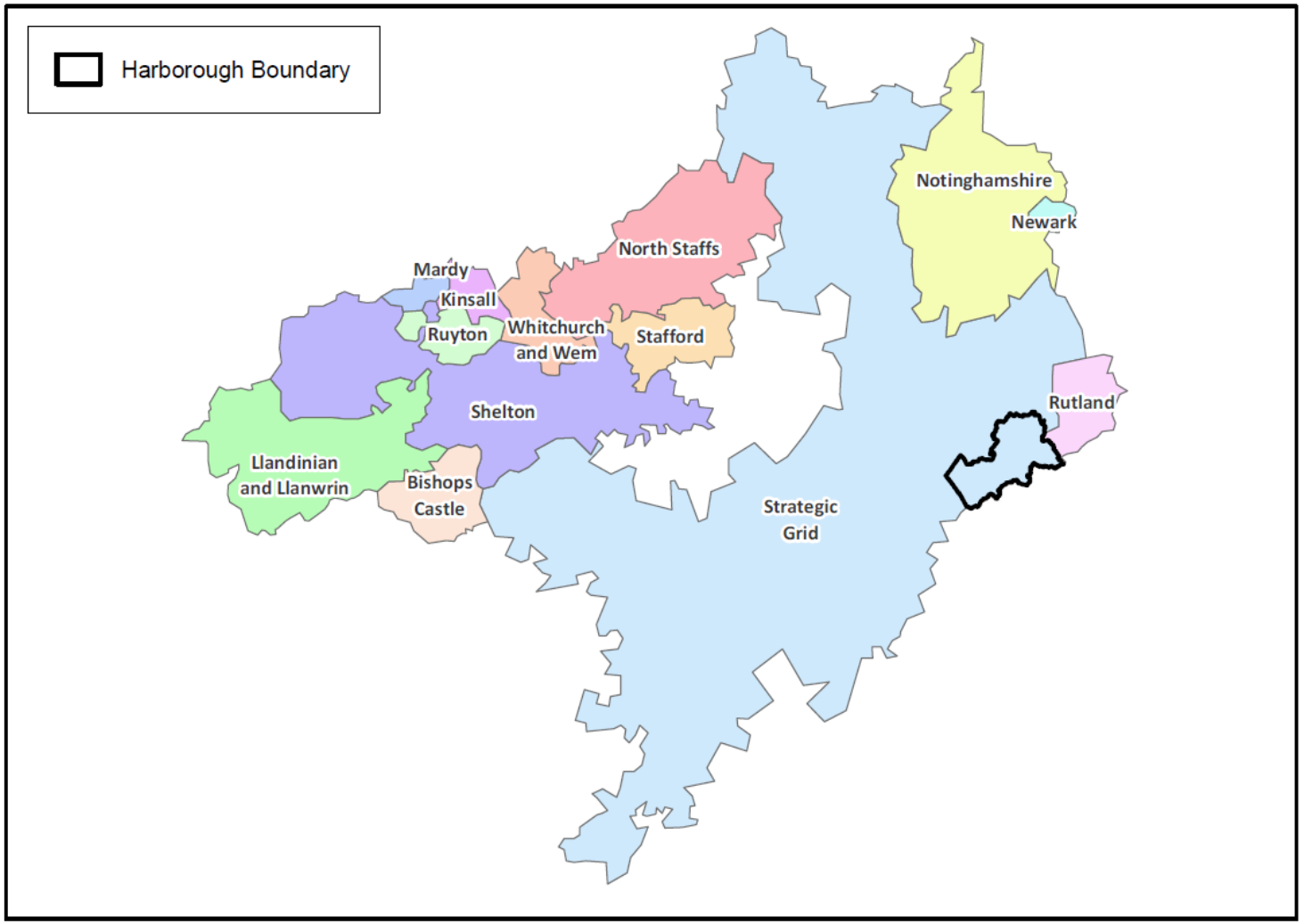
5.2.4 A map of the Severn Trent Water’s Water Resource Zones and relative location of Harborough District can be seen at figure 5.2 overleaf.

Figure 5.1 Existing potable water infrastructure



Source: PBA drawing based on asset and boundary information provided to PBA by Severn Trent Water in Nov 2016

Figure 5.2 Severn Trent Water's Water Resource Zones



Source: Severn Trent Water Final Water Resources Management Plan 2014 (p.8)- amended by PBA to show relative location of Harborough District area[6]

[6] Available at https://www.severntrent.com/about-us/future-plans/water-resource-management/final-wrmp-documents/

5.3 Asset Management Plan 2015 – 2020

5.3.1 The water industry operates on five-yearly cycles called Asset Management Plan (AMP) periods, with the current period running from 2015 to 2020. The current period is AMP6 because it is the sixth cycle since the water industry was privatised in 1989.

5.3.2 During these periods, each water company is obliged to produce a Water Resource Management Plan (WRMP) that looks ahead 25 years or more and outlines how they will maintain a sustainable balance between water supplies and demand by managing increased demands, creating efficiencies and developing new water resources for security of supply. Work on preparing the WRMP for AMP7 2021 - 2025, is expected to commence in 2017.

5.3.3 STW have published their final Water Resources Management Plan 2014 (WRMP)7 which covers the planning period 2015 to 2020 and builds on the strategy set out in their previous WRMP published in 2010. The plan explains STW's proposals for making sure enough water is available, in the right place and at the right time, to supply their customers in an affordable and sustainable way over the next 25 years.

5.3.4 These plans outline a number of challenges that STW must address in order to maintain a reliable water supply to customers. These include:

- Replacing approximately 85 million litres per day (M/l/d) of licensed water abstraction that is no longer environmentally sustainable; this is because 85M/l/d of current abstractions are either causing environmental damage or are contributing to failure of the Water Framework Directive objectives, so these abstraction licences must be given up;
- Meeting the demand for water from the additional 1.6 million people expected to be living in the STW potable water supply region;
- Coping with potential lower river flows during dry periods as a result of climate change; and
- Ensuring investment at an appropriate rate, to address asset deterioration as networks age.

Harborough District is within an area that without intervention could have insufficient water supply in the long term

5.3.5 Harborough District falls within the Strategic Grid water resource zone, which will lose up to 80M/l/d of its deployable water supply. Significant future investment will be needed in the zone because of the need to reduce environmentally unsustainable abstractions and to meet the longer-term challenge of future climate change impacts. Currently, with no mitigation, this would leave insufficient water supply in the Strategic Grid zone by 2020.

5.3.6 Figure 5.3 shows a visual representation of all the STW water resource zones. The Strategic Grid zone can be shown to be under stress in the "Do Nothing" scenario. The "Final Planning Scenario" sets out the outcome based on STW introducing mitigation measures planned to overcome the supply demand balance in their plans.

[7] Severn Trent Water 'Final Water Resources Management Plan 2014' Available at: https://www.severntrent.com/about-us/future-plans/water-resource-management/final-wrmp-documents/ (24 February 2017).

Figure 5.3 Long Term Supply Demand Balance Risks by Water Resource Zone before and after proposed STW mitigation plans.

Supply / demand risk: do nothing scenario

Water Resource Zone	2015	2020	2025	2030	2035	2040
Bishops Castle						
Forest and Stroud						
Kinsall						
Llandinam						
Mardy						
Newark						
North Staffs						
Nottinghamshire						
Rutland						
Ruyton						
Shelton						
Stafford						
Strategic Grid						
Whitchurch & Wem						
Wolverhampton						

Supply / demand risk: final planning scenario

Water Resource Zone	2015	2020	2025	2030	2035	2040
Bishops Castle						
Forest and Stroud						
Kinsall						
Llandinam						
Mardy						
Newark						
North Staffs						
Nottinghamshire						
Rutland						
Ruyton						
Shelton						
Stafford						
Strategic Grid						
Whitchurch & Wem						
Wolverhampton						

	Dry year supply > dry year demand
	Insufficient supply / demand headroom
	Dry year supply < dry year demand

Source: Severn Trent Water Final Water Resources Management Plan 2014 (p.15) 8

5.3.7 STW are clear that if nothing is done by them to mitigate against the reduction in water supply in the Strategic Grid zone, then there will be insufficient water by 2020. Thus STW have made strategic plans in order to ensure that demand will be met for Strategic Zone.

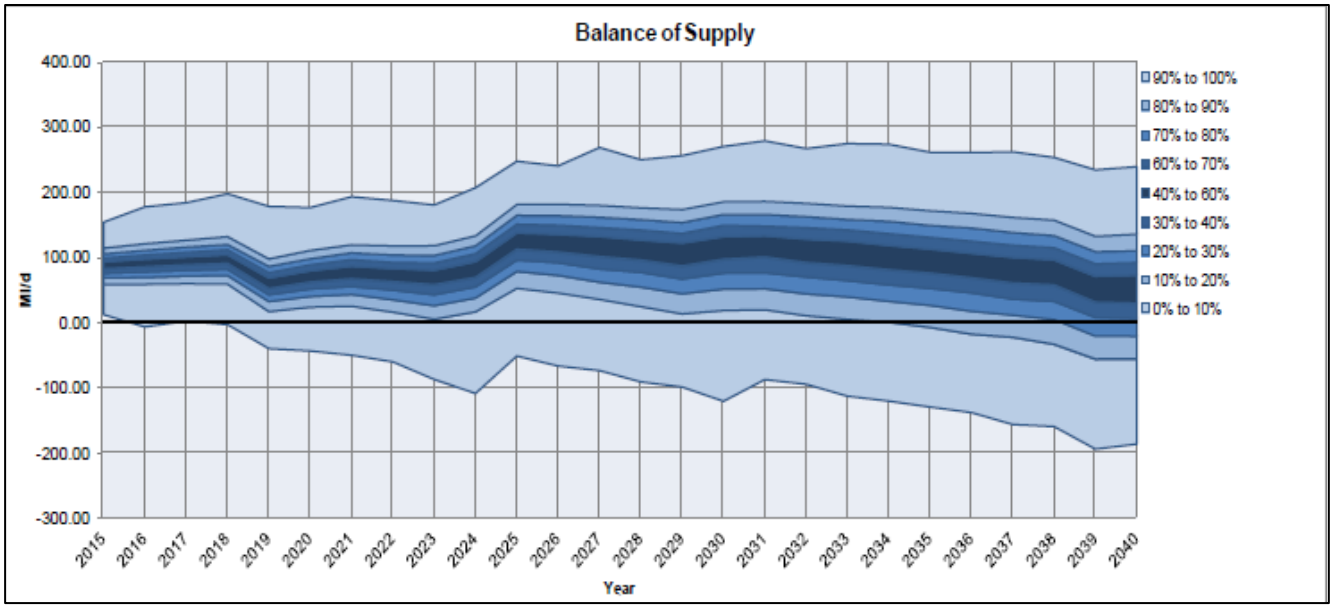
5.3.8 The STW's strategy is restore the supply/demand balance by reducing the overall demand for water and to make the best use of existing water resources through a more flexible and sustainable supply system[9], ambitious leakage reduction plans and changes to expected commercial demand. STW predict that their strategy will provide around 90% confidence in meeting the demand requirements of the Strategic Grid Zone predicted over the next 25 years.

5.3.9 The graph in figure 5.4 overleaf displays the confidence margins for headroom in predicted supply and demand balance, in M/l/d over time (with the STW mitigation plans in place). It demonstrates that the mitigation investment plans that STW are proposing give high confidence (~90%) that they can maintain a positive balance of supply and meet customers' demand for water over the next 25 years.

[8] Available at https://www.severntrent.com/about-us/future-plans/water-resource-management/final-wrmp-documents/ (Downloaded: 24 February 2017)

[9] STW plan make new strategic links to their neighbouring water supply companies to improve supply resilience; and to also make more sustainable use of existing resources such as implementing more efficient operating rules at water abstraction points and reducing leakage in their network.

Figure 5.4 Balance in supply and demand forecast over time for the Strategic Grid Zone



Reference: Severn Trent Water. (2014) 'Final Water Resources Management Plan 2014 (p.16)'. Available at https://www.severntrent.com/about-us/future-plans/water-resource-management/final-wrmp-documents/ (Downloaded: 24 February 2017).

5.3.10 STW released their latest Final Water Resources Managaement Plan (WRMP) in 2014 which incorporated forcecast development from that time based on high level predictions over their supply area. The forecast new housing growth within the Strategic Grid Zone at the time was estimated by STW to be around 16,000 homes per year. Specifics of the Harborough IDP would not have been available at the time of the report issue.

5.3.11 STW comment that they do not have the resources available to incorporate individual sites into their WRMPs and only consider predicted development numbers at a strategic level, such as by county. Specific details of planned growth in the Harborough District therefore were not incorporated into the STW WRMP, however a quantum for the overarching Leicestershire growth was included.[10]

What are the growth related infrastructure requirements?

5.3.12 STW have a statutory duty to supply water to housing for domestic use on request. They are also required to provide new supplies for non-domestic purposes provided the provision of such supplies does not jeopardise their obligations to existing customers, or incur unreasonable expenditure in carrying out works to meet those existing obligations. In practice, water companies do not refuse to make supplies available.

5.3.13 Specific growth in the Harborough District as outlined in this IDP has not been incorporated into the STW WRMP but an allowance as part of the overall Leicestershire growth predicted in 2014 has been. This growth has been included in the mitigation plans submitted as part of the STW WRMP for the Strategic Grid Zone and STW have commented that they do not envisage there to be any issues at a strategic level for the supply of potable water but they may need some reinforcement work to be undertaken on their distribution network. As part of STW's preparation work for AMP7 2020-25 they will be able to assess the potential investment needs in these areas.

[10] Data tables for the STW Strategic Grid Final Plan 2011 to 2040 can be found here: https://www.severntrent.com/about-us/future-plans/water-resource-management/final-wrmp-documents/ (Feb 2017).

5.3.14 Ongoing discussions will need to continue between Harborough DC and STW to ensure that the full planned proposals for development in the district are fully included in STW plans moving forward.

5.3.15 To assess the actual infrastructure upgrade required for specific sites an application for new supply / reinforcement requirements to the utility provider must be submitted. These often include payments and detailed plans needed as part of the application process. This is usually made at a point when the infrastructure is required and will be based on the actual capacity at that point in time.

5.4 Critical path assessment

5.4.1 The critical path assessment shown in table 5.1 below reflects the RAG findings from the Severn Trent Water Resource Management Plan discussed above.

Table 5.1 - Potable water RAG assessment

	Place	Short Term (2018 -2021)	Medium Term (2021-2026)	Long Term (2026-2031)
Potable Water	Harborough District Area			
Potable Water	Harborough District Area	Strategic Grid Zone affected by the Water Framework Directive which has removed 85m litre of licensed water abstraction. Seven Trent have various measures in place to manage this position and reduce waste and leakage. However, if they do not hit the target then their own assessment indicates a red position of dry year supply being less than predicted dry year demand by 2040.		

Consultation response from Severn Trent Water on infrastructure requirements

5.4.2 STW were consulted on the known planned growth during October 2016.

5.4.3 STW have responded that the STW Water Resources Management Plan 2014 considers the supply / demand issues for the future 25 years. However, the water supply network is a pressurised system and detailed modelling is required to determine whether additional demand will require capacity upgrades for specific development sites.

5.4.4 Consequently, STW do not assess water supply at this level as part of a Water Cycle Study (WCS) enquiry or an Infrastructure Delivery Plan (IDP) but the information PBA/Harborough District Council have provided to STW will be used to inform future planning of investment in potable water infrastructure.

5.4.5 STW have commented that overall they do not envisage there to be any issues at a strategic level for the supply of potable water for the proposed developments due to their ongoing mitigation work outlined in their WRMP, but they may need some reinforcement work to be undertaken on their distribution network. As part of STW's preparation work for AMP7 2020-25 they will be able to assess the potential investment needs.

5.4.6 As developments come through the planning system STW modelling teams will undertake detailed modelling. However, as infrastructure improvements and local reinforcement can usually be undertaken within an 18 month to 2-year window, STW does not expect potable water capacity to be a constraint to development so long as all development proposals are clearly outlined to STW, with a continuing discourse in place. This will allow their incorporation into ongoing infrastructure planning and any amendments to be provided for as planning moves forward.

5.5 Potable water infrastructure supporting the SDAs

East of Lutterworth SDA

5.5.1 STW do not envisage there to be any issues at a strategic level for the supply of potable water but they may need some reinforcement work to be undertaken on their distribution network.

As part of STW's preparation work for AMP7 2020-25 they will be able to assess the potential investment needs.

5.5.2 Any crossing of the M1 motorway may have significant engineering difficulties and as such it is very important that Harborough DC and promoting developers have early and ongoing discussions with STW regarding their plans to ensure that any strategic work to allow development to move forward unimpeded is carried out in good time, as it will be for all of the major planned developments.

Land to the north of Scraptoft SDA

5.5.3 STW do not envisage there to be any issues at a strategic level for the supply of potable water but they may need some reinforcement work to be undertaken on their distribution network. As part of STW's preparation work for AMP7 2020-25 they will be able to assess the potential investment needs. The Scraptoft SDA is on the edge of the Leicester conurbation which provides further security of supply based on the number of local connection points that can be made.

5.6 How will the infrastructure be funded?

5.6.1 Upgrades of the water network may be delivered in one of two ways. Upgrades can come either via either: a) STW's five-year business plan; or b) via a cost sharing arrangement between the developer and STW.

5.6.2 New water mains infrastructure to connect a new development to the local network is the financial responsibility of the developer, although, with sufficient notice, it may be possible for water companies to factor upgrades into their Asset Management Programme (AMP) as agreed with Ofwat. Water companies may make some investment into the local water network infrastructure but generally will be expecting developer contributions through the requisition process to fund new mains infrastructure and provide adequate capacity for specific developments.

5.6.3 Construction costs for new water infrastructure to a development will be offset against the predicted income generated from the new water main (based on a 12-year period). This reduced value is either paid by the developer to the water company, if the infrastructure has been requisitioned, or from the water company to the developer, if they are adopting works constructed by them.

5.6.4 In addition to provision of local distribution networks STW have and will be installing strategic infrastructure. These are the offsite potable water mains which deliver water within an area to a large number of development sites, often across a number of towns. The strategic provision of these water mains enables the water company to provide the cheapest solution across a large geographical area. Where a development site will benefit from the strategic water mains constructed by STW, designed to cater for the predicted growth the area, then all developments that benefit from this strategic water scheme will be required to make a contribution proportional to their water demand.

5.6.5 Dependent on the size and location of the development a lead-in time may be required to prepare connections to the local infrastructure. Strategic reinforcement should be completed in advance on proposed development as part of the STW ongoing network resilience. Again, it is important at this point that early engagement is made with STW to enable to them to factor in future development into their strategic upgrade plans.

5.6.6 The more dispersed developments may require additional work to provide suitable connections to the existing supply network if new trunk mains are required. However, STW have confirmed that they expect no major issues.

5.7 Issues and recommendations

5.7.1 As plans mature, there will need to be discussions with Severn Trent Water regarding diversions, capacity upgrades and other agreements relating to the supply of potable water infrastructure.

5.7.2 STW have commented that there is a lack of water in the Strategic Grid Zone which includes all of the Harborough District area, but that they have plans in place to ensure security of supply into the future. These plans do not specifically include the Harborough IDP growth, as the WRMP was submitted in 2014. However, an allowance for growth in Leicestershire as a whole was included. It is recommended that ongoing engagement is made between Harborough DC and STW to ensure any STW strategic network plans for the area include the new development proposals.

5.7.3 The Strategic Grid Zone is a water stressed area and as such mitigation measures are being put in place by STW to mitigate this. Though STW believe there is no strategic barrier to development in the area going forward, it is prudent that water efficiency requirements are included within the planning process, such as imposing Regulation 36 of the Building Regulations 2010 to new buildings, to restrict potential water consumption to 110 litres per person per day, or equivalent efficiency measures.

5.7.4 The STW WRMP show an overall demand for the Strategic Grid Zone of over 1200Ml/d and a median level of confidence that around 100Ml/d of headroom above the supply/demand balance will be maintained with their mitigation measures in place. The predicted demand from the Harborough IDP suggests around 2.7Ml/d will be required, a proportion of which will already be incorporated into STW plans. This is less than 0.5% of the overall demand of the Strategic Grid Zone. STW have commented that overall they do not envisage there to be any issues at a strategic level for the supply of potable water for the proposed developments.

5.7.5 With regards to specific reinforcement requirements that may be needed for the proposed Harborough IDP, STW will model these requirements as the proposals move towards implementation stage. STW note that as infrastructure improvements and local reinforcements can usually be undertaken within 18 months to 2 years, they do not expect potable water capacity to be a constraint to development.

5.7.6 STW are obliged to plan for security of supply and demand of potable water, which involves working with local authorities to determine development plans. However, at these early stages STW are unwilling to commit large resources to emerging and dynamic plans that may result in abortive work. It is recommended that Harborough DC continue to work with STW as plans develop to ensure that all likely growth is captured in STW's plans, and that as site plans become more definitive this information is fed to STW so any upgrade works can be programmed by STW early in the cycle.

5.7.7 At present indications are that the development sites in relation to potable requirements would be represented by 'amber' for the entire RAG status, noting that there should be no issue with potable water capacity with early engagement to ensure any reinforcement works are programmed in relation to planning.

6 UTILITIES WASTE WATER

6.1 Introduction

6.1.1 This section sets out the findings for waste water (sewage) infrastructure.

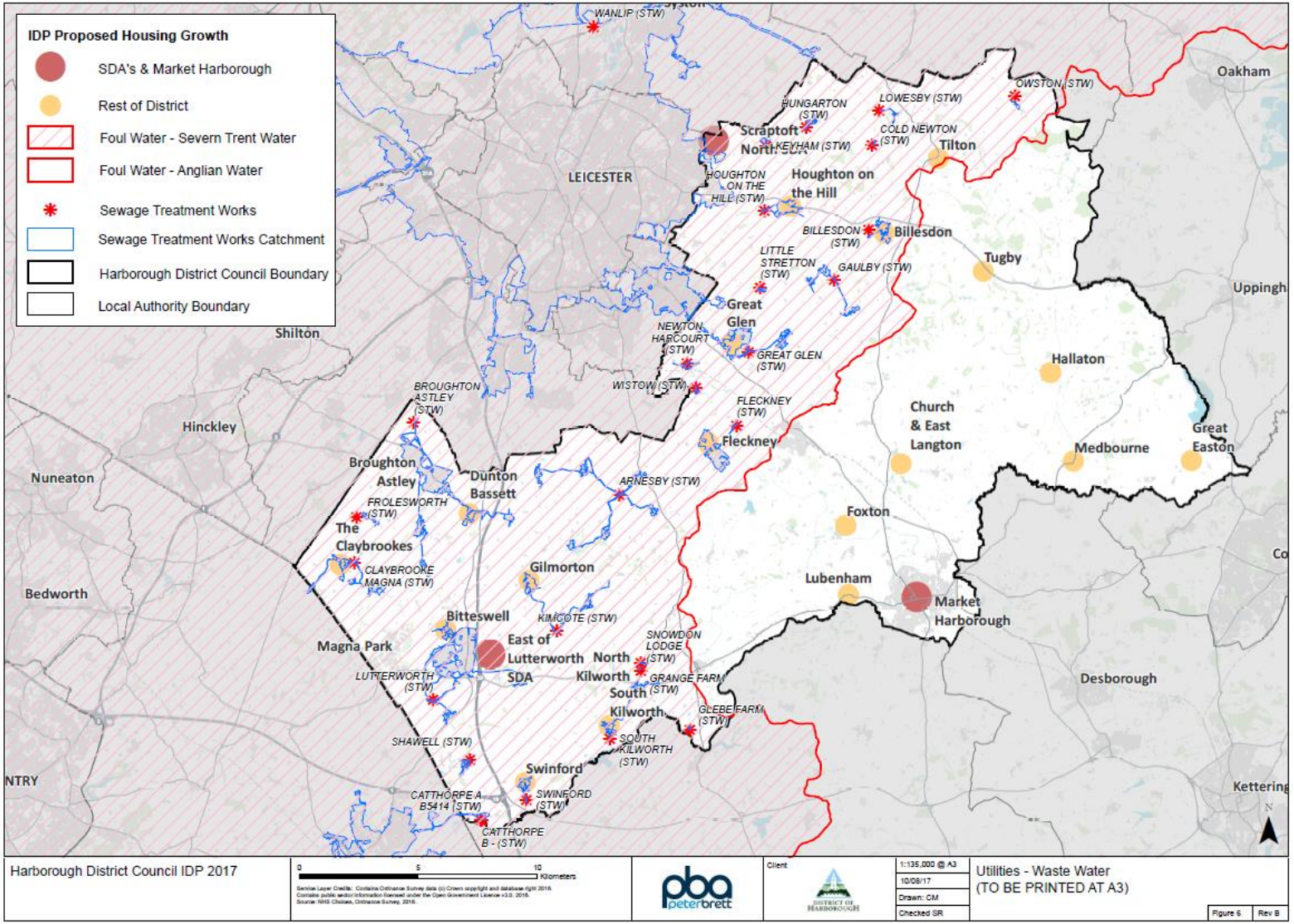
6.1.2 The sewerage infrastructure comprises of the following:

- Water Recycling Centres (WRC), which were formerly known as sewage treatment works; and
- Foul sewerage networks which relates to the network of pipes that connect between development and the downstream WRC.

6.1.3 The responsibility for the operational and maintenance of the existing foul drainage network (or now known as recycled water systems) across the Harborough District is split between Severn Trent Water Plc (STW) which serves the Western half of the District and Anglian Water Services Ltd (AWS) which services the East.

6.1.4 The wastewater infrastructure is shown in Figure .1 overleaf. Waste water asset information is only shown for STW as the information from AWS has been requested but not received at the time of writing.

Figure 6.1 Existing waste water infrastructure



Source: PBA drawing based on asset and boundary information provided to PBA by Severn Trent Water in Oct 2016.

6.1.5 Any discharge of effluent into the main water courses by either STW or AWS is through license consents managed by the Environment Agency in order to protect the water quality of the receiving watercourse.

6.1.6 This section has been informed by consultation with Severn Trent Water and a list of the consultees may be found in Appendix A.

6.1.7 A review has been undertaken of the following documents:

- Severn Trent Water: Final Water Resources Management Plan 2014;
- Severn Trent Water: Strategic Direction Statement 2010-2035;
- Anglian Water Resources Management Plan 2015; and
- Anglian Water Strategic Direction Statement 2010-2035.

6.2 Asset Management Plan (AMP6) 2015 – 2020

6.2.1 The water industry operates on five-yearly cycles called Asset Management Plan (AMP) periods, with the current period running from 2015 to 2020. The current period is AMP6 because it is the sixth cycle since the water industry was privatised in 1989.

6.2.2 During these periods each water company is obliged to produce a Water Resource Management Plan (WRMP) that looks ahead 25 years or more and outlines how they will maintain a sustainable balance between water supplies and demand by managing increased demands, creating efficiencies and developing new water resources for security of supply. Work on preparing the WRMP for AMP7 2021 - 2025, will commence in 2017.

6.2.3 It is important to note that the WRMP focuses on potable water supply and how the companies will manage the supply-demand balance. There are however no statutory corresponding documents for waste water infrastructure. The water companies are bound to provide wastewater infrastructure for planned development, and it follows that from their WRMPs any increase in potable demand hill herald an increase in waste water infrastructure demand, and that the water companies will be planning for this. There is however no statutory requirement for them to release a planning document for waste water.

6.2.4 Water companies do have obligations under section 94 of the Water Industry Act to provide capacity to accommodate planned development but they have limited control on the volume of sewage received. Several factors combine to increase sewage volumes such as population increases, new property connections added to the network, and continued implementation of legislation such as the European Urban Waste Water Treatment Directive, which specifies standards in relation to discharges to the environment. Water companies must therefore have a flexible approach to provision of wastewater infrastructure, adapted to regional requirements.

What infrastructure is needed?

6.2.5 The sewerage companies have commented that they do not have resources available to analyse detailed network requirements for individual sites prior to the site specific applications being made. It is therefore not possible to assess the actual infrastructure upgrades required without them. They are usually made at a point when the infrastructure is required and will be based on the actual capacity at that point in time. It is recommended that there will need to be early engagement and ongoing discussions between Harborough DC and both water companies regarding future diversions, capacity upgrades and other agreements relating to the supply of waste water infrastructure for the proposed IDP development; to enable the water companies to include the proposals in any strategic infrastructure work they are planning.

6.3 Critical path assessment

6.3.1 Anglian Water Services and Severn Trent Water were consulted on the known planned growth during October 2016.

6.3.2 STW have responded that though they have a general duty to provide additional capacity when development comes forward, to ensure they minimise the impact on customers' bills they will only provide additional capacity when it is required. However as capacity upgrades can usually be provided within 18-24 months, and as larger development take several years before they are fully occupied, STW confirm it does not often find that waste water capacity causes problems for new development.

6.3.3 STW would only provide capacity for planned development once there is sufficient certainty that the development will take place by taking into account the Local Plan information and planning applications.

6.3.4 STW have provided a high level indication of the existing infrastructure capacity and likely reinforcement works for their sewerage infrastructure, which is summarised in table 6.1.

6.3.5 Anglian Water provided a similar response to STW with regards to providing additional capacity, in that this will be provided when the development comes forward through planning. They have however made a high level assessment of the available capacity at each of their relevant Water Recycling Centres in the District to accommodate the proposed sites identified. The assessment does not take account of the cumulative impact of these sites and the other sites which have been proposed for inclusion in the Local Plan on the identified Water Recycling Centres.

6.3.6 The scale of the Anglian Water waste water infrastructure requirements will be dependent on the location, size and phasing of the development. All sites will require a local connection to the existing sewerage network which may need network upgrades.

6.3.7 The information provided by Anglian Water for their sites and their high level capacity assessment has informed the Critical Path Assessment set out in table 6.1. This identifies where there is expected to be a need for improvements to the existing network to enable development of the additional sites which have been proposed. The highlighting of any potential upgrades should not be seen as an obstacle to the allocation of these sites, as Anglian Water can work with Harborough DC to ensure development and reinforcement is brought online at the correct time. Upgrades are to be expected as Anglian Water sewers have not been designed to have capacity for all future growth.

Table 6.1 Critical Path Assessment

Place	Short Term (2018 -2021)	Medium Term (2021-2026)	Long Term (2026-2031)	Post Plan - Lutterworth East SDA Only
Billesdon				N/A
	Housing provision above 54 houses may necessitate a further expansion of Billesdon WRC. Upgrades would likely be required during Phase 2 around 2022. There are no known problems in the local sewerage system and providing development is managed sustainably capacity issues are not envisaged.			
Bitteswell				N/A

	The site is served by Lutterworth WRC. Lutterworth WRC will need to be expanded on provision of over 677 new homes. Though Bitteswell is planned to receive only 46 homes the numbers planned for Lutterworth SDA, which will also be served by Lutterworth WRC, will necessitate an expansion during Phase 2 around 2028. There are no known problems in the local sewerage systems and providing development is managed sustainably capacity issues are not envisaged; however due to the size of the Lutterworth SDA development extensive capacity improvements are envisaged in association with this scheme.
Church & East Langton	N/A East Langton WRC will require upgrades to its capacity to enable it to treat the proposed flows in Phase 2 and 3.
Dunton Bassett	N/A Dunton Bassett is served by Broughton Astley WRC. A significant proportion of the design capacity for this WRC has been taken up by recent approvals. However, STW comment that there should be sufficient residual capacity to cater for the increase proposed in Dunton Bassett over the plan period. There are no known problems in the local sewerage system and providing development is managed sustainably capacity issues are not envisaged.
Fleckney	N/A Housing provision above 263 houses will necessitate a further expansion of Fleckney WRC. With 510 homes planned upgrades would likely be required during Phase 2 around 2022. There are no known problems in the local sewerage system and providing development is managed sustainably capacity issues are not envisaged.
Foxton	N/A Foxton WRC will require upgrades to its capacity to enable it to treat the proposed flows in Phase 1.
Gilmorton	N/A Gilmorton is served by Kilmote WRC. There are no known problems in the local sewerage system and providing development is managed sustainably capacity issues are not envisaged.
Great Bowden	N/A Market Harborough WRC has capacity to treat the proposed development flows, however the upstream sewerage network may need some minor upgrades to transfer the flows.
Great Easton	N/A Great Easton WRC has capacity to treat the proposed development flows, however the upstream sewerage network may need some minor upgrades to transfer the flows.
Great Glen	N/A Great Glen is served by Great Glen WRC which has capacity for housing provision up to 263 houses before development would necessitate a further works extension; the timing of which would be dependent upon performance of the new assets being provided and rate of housing development. With planned provision of 17 homes there are no foreseen capacity issues. Though there are some areas of known flood risk in Great Glen and larger developments could cause capacity issues, due to the size of proposed development capacity issues are not envisaged in the local sewerage system providing development is managed sustainably.
Hallaton	N/A

	Hallaton WRC will require upgrades to its capacity to enable it to treat the proposed flows in Phase 2.
Houghton on the Hill	N/A
	Houghton on the Hill is served by Houghton on the Hill WRC. The design threshold population equivalent to trigger the need for quality improvement is to be confirmed by STW as part of their project team assessment of the additional capacity requirements, as part of their normal design process. Provision will then be made for proposed population increases. If the proposed developments are to the west of current village boundary STW may opt to drain them to Wanlip STW.
Husbands Bosworth	N/A
	Husbands Bosworth WRC has capacity to treat the proposed development flows, however the upstream sewerage network may need some minor upgrades to transfer the flows in Phase 2.
land north of Scraptoft SDA	
	Scraptoft SDA will be served by the main WRC for Leicester, which is Wanlip WRC. There is adequate capacity at Wanlip WRC for the proposed works. There have been numerous upgrades in the past 5 year periods to Wanlip WRC and some are planned for the current AMP6 (up to 2020), although the current upgrades are in development. Any upgrade will take into account the current growth profiles and make decisions on what to include/exclude from the scope of the project in question. Subject to hydraulic modelling STW envisage the need to provide some upgrades to the sewerage system due to the size of the development and the make-up of the sewerage system in the area but don't believe this will be significant. There are several potential connection points but consideration will need to be given alongside the Thurmaston SUE proposal as both projects will affect the same sections of trunk sewer further downstream in the network.
Lubenham	N/A
	Market Harborough WRC has capacity to treat the proposed development flows, however the upstream sewerage network may need some minor upgrades to transfer the flows in Phase 2.
Lutterworth East SDA	
	The site is served by Lutterworth WRC. Lutterworth WRC will need to be expanded on provision of over 677 new homes. The numbers planned for Lutterworth SDA will necessitate an expansion during Phase 2 around 2028. With regards to the existing sewerage network, there is currently no public sewerage east of the M1 motorway where the development is proposed. Based on the local topography it is likely that a new trunk sewer or rising main will need to be installed under the motorway to connect to the main trunk sewer west of M1 Junction 20. Modelling studies will be needed to confirm requirements but based on 2750 new homes the capacity improvements needed could be significant.
Market Harborough	N/A
	Market Harborough WRC will require upgrades to its capacity to enable it to treat the proposed flows from Phase 1.
Medbourne	N/A
	Medbourne WRC will require upgrades to its capacity to enable it to treat the proposed flows from Phase 1.
North Kilworth	N/A

	North Kilworth is served partly by South Kilworth WRC. Some investment is proposed by STW at this site in their current programme. This will make some additional capacity available, though the project team will be making an assessment of the additional capacity requirements as part of their normal design process. There are no known problems in the local sewerage system and providing development is managed sustainably capacity issues are not envisaged.
Scraptoft, Thurnby and Bushby	N/A These sites are within the catchment area for the main Wanlip WRC serving Leicester. There is adequate capacity at Wanlip WRC available for all of these options.
South Kilworth	N/A South Kilworth is served by South Kilworth WRC, which also serves part of North Kilworth. Some investment is proposed by STW at this site in their current programme. This will make some additional capacity available, though the project team will be making an assessment of the additional capacity requirements as part of their normal design process. There are no known problems in the local sewerage system and providing development is managed sustainably capacity issues are not envisaged.
Swinford	N/A Swinford is served by Swinford WRC. There is very limited capacity available at this WRC and no investment is currently planned. STW have advised that approximately 15 houses could be accommodated and further development could trigger a need for a works extension. Capacity would be breached very early into the proposed development during phase 2 around 2022. Some areas around Swinford are of known flood risk and sewerage network capacity improvements may be required.
The Claybrookes	N/A Housing provision above 86 new homes may necessitate a further works expansion of Claybrooke Magna WRC. Both The Claybrookes and Ullesthorpe sites will be served by the Claybrooke Magna WRC. With a combined total of 103 homes planned, upgrades would likely be required during Phase 2 around 2022. There are no known problems in the local sewerage system and providing development is managed sustainably capacity issues are not envisaged.
The Kibworths	N/A Kibworth WRC has capacity to treat the proposed flows and it is not anticipated that there will be any issue within the upstream sewerage network.
Tilton	N/A Tilton on the Hill WRC will require upgrades to its capacity to enable it to treat the proposed flows in Phase 2.
Tugby	N/A Tugby WRC has capacity to treat the proposed flows and it is not anticipated that there will be any issue within the upstream sewerage network.
Ullesthorpe	N/A Housing provision above 86 new homes may necessitate a further works expansion of Claybrooke Magna WRC. Both The Claybrookes and Ullesthorpe sites will be served by the Claybrooke Magna WRC. With a combined total of 103 homes planned, upgrades would likely be required during Phase 2 around 2022. There are no known problems in the local sewerage system and providing development is managed sustainably capacity issues are not envisaged.

6.3.8 Generally, Phase 1 of the planning period will see little issue regarding capacity, and as the planning period progresses most sites will then begin to need additional reinforcement as housing numbers are increased.

6.3.9 The water companies will provide additional capacity when it is required, with such upgrades usually provided within 18-24 months of initiation. Such work will be planned in when they have sufficient certainty that the development will take place by taking into account the Local Plan information and planning applications.

6.3.10 STW and Anglian Water confirm they do not often find that waste water capacity causes problems for new development.

6.4 Waste water infrastructure supporting the SDAs

East of Lutterworth SDA

6.4.1 STW have commented that housing provision above 677 houses may necessitate a further works extension to the WRC. Timing of these works would be dependent upon performance of the new assets being provided and rate of housing development. At the planned rate of build 677 houses would be completed in Phase 2, around 2028 (not allowing for other development in the area).

6.4.2 The scope of works needed for Lutterworth WRC will be assessed with respect to the planned growth, there will be further work to decide what capacity is designed for in the period. STW have confirmed approximate lead in times of 12 to 18 months to provide any upgrade to Lutterworth WRC capacity.

The EA will require a modification to the existing discharge permit for the expansion of Lutterworth WRC to serve the SDA

6.4.3 Generally, wastewater plant expansion does not necessarily require new discharge permits from the Environment Agency, as sometimes expansion is only to address growth and maintenance within the current discharge permit.

6.4.4 There will be a modification to the discharge permit at Lutterworth WRC due to the introduction of a phosphorus limit to meet the needs of the Water Framework Directive (WFD). STW have already been in discussion with the Environment Agency regarding this change. However, as the proposed IDP growth is significant, this may necessitate a further modification to the discharge permit. STW have commented that they will review this need for the current planned scheme but the actual implementation of the new permit will only happen once the growth arrives.

6.4.5 There is the possibility that further modification to the discharge permit may be denied by the Environment Agency. If this were to happen it would preclude the WRC from being able to adequately treat sewerage flows from new developments, and thus STW and the Environment Agency could object to planning consent for those developments that would trigger the breach of permit. It is more likely however, that by fully outlining the proposed development plans to STW, well ahead of need, and working with them to ensure they are captured in STW's strategic plans, that any modification to the discharge permit imposed by the Environment Agency would rather result in additional enhancements needed at the WRC in order for it to meet the requirements of the WFD. If captured early, these can be programmed into STW's strategic reinforcement plans.

Connecting East of Lutterworth SDA to sewerage network

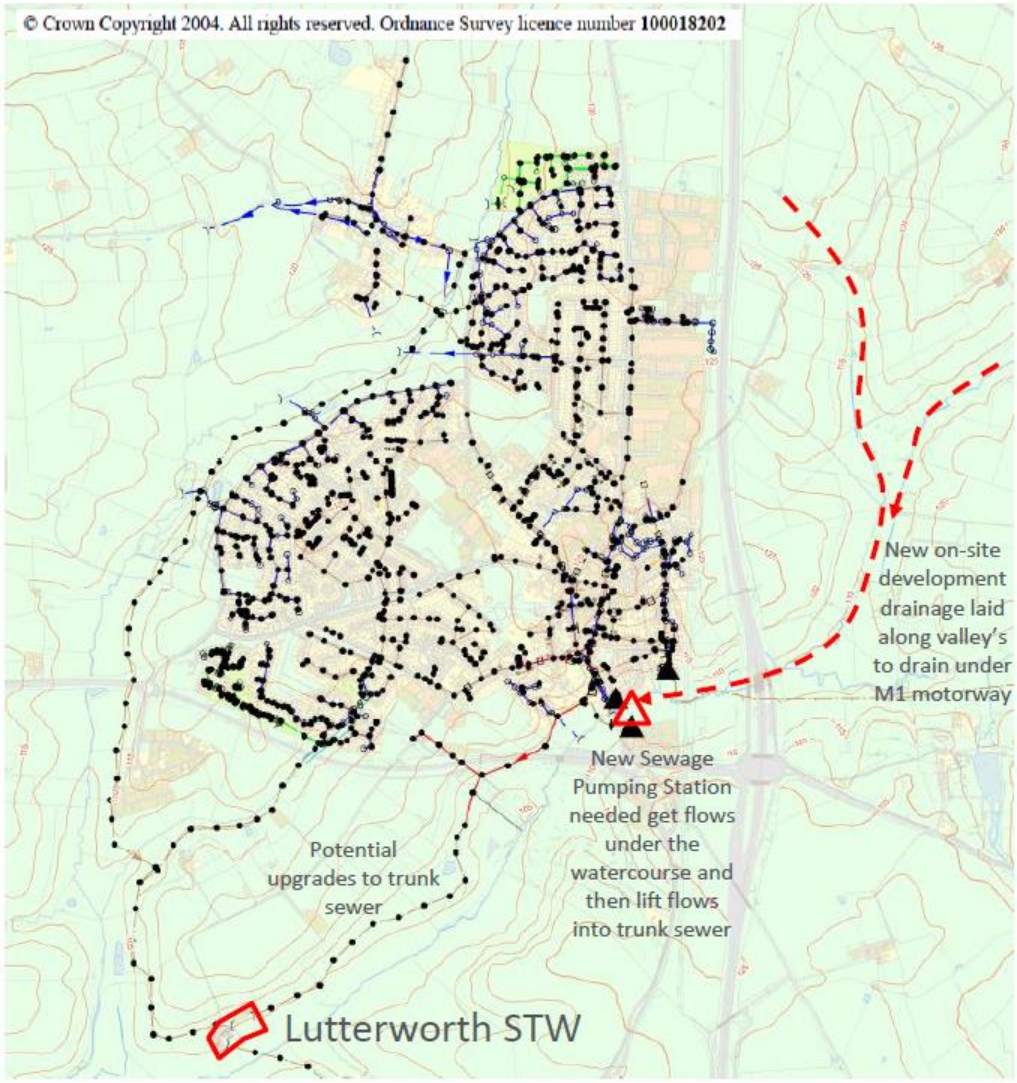
6.4.6 There is currently no public sewerage to the east of the M1 motorway where the development is proposed. STW have advised that due to the local topography it would be sensible for the on-site drainage to follow the natural lie of the land in a southerly direction under the motorway to connect to their main trunk sewer to the west of M1 Junction 20.

6.4.7 STW have advised that due to current invert levels of the trunk sewer it is likely that flows from the new development will need a new pumping station to pump flows under the existing watercourse across to the trunk sewer, or traverse the watercourse using a syphon. Further modelling would be required to determine if any capacity upgrades are required to the trunk sewer.

6.4.8 Based on 2750 dwellings the capacity improvements required could be quite significant but the key would be to ensure development is phased from south to north to ensure the required new spine sewer could be laid through the site from the downstream connection. Figure 6.2 overleaf is a plan provided by STW showing an extract from their sewer records and potential connectivity to serve the SDA.

6.4.9 It is likely that installation of this spine infrastructure, considering the engineering difficulties of a motorway crossing, may have a lead-in time of approximately 12-24 months.

Figure 6.2 Possible waste water connectivity for East of Lutterworth



Source: Provided to PBA by Severn Trent Water (June 2016)

6.5 Land north of Scraptoft SDA

6.5.1 Scraptoft North SDA is located within the area of the Harborough District served by Severn Trent Water (STW) and the receiving waste water recycling centre (WRC) for the proposed growth is Wanlip WRC, which is the main sewerage works for Leicester serving an approximate population equivalent of 600,000.

6.5.2 STW have commented that adequate sewage treatment capacity is available at Wanlip WRC. Subject to hydraulic modelling that will be undertaken as part of their planning process, STW envisage that though some upgrades to the sewerage system will be required due to the size of the Scraptoft SDA and the make-up of the sewerage system in the area, they do not expect them to be significant.

6.5.3 There have been numerous upgrades to Wanlip WRC in the past 5 year periods and some are also planned for AMP6 (the current period up to 2020) although the current upgrades are in development. STW make will take into account the current growth profiles and make decisions on what to include/exclude from the scope any proposals for upgrades to existing infrastructure.

6.5.4 STW have confirmed approximate lead in times of 12 to 18 months to provide any upgrade to WRCs

6.5.5 STW will soon be starting some high level modelling work in the build up to preparing their investment needs for the next planning period covering 2020-25. As part of this work they will assess the potential impacts of proposed development and the results of this work will start to become available early 2017.

Discharge permits

6.5.6 Generally, wastewater plant expansion does not necessarily require new discharge permits from the Environment Agency, as sometimes expansion is only to address growth and maintenance within the current discharge permit. No discharge permit alteration requirements have been identified to us by STW regarding Wanlip WRC, which will serve Scraptoft SDA.

Connecting to the SDA

6.5.7 STW have advised that due to the local topography there are several potential connection points to the existing wastewater network. Any connection for the land to the north of Scraptoft SDA will need to be considered alongside the Thurmaston Sustainable Urban Extension proposal in Charnwood, as that development will affect the same sections of trunk sewer further downstream in the network.

6.6 How will the waste water infrastructure be funded?

6.6.1 As can be seen from the critical path analysis, some treatment works may require upgrading, particularly in the case of the SDAs.

6.6.2 Waste water infrastructure is generally funded in one of two ways, delivery can be either:

- Via the STW / AWS five-year business plan; or
- Via a cost sharing arrangement between the developer and STW /AWS (such as requisitions).

6.6.3 If waste water system upgrades are required, STW / AWS may require extensions to and reinforcement of the foul water sewerage network to be part or wholly funded by the proposed development.

6.6.4 With sufficient notice, systemic works may be delivered via the 5-year AMP cycle. Any charges to be met by the developer will be determined via a Section 98 agreement under the Water Industry Act (duty to comply with sewer requisition).

6.6.5 Once STW / AWS have greater certainty about the proposed development (such as inclusion in a Local Plan / planning approval) then this information will help support any future investment submission to the OFWAT regulator.

6.6.6 For development of the size and scale anticipated at Lutterworth East SDA, it may be feasible to provide the potable water and waste water supply through an Inset Agreement; whereby a third party water company or organisation (such as a Multi Utility Service Company, MUSCO) takes responsibility for the construction, operation and maintenance of the network within the area. The consideration of a MUSCO is a standalone piece of work which the scheme promoter may explore.

6.6.7 Due to the location of Scraptoft SDA, which is on the edge of the Leicester conurbation, it is likely that an inset agreement for Scraptoft would not be as practical as an inset site should have no existing water or sewerage connections.

6.6.8 In some instances, an Inset Appointed organisation has borne the cost of all related aspects on the basis of the future revenue from waste water charges related to the development. The option as a way of funding infrastructure delivery maybe explored further by the site promoters.

6.7 Issues and recommendations

6.7.1 As plans mature, there will need to be discussions with Severn Trent Water and Anglian Water Services regarding diversions, capacity upgrades and other agreements.

6.7.2 STW and Anglian Water have confirmed that in general, Phase 1 of the planning period will see little issue regarding capacity, though as the planning period progresses most sites will then begin to need additional reinforcement as housing numbers are increased.

6.7.3 STW and Anglian Water will provide additional capacity when it is required, with such upgrades usually provided within 18-24 months of initiation. Such work will be planned in when they have sufficient certainty that the development will take place by taking into account the Local Plan information and planning applications.

6.7.4 Water companies are obliged to make connections for new planned development. However, at these early stages STW and Anglian Water are unable to commit large resources to emerging and dynamic plans that may result in abortive work.

6.7.5 It is recommended that Harborough DC continue to work with the two waste water companies to ensure that all likely growth is captured in their plans, and that as site plans become more definitive this is fed to STW / AWS so any upgrade works can be programmed early in the cycle.

6.7.6 STW and Anglian Water do not often find that waste water capacity causes problems for new development. However, there may be the need for modification to the discharge permit at Lutterworth WRC to serve the SDA. Further investigations and modelling should be undertaken by STW to confirm that the relevant discharge permits to support the expansion of the STW will be forthcoming from the Environment Agency along with any additional modifications to the WRC needed. It is therefore important that early and ongoing liaison is made between Harborough DC, STW and AWS in order to ensure all strategic reinforcement works are incorporated into the water companies' infrastructure development plans.

7 UTILITIES ELECTRICITY

7.1 Introduction

7.1.1 This section considers the electricity infrastructure requirements for Harborough's planned growth. The assessment is based on consultation with Western Power Distribution (see Appendix A for a list of consultees) and a review of the Long Term Development Statement for Western Power Distribution (East Midlands) plc's Electricity Distribution System November 2015 (Part One and Part Two).

7.1.2 Western Power Distribution is the Distribution Network Operator (DNO) for Harborough District. It is responsible for reliability, capacity and maintenance and emergency response.

7.2 How is the infrastructure structured?

7.2.1 Western Power Distribution (WDP) distributes electricity from National Grid Transmission supply points to the distribution network areas of the East Midlands, the West Midlands, the South West of England and the South and South West of Wales. WPD operates electricity networks of 132kV and below in the East Midlands. The electricity supply to Harborough is generally supplied by the 33kv grid to local low voltage substations and finally the end user.

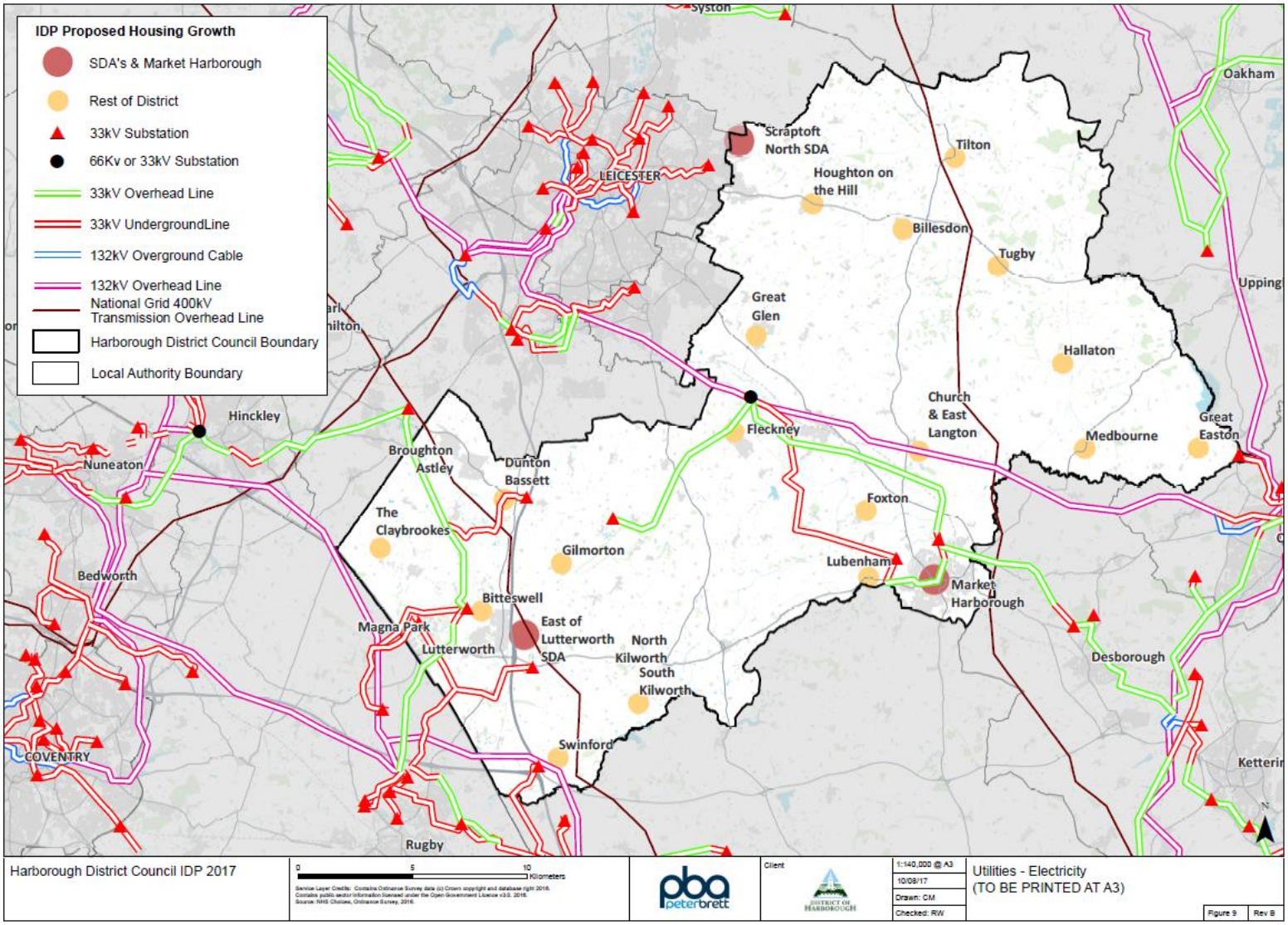
7.2.2 Figure 7.1 overleaf shows the location of the existing electricity infrastructure within Harborough District in relation to the planned growth. As can be seen from this figure, the main high voltage electricity infrastructure is concentrated in the central and western areas of the district.

7.2.3 Two National Grid 400 kV transmission overhead lines run through the district, one to the east and one to the west, including across the site of the proposed Lutterworth East SDA. These are classed as 'nationally critical infrastructure', and generally National Grid Transmission manage this high voltage transmission system in the UK, and will look for a 20m buffer corridor along these lines; therefore, no building or structure should be placed underneath these extra high voltage lines.

7.2.4 Figure 7.1 overleaf also shows that there is very little high voltage infrastructure within the rural areas to the east of the District in terms of sub stations or power lines. This does not indicate that there is a lack of capacity in these locations, just that the infrastructure is run from lower voltage infrastructure (11kV and below) due to the local demand. Where new low quantum rural development is proposed in the vicinity of existing rural development, as per the IDP, it is likely that it will be served by the existing infrastructure, though some local reinforcement works may be required.

7.2.5 The electricity distribution to the Harborough District area is served by two separate sections of Western Power Distribution. The area to the west of the 400 kV line running through Lutterworth is served by WPD's Warwickshire district, whilst the eastern portion is served by their Kettering district.

Figure 7.1 Existing electricity transmission and distribution infrastructure



Source: Based on asset and boundary information provided to PBA by Western Power Distribution in Nov 2016

WPD has a ten year rolling investment plan

7.2.6 WPD has its own 10-year rolling investment plan which overlap with their eight- year price control periods known as RIIO (Revenue = Incentives + Innovation + Outputs). WPD is currently operating under RIIO – ED1 which runs from 1st April 2015 to 31st March 2023.

7.2.7 The WPD 10-year investment plan differs from the eight-year asset management plan in that it has greater flexibility to pick up new developments, but the investment stream is usually separate from the Ofgem approved cycle of upgrades and reinforcement, and primarily deals with entirely new infrastructure.

7.3 Critical path assessment

Approach to assessing growth related requirements

7.3.1 PBA have consulted with both National Grid Transmission and WPD to gain an understanding of current capacity and their ability to provide future capacity to meet the needs of the planned growth. National Grid Transmission have been able to provide a definitive statement. WPD have provided some information on current capacity but have not provided any definitive information on the medium and longer term capacity, as capacity as they comment their network is dynamic and constantly changing as developments come on-line. As such the capacity can change very dramatically in a short period of time. WPD have provided a high level view on capacity.

7.3.2 There are seven primary substations that feed high voltage electricity into the Harborough area. This quantum of substations is normally considered as positive in terms of capacity needs, however on this occasion six of these primary substations are up to firm capacity (i.e. they have reached the Transformers agreed capacity) and thus will need to be upgraded to accommodate further growth. The Primary sites that are at firm capacity are:

- Lutterworth, Magna Park, Sapcote, Bruntinthorpe, Hillmorton and Hinckley. These primary substations serve the western area of Harborough; and
- Kibworth Primary serves the eastern area of Harborough and though not at capacity, it is very close to being so.

7.3.3 WPD have also commented that the 11kV circuits that run through the site are not of a large capacity and may need overlaying/restringing, however this all depends on when, where and the amount of load that's required.

7.3.4 Several of these primary substation sites, including Hillmorton and Hinckley already have reinforcement projects triggered, which will unlock additional capacity within these areas. When WPD have the trigger for additional demand at the other substations, this will also result in reinforcement projects being started or new substations being installed to cater for the new demand. The high level timescales for a new primary substation is 2-3 years, this is dependent on planning permission and wayleaves for circuits and a detailed programme of works.

7.3.5 With regards to the Higher Voltage levels, the network can and does change frequently due to new connections, asset reinforcement projects and asset replacement where larger assets are installed if it is required. This means that the network capacity will change between now and 2031. The capacity which is available within the network today can be utilised by all new connections including energy storage facilities.

7.3.6 WPD have forecast demands out to 2022/23 which is the end of the regulatory period for natural load growth, they will monitor the specific new demand enquiries and have just started

a large investigation into future energy scenarios and subsequent demands thorugh the WPD strategy team, which is scheduled to be completed by mid 2017. These future demand scenarios will take into account future manufacturing growth, demand growth due to the electrification of the heating and transport sectors and the areas within the network this will have the greatest impact. It is recommended that Harborough DC undertake an ongoing discourse with WPD to ensure that all plans are taken into account in these studies.

National electricity transmission

7.3.7 The National Grid control the national transmission network which provides WPD with the supply points for local distribution. National Grid have confirmed that the transmission network has capacity to cope with any increase in load demand as a result of the proposed increased residential growth in the short, medium and long term.

7.3.8 The only scenario that may cause difficulty is if major infrastructure, for example a new steel works, were to be introduced into the network in the area. The effect of such a major power user would trigger a reinforcement of the existing infrastructure.

WPD electricity infrastructure capacity to meet planned growth delivery

7.3.9 WPD are not able to analyse detailed network requirements for individual sites prior to site specific applications being made. It is therefore not possible to assess the actual infrastructure upgrades required without them. The applications are usually made at a point in planning when full details of the development are known and the required infrastructure can then be determined based on the actual capacity at that point in time.

7.3.10 Though electrical capacity is dynamic and constantly changing with upcoming developments, capacity can be reserved on acceptance and payment of a new supply quotation from WPD. This capacity will be reserved for approximately twelve months. If no major design or construction works have progressed after this time WPD reserve the right to reallocate the capacity elsewhere.

7.3.11 It is recommended that there will need to be early engagement and ongoing discussions between Harborough DC and WPD regarding future diversions, capacity upgrades and other agreements relating to the supply of electrical infrastructure for the proposed IDP development; to enable WPD to include the proposals in any strategic infrastructure work they are planning.

7.3.12 Table 7.1 shows the critical path assessment for electricity based on consultation feedback from the WPD Warwickshire district office.

Table 7.1 - Electricity Critical Path Assessment

Place	Short Term (2018 -2021)	Medium Term (2021-2026)	Long Term (2026-2031)	Post Plan - Lutterworth East SDA Only
Bitteswell				N/A
	Nearby Lutterworth and Magna Park primary substations have 2 transformers on site, these however have reached the transformers agreed capacity and will require an upgrade. When WPD have the trigger for additional demand at the other substations, this will result in reinforcement projects being started or new substations being installed to cater for the new demand.			
Dunton Bassett				N/A

	Nearby Sapcote primary substation has 2 transformers on site, these however have reached the transformers agreed capacity and will require an upgrade. When WPD have the trigger for additional demand at the other substations, this will also result in reinforcement projects being started or new substations being installed to cater for the new demand.			
Gilmorton				N/A
	Nearby Bruntingthorpe primary substation only has 1 transformer on site, this has reached the transformers agreed capacity and will require an additional transformer to be installed or an upgrade of the existing transformers and network. When WPD have the trigger for additional demand at the other substations, this will result in reinforcement projects being started or new substations being installed to cater for the new demand.			
Husbands Bosworth				N/A
	Nearby Bruntingthorpe primary substation only has 1 transformer on site, this has reached the transformers agreed capacity and will require an additional transformer to be installed or an upgrade of the existing transformers and network. When WPD have the trigger for additional demand at the other substations, this will result in reinforcement projects being started or new substations being installed to cater for the new demand.			
Lutterworth East SDA				N/A
	Nearby Lutterworth and Magna Park primary substations have 2 transformers on site, these have reached the transformers agreed capacity and will require an upgrade. When WPD have the trigger for additional demand at the other substations, this will result in reinforcement projects being started or new substations being installed to cater for the new demand.			
North Kilworth				N/A
	Nearby Bruntingthorpe primary substation only has 1 transformer on site, this has reached the transformers agreed capacity and will require an additional transformer to be installed or an upgrade of the existing transformers and network. When WPD have the trigger for additional demand at the other substations, this will result in reinforcement projects being started or new substations being installed to cater for the new demand.			
South Kilworth				N/A
	Nearby Bruntingthorpe primary substation only has 1 transformer on site, this has reached the transformers agreed capacity and will require an additional transformer to be installed or an upgrade of the existing transformers and network. When WPD have the trigger for additional demand at the other substations, this will result in reinforcement projects being started or new substations being installed to cater for the new demand.			
Swinford				N/A
	Nearby Hilmorton primary substation has 2 transformers on site, these however have reached the transformers agreed capacity and will require an upgrade. Hillmorton and Hinckley already have reinforcement projects triggered (recently) which will unlock additional capacity within these areas. When WPD have the trigger for additional demand at the other substations, this will result in reinforcement projects being started or new substations being installed to cater for the new demand.			
The Claybrookes				N/A
	Nearby Lutterworth and Magna Park primary substations have 2 transformers on site, these have reached the transformers agreed capacity and will require an upgrade. When WPD have the trigger for additional demand at the other substations, this will result in reinforcement projects being started or new substations being installed to cater for the new demand.			

Ullesthorpe				N/A
	Nearby Lutterworth and Magna Park primary substations have 2 transformers on site, these however have reached the transformers agreed capacity and will require an upgrade. When WPD have the trigger for additional demand at the other substations, this will result in reinforcement projects being started or new substations being installed to cater for the new demand.			

7.3.13 Based on the RAG assessment most of the planned growth will require some upgrades in infrastructure capacity to both transformers and the 11 kV networks. However, this will depend on when, where and the amount of load are required for the phases of development in the area, this will need to be provided by Harborough DC to WPD at the earliest possible opportunity with ongoing consultation so as to inform WPD's reinforcement of the existing distribution network to meet load demands for this and other developers at the time.

7.3.14 The Kibworth Primary Station which is very close to firm capacity, reinforcement will be required at this primary and also reinforcements may be required of the 11kV circuits (that may need overlaying/restringing). Full requirements will be confirmed by WDP as and when the new supply applications are made

7.3.15 It is generally accepted that smaller sites (<100 dwellings) can usually be accommodated on the existing network (although there may be occasions where local reinforcement or network upgrades are required). Where there are clusters of smaller sites creating a demand on the capacity of a single transformer, these, could cumulatively create the need for an upgrade.

7.3.16 Upgrades in capacity will only be undertaken when there is actual demand. The developer is likely to be required to pay towards the reinforcements (depending on beneficiary and proportion of use). There will be a plan for how to deal with the capacity requirement in WPD's RIIO plans.

Infrastrucuture to support the planned growth at the SDA's

7.3.17 Western Power Distributor have confirmed that the East of Lutterworth SDA can be serviced, as there is some capacity in the network, but there will be need for system upgrades, particularly depending on loads arising from any employment use that can vary widely dependent on final use. There will be varying cost implications depending on this capacity and load requirements. Lutterworth Primary has two transformers and currently has approximately 5MVA of spare capacity, with a predicted requirement from the East of Lutterworth SDA of 3.5MVA up to 2031 and 6MVA post planning.

7.3.18 Scraptoft North SDA will be serviced by the Kibworth primary substation. Reinforcement will be required at this primary and also reinforcement of the 11kV circuits that may need overlaying/restringing. Full requirements will be confirmed by WDP as and when the new supply applications are made. However, based a review of the information submitted by the site promoters, and the availability of connections points at nearby Leicester City, it is not envisaged that there will be any problems in gaining access to infrastructure, though upgrades are likely to be required to reflect the scale of planned growth.

7.3.19 The costs of any required reinforcements will be provided by WPD in response to new supply applications as and when the developments come forward, estimates have been provided by the scheme promoters based on their consultation with the utility providers.

Cross border infrastructure implications

7.3.20 Hillmorton and Hinckley already have reinforcement projects triggered (recently) which will unlock additional capacity within these areas. When WPD have the trigger for additional demand at the other substations, this will also result in reinforcement projects being started or new substations being installed to cater for the new demand. The high level timescales for a new primary substation is 2-3 years, this is dependent on planning permission and way leaves for circuits and a detailed programme of works.

How will the infrastructure be funded?

7.3.21 For a new customer requesting an electricity connection - the Distribution Network Operator (DNO) for the area is required under Section 16 of the Electricity Act 1989 to offer a connection and inform them of the charges. This should be made within 3 months of the DNO receiving the necessary information from the customer.

7.3.22 Section 16 of the act requires the DNO to charge for the minimum scheme required to provide the connection. A DNO may design an enhanced scheme, but the cost to the customer should not exceed that of the minimum scheme. If considered beneficial, the customer may request the enhanced scheme and pay the additional costs.

7.3.23 A connection charge will include up to three components:

- The full cost of assets that will be used solely by the connecting customer, providing the requirement is over and above the minimum scheme, when asked for by the connecting customer;

- A proportion of the cost of network reinforcement where it's required. The proportion is calculated based on the share of new capacity created that will be used by the connecting customer. Generally, the connecting customer will only pay for reinforcement at the voltage level it is connecting to and one voltage level above; and

- A rebate to the DNO or a previously connected customer under the Electricity (Connection Charges) Regulations 2002. This rebate will apply where the new connection uses network assets that were installed for by a previous customer.

Second Comer Regulations

7.3.24 The Electricity (Connection Charges) Regulations 2002 (ECCRs) also known as the 'Second Comer Regulations' allows a developer to claw-back costs they may pay to the Distribution Network Operator (DNO) for new infrastructure.

7.3.25 The ECCRs apply where a customer pays a DNO for a new or modified connection to create capacity and a subsequent customer then utilises the assets installed for the first customer. When this happens the second customer may be additionally charged by the DNO a proportion of the costs paid by the first customer, directly relating to their required use of the created capacity. This amount may then be paid back to the first customer by the DNO.

7.3.26 The ECCRs apply only to assets installed up to 5 years from when they were installed and apply in that period to each successive connecting developer. The regulations are proposed for change in 2017 to increase the ECCR period to 10 years to allow customers a longer period for claw-back of initial outlay.

Competition in Connections

7.3.27 Not all electrical network connection work has to be carried out by the Distribution Network Operator (DNO). Competition exists for some works which is mainly in relation to new works that are physically and electrically separate from the DNO's existing Distribution System. This work may be undertaken by suitably accredited Independent Connection Providers (ICPs), or by an Independent Distribution Network Operator (iDNO).

7.3.28 In 2010 Ofgem introduced a 4% regulated margin that DNO's must charge on contestable connection services in markets where competition is viable, to allow other connection providers greater scope to compete with the DNO's.

DNO Strategic Investment

7.3.29 Each DNO is bound by its licensing conditions to the development, maintenance and operation of an efficient, co-ordinated, and economical Distribution System; and part of their obligation is to make Strategic Investment in their network assets in anticipation of new connections.

7.3.30 RIIO-ED1 contains an 'Efficiency Incentive' element which is used to calculate revenue a DNO receives each review period by sharing any over-or-under-spend between the company and the customer. This incentive drives the DNOs to seek out lower cost solutions and prioritise schemes that manage electricity usage and to offset the need for network reinforcement. It is about risk-sharing, where investors and consumers share the benefits when the DNO delivers outputs for less money than envisaged at the start of their price review period.

7.3.31 The problem that this causes is who should bare the risk (and cost) of any Strategic Investment. The more costs a DNO recovers via connection charges the better it performs against its allowed revenue, and the more it benefits via the 'Efficiency Incentive'. But if the connecting customers do not emerge then the opposite occurs. At the same time a DNO cannot recover costs for assets provided in advance of any connection, via connection charges.

The combination of these things incentivise DNOs to wait for customers to request a connection before undertaking significant reinforcement.

7.3.32 The issues outlined above are a very common story for new development, which OFGEM are now putting pressure on the DNOs to resolve. They acknowledge that through RIIO-ED1 that DNOs need to connect customers without delays or service disruptions, and without increasing the network capacity unnecessarily or at a high cost; and that this may require a move away from traditional investment to newer, more flexible solutions offered by smart grid technologies and different contractual arrangements with demand and generation customers.

7.4 Issues and recommendations

7.4.1 As plans mature, there will need to be discussions with National Grid and Western Power Distribution regarding build over agreements, diversions, capacity upgrades and inset agreements. A utility forum[11] should be established either at a District or sub-regional level to coordinate the timely delivery of critical infrastructure to support the planned growth.

7.4.2 WPD have forecast demands out to 2022/23 which is the end of the regulatory period for natural load growth, WPD monitor the specific new demand enquiries and have just started a large investigation into future energy scenarios and subsequent demands by their strategy team which is scheduled to be completed in the next six months. These future demand scenarios will take into account future manufacturing and employment growth, demand growth due to the electrification of the heating and transport sectors and the areas within the network this will have the greatest impact.

7.4.3 Careful planning, phasing of developments and timely applications for new residential developments depending on the load requirement and timing for when the growth, particularly at the SDA's is expected to be built out, will provide a better outcome for Harborough District Council by minimising delays required by having to reinforce the network prior to providing a new supply connection.

7.4.4 Primary sub-stations can be very land-hungry. These facilities are not ideal neighbours from an aesthetic and public perception perspective, and so the location of any newly required substation needs to be carefully planned. The high level timescales for a new primary substation is 2-3 years, this is dependent on planning permission and way leaves for circuits and a detailed programme of works.

7.4.5 With regards to the Higher Voltage levels, the network can and does change frequently due to new connections, asset reinforcement projects and asset replacement where larger assets are installed if it is required. This means that the network capacity will change between now and 2031.

7.4.6 Two National Grid 400 kV transmission overhead lines run through the district, one to east and one to the west including across the site of the proposed Lutterworth East SDA. These are classed as 'nationally critical infrastructure', and generally National Grid will look for a 20m buffer corridor along these lines, so no building or structure should be placed underneath these very high voltage lines.

7.4.7 The majority of sites in the west of the district have been classified as Amber through the planning period, whereby some level of reinforcement to the existing networks will be required. The sites in the east of the district will received power from Kibworth Primary Substation. There is currently some capacity at this substation for Phase 1, however reinforcement will be required for later stages of development, including works to the 11kV network.

[11] Following PBA contact with WPD in 2016, Philip Bale of WPD has forwarded Harborough District Councils proposed development strategy to the WPD Primary Strategy team so that the proposed growth plans are taken into account in the WPD assessments. HDC will also be included onto the WPD stakeholder group so that HDC are invited to future dissemination events.

7.4.8 Lutterworth East SDA can currently be serviced through to the end of Phase 3 due to existing capacity in the network. It should however be noted that this is existing capacity now, and WPD confirm that due to the dynamic changes that occur in their networks that this capacity may not be available in the future and reinforcement works may ultimately be required. Scraptoft SDA will require reinforcement works to Kibworth primary substation to release the required capacity.

7.4.9 Harborough DC must work closely with WPD to ensure that all planned development is incorporated in WPD strategic plans to enable them to fund as much as possible ahead of need. Security of the developments needs to be confirmed for WPD to ultimately risk investment to cater for them, else developers will be required to make a greater investment into the reinforcement of the network. Costs to developers can be offset however by utilising the competitions in connection and the heavily subsidised rates offered by Independent Connection Providers (ICPs) and Independent Distribution Network Operators (IDNOs).

8 UTILITIES GAS

8.1 Introduction

8.1.1 This section considers the gas infrastructure requirements for Harborough's planned growth. The assessment has been informed by consultation with National Grid and a review of the following documents:

- National Grid Gas Transmission Ten Year Statement 2016;
- National Grid Future Energy Scenarios – July 2016; and
- National Grid Gas Distribution Ltd. Long Term Development Plan 2016.

8.1.2 National Grid (NG) is responsible for the gas transmission and distribution network within the Harborough District Council (HDC) area. All of the Harborough District area falls within the NG East Midlands Local Distribution Zone (EM-LDZ) as shown in figure 8.1 below.

Figure 8.1 National Grid Gas Distribution Ltd - Local Distribution Zones

Source: National Grid Gas Distribution Ltd. Long Term Development Plan 2016[12]

[12] Available at http://www2.nationalgrid.com/UK/Industry-information/Developing-our-network/Gas-Distribution-Long-Term-Development-Plan/ (Downloaded: 24 February 2017)

8.2 How is the infrastructure structured?

National Grid operates the national gas transmission system and also the distribution system for the Harborough District

8.2.1 National Grid are the system operator and owner of the gas National Transmission System (NTS) in Great Britain. As system operator their primary responsibility is to transport gas from supply points to exit offtake points safely, efficiently and reliably. They manage the day-to-day operation of the network including balancing supply and demand, maintaining system pressures and ensuring gas quality standards are met. As owner they must ensure all assets on the NTS are fit for purpose and safe to operate.

8.2.2 At the NTS exit offtake points, gas is transferred to twelve. Local Gas Distribution Zones (LDZs) around the UK for onward transportation to domestic and industrial customers, or to directly connected customers including storage sites, power stations, large industrial consumers and interconnectors (pipelines to other countries).

8.2.3 Within each LDZ gas is reduced in pressure and piped to homes and businesses through intermediate (I/P), medium (M/P) and low pressure (L/P) networks to industrial, commercial and domestic consumers via a gas distribution network (GDN). There are currently eight GDNs, each of which covers a separate geographical region of Great Britain and GDN operators are licenced to distribute gas through the system. There are currently 5no. GDN operators, of which National Grid Gas Distribution Ltd (NNGDL) is one of, and runs the 4no. GNDs of West Midlands, North West, East of England (which includes Harborough District) and North London.

8.2.4 In addition, there are a number of smaller networks owned and operated by Independent Gas Transporters (IGTs). These are located within the areas covered by the GDNs. Since GDNs are natural monopolies they are regulated by us to protect consumers from potential abuse of monopoly power.

Ofgem regulates price control and investment planning through a regulatory cycle

8.2.5 GDNs are regulated by Ofgem to protect consumers from potential abuse of monopoly power. Similar to the electricity industry, 8-year price control periods are used, which incorporate curbs on expenditure as well as incentives for efficiency and innovation. The current price control is RIIO – GD1 (Revenue = Incentives + Innovation + Outputs 'Gas Distribution Period 1') sets out the outputs that the eight GDNs need to deliver for their consumers and the associated revenues they are allowed to collect for the eight-year period from 1 April 2013 until 31 March 2021. RIIO – GD2 will follow on from 1st April 2021 to 31st March 2028.

8.2.6 RIIO – GD1 limits the amount of revenue that energy network owners can take through charges they levy on users of their networks to cover their operating costs and give a return in line with agreed expectations. As with electricity and water, a gas transporter is bound by duties imposed by the Gas Act, other relevant legislation and the conditions incorporated in their licence; if they fail to comply with any condition of its licence or any duty, they may be subject to enforcement action by Ofgem.

8.3 Asset management plans include some new infrastructure

8.3.1 Through their demand forecasting NGGDL currently have planned 3no. significant projects (>£500,000) for asset investment in the East of England region to maintain the system capability of their high and low pressure distribution systems. These are due to be complete by 2019.

8.3.2 Only 7% of NGGDL's expected level of net capital expenditure over the next five years (2015/16 – 2020/21 as per their RIIO business plan) corresponds to reinforcing the existing gas network and connecting new gas customers (domestic and non-domestic) to the network.

The vast majority of NGGDL's RIIO-GD1 investment will be spent on 'Replacement', relating to the money invested in replacing old metallic mains and metallic services.

8.3.3 Where the NGGDL has already planned and financially approved general reinforcement within their 8-year price control period, and those works are due to be undertaken prior to the winter following connection of the new load request (which obviates the requirement for specific reinforcement), the GDN will fund the full cost of the general reinforcement.

8.4 Approach to assessing growth related requirements

8.4.1 NGGDL quote for new network connections and assess capacity on a first-come, first-served basis. Capacity available today might not be there tomorrow, so for long-term projects information about current available capacity may be out of date by the time a development is complete. If capacity is not available for a development, it can usually be provided. The service level agreements within the connections process allow for lead times to deliver any reinforcement requirement. Over the life of a proposed development, there should be no expected issues, but the cumulative effect of a large number of loads may well overload the upstream systems, so they must be carefully managed. Potentially higher pressure system reinforcement can pose a problem, but this is rare and would be picked up at the point when the connections are requested. These are usually phased and shouldn't stop the development.

8.4.2 Utility infrastructure providers (UIPs) or gas transporters (GTs) requesting a connection will usually ask for it at time of need. This means that a site could be connected at any one of many points, and until there's a connection request, NGGDL find it difficult to plan ahead of need. A single site might be split into many sites for different GTs, all wanting connections for their part of the 'planned' site. Initially as part of new supply requests NGGDL will state whether or not there is infrastructure in an area, and if that infrastructure is capable of supplying an identified development.

8.5 Critical path assessment

8.5.1 The gas infrastructure is separated between the 'transmission' network which feeds to the local supply distribution points, and the 'distribution' network which feeds locally from the national network to the end users.

8.5.2 NNGDL have confirmed that they will be able to manage an increased gas demand on their 'transmission' network as a result of any increased residential growth in the short, medium and long term. **This would be represented by 'Green' for the entire RAG status**.

8.5.3 The only scenario that may cause difficulty is if major infrastructure such as a new steel works (or other very high intensive gas) user were to be built in the area. The knock on effect would require a reinforcement of the existing infrastructure, but at this moment in time there is nothing like this planned in the area.

8.5.4 The NNGDL Network Strategy team for the distribution capability in the Harborough District for Phases 1 to 3 have commented that there will be capacity available for the short, medium and long term. National Grid do however operate on the principal of customers booking the required capacity, with at least 12 months of prior notification for development site works to commence. This would allow time for National Grid to plan and implement any necessary reinforcement works to provide service to all requested developments. However, national grid connections process works on a first come first serve basis and there is no guarantee that this capacity will still available at the time that an official connections request is submitted.

8.5.5 At present indications are that the development sites in relation to gas requirements would be represented by 'Green' for the entire RAG status.

How can infrastructure be paid for?

8.5.6 Gas infrastructure can be paid for in the following different ways, depending on the type of infrastructure connections:

- Local on-site connections - these connections are paid for by the developer;
- Gas governor and new medium pressure mains - National Grid Gas' "Statement of Principles and Methods to be Used to Determine Charges for Gas Distribution Connection Services for Distribution Networks: Effective Date 7th April 2014" requires the costs associated with the medium pressure pipework and governor from the Connection Point to the development to be funded by the developer; or
- Main reinforcement costs upstream of the Connection Charging Point - there will be an apportionment of costs between the developer and the National Grid. This apportionment is subject to a separate economic analysis exercise. This contribution will be equal to the excess of the costs associated with the new load over the capitalised transportation revenue. Contributions are made by means of an up-front payment. Note that these costs would require separate investigation, and are not covered here.

8.6 Issues and recommendations

8.6.1 The Long Term Development Statement 2016 for NNGDL shows that only a small portion of their capital expenditure is allocated to new connections. NGGDL target spend is on maintenance of their existing network and not connecting new developments to the gas network. NGGDL will however confirm whether there is sufficient capacity within their network to supply a development, and a suitable connection point, at the time of request. It can be difficult to obtain a connection or quotation direct from NGGDL and a common approach is for a developer to request a connection through an accredited independent gas transporter (IGT) or independent connections provider (ICP). These organisations can design, construct and connect to the NGGDL gas network, with the new network being run by an IGT, or just constructed and then adopted by NGGDL. The cost savings of such collaboration can be high, with greater flexibility and programme certainty, making use of competition in connections. In some cases, the cost to the developer is zero, with the capital cost of the network construction absorbed by the IGT and recouped via payments from the gas shipper for use of the network over a number of years.

8.6.2 Both National Grid Gas Transmission and National Grid Gas Distribution Ltd have commented that they do not foresee any capacity issues within their networks for the anticipated demands in the Harborough District over the planning period. As plans mature, there will need to be discussions with National Grid regarding build-over agreements, diversions, capacity upgrades and inset agreements. A utility forum should be established either at a district or sub-regional level, between Harborough DC and National Grid Gas Distribution Ltd, to coordinate the timely delivery of critical infrastructure to support the planned growth.

9 UTILITIES TELECOMMUNICATIONS

9.1 Introduction

9.1.1 This section relates to telecommunications infrastructure in the Harborough District, including broadband.

9.1.2 Telecommunications networks are provided by a range of operators in the district with the main suppliers being BT, Virgin Media (VM) and the Harborough East Rural Broadband Syndicate (HERBS). This section of the report has been informed by consultation with these providers and through research on current initiatives in the area and around the UK.

How is the infrastructure structured?

9.1.3 Both BT Openreach and Virgin Media are the primary infrastructure providers in the Harborough District with a network of copper and fibre overhead and underground assets. Neither company has provided the requested plans of their telecommunication infrastructure around the Harborough District. Virgin Media have informed us that plans for obtaining existing infrastructure details would require a detailed design of each of the proposed build sites for their planning purposes.

9.2 Superfast broadband initiative by Leicestershire County Council

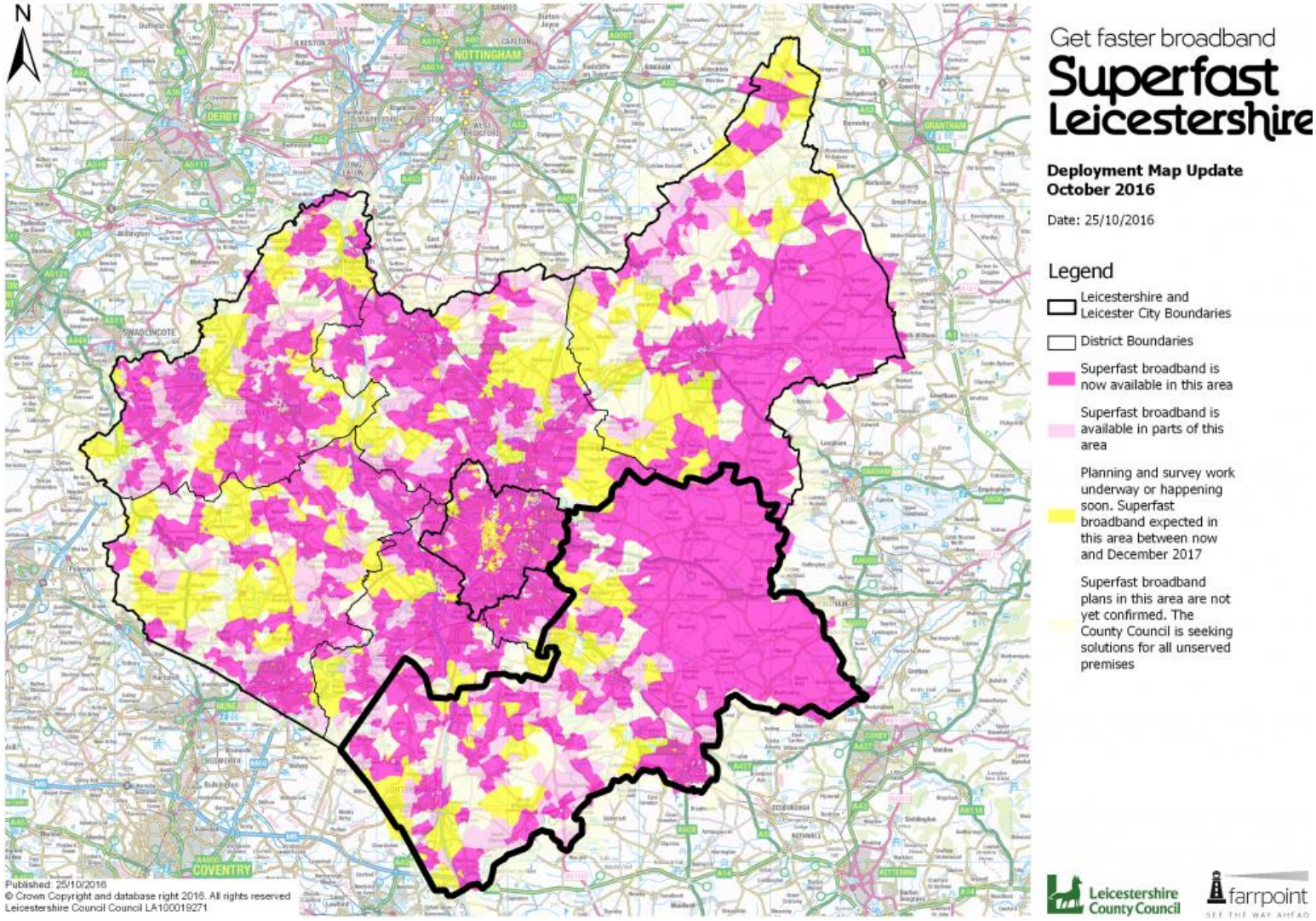
9.2.1 Leicestershire County Council (LCC) are working through their Superfast Leicestershire programme to ensure that 96% of all homes and businesses in the county have access to fibre broadband by the end of 2017. This has resulted in two contracts let to BT to date to meet the 96% target joint funded through LCC, Broadband Delivery UK and BT.

9.2.2 By March 2016 access had been enabled for over 65,000 properties, reaching almost 150 towns and villages. In the next phase of the rollout the project aim is to bring fibre broadband to another 15,000 county properties. Details on when and where expected deployment is expected and an interactive map can be found on the Superfast Leicestershire website.[13] A current map of superfast broadband within Leicestershire can be seen in figure 9.1 overleaf.

9.2.3 Superfast Leicestershire understands that current funding constraints mean that some areas are still expected to miss out on superfast access. They have identified around 15,000 properties across Leicestershire that are not currently due to have access to superfast broadband (4% of homes and businesses) based on the outcome of the initial two contracts with BT. They are currently working on plans to reach more of these properties through a new phase of the programme and have asked BT to develop plans for additional coverage to the value of £5.6 million, which will form the next contract phase.

[13] The Superfast Leicestershire Website can be found at the following link (Feb 2016): http://www.superfastleicestershire.org.uk/

Figure 9.1 Superfast Broadband Deployment Map (October 2016)



Source: Superfast Leicestershire [14]

[14] Available at http://www.superfastleicestershire.org.uk/when-and-where/ (Downloaded: 24 February 2017)

How can the infrastructure be paid for?

9.2.4 Broadband Delivery UK (BDUK) has been set up by Government as part of the Department for Culture, Media and Sport, for the purposes of delivering superfast broadband and better mobile connectivity to the UK, with the aim of providing superfast broadband coverage to 90% of the UK by early 2016 and 95% by December 2017

9.2.5 BDUK developed a broadband delivery framework for use by the local bodies to assist in the procurement process. The framework contract was signed by BT who announced an investment of £6billion in ultrafast and mobile broadband over the next few years on 5 May 2016.

9.2.6 The contracts between local authorities and BT for broadband roll-out contain clauses that allow for the return of public subsidy by BT (claw back or gain share). This happens when the take up of superfast broadband in the area covered by a contract reaches a certain threshold. The claw back (gain share) mechanism in BDUK's contracts requires BT to return part of the investment when adoption of the new service passes beyond the 20% mark in related areas.

9.2.7 Two of these contracts have already been enacted with the forecast of meeting 96% of all homes and businesses in the county having access to fibre broadband by the end of 2017. Superfast Leicestershire plan that the final contract phase will utilise underspend from previous contracts in the programme to be reinvested early 2017 with BT as part of a third claw-back/gain share contract to complete connection of the remaining 4% of premises.

9.2.8 There is a further finance option available for premises that may still have issues with superfast connections, likely restricted rural areas of limited connectivity. BT Openreach is likely to cover infrastructure costs of residential connection of homes to for provision of Fibre to the Premises (FTTP) for new developments greater than 200 homes. Developments between 50 and 200 homes will require a contribution from the developer for FTTP. Developments less than 50 homes will most likely need the majority of funding to come from the developer; however, there is the possibility that the BT Community Fibre Partnership Team may be able to assist with grant funding for these small developments, that will also bring fibre in to other homes in these smaller often rural communities.

9.2.9 For new developments where the strategic spine fibre infrastructure has been installed, BT will normally require developers to excavate and lay the necessary ducts and joint boxes, which BT Openreach provide free of charge, and construct the necessary chambers as part of the general highway construction works. All other works are typically undertaken by BT Openreach at their expense, provided each individual connection does not exceed £3,400.

9.3 BT Community Fibre Team

9.3.1 A Community Fibre Partnership is where BT work with a local group such as residents of a rural village, a block of flats in a city centre, or even a group of business owners in an industrial park, that isn't covered in an existing fibre upgrade plan to find a solution to bring fibre to their area. A joint funding arrangement will be set up between BT and the end customer where BT cover partial costs of the broadband provision (level in line with their commercial model) and the community has the option to self-fund the remaining gap. Developer contributions may also help to achieve connection on top of the funding allowance. The Fibre Team should be contacted to discuss the individual sites once more certainty is known on planning and overall broadband provision.[15]

9.4 Virgin Media

9.4.1 Early consultation with Virgin Media has highlighted that they are currently working on an active project called Project Lightning, which Virgin Media are investing £3 billion in during a 5-

[15]BT Community Fibre Partnership Website (February 2017): http://www.communityfibre.bt.com/

year network expansion programme. Their aim for this spend is to expand their network to connect 4 million more UK homes and businesses providing up to 200Mb ultrafast broadband. Virgin Media also operate a demand led service: Cable My Street[16] which is a similar scheme to the BT Community Fibre Partnership, but is resident led and fully funded by Virgin Media dependent on the number of interested applicants in the area versus their commercial model to supply the area. If enough residents request it and the makes supply commercially viable to them, Virgin will install it.

9.4.2 Virgin Media have advised they can offer Superfast Broadband – up to 200Mbps, TiVo TV Services, Home Phone, Mobile Packages, Home Works – dedicated 300Mbps business connection for when your home is your head office. Their superfast network is independently owned, meaning they don't use or share Openreach duct and can deliver service to New Builds or existing properties without disruption.

9.4.3 Virgin Media have been consulted on the planned phased growth in the Harborough District and they have advised they provide free issue of material for all sites and their dedicated teams will be available for onsite works and installations. All services can be pre-installed into the homes.

9.4.4 It should be noted that though Virgin Media have expressed their interest in providing telecommunications for the developments, they have not provided any detailed information. It is likely that provision of high speed broadband to the main densely inhabited sites will not be an issue, but delivery to smaller rural communities will be not be commercially viable for them. Virgin require more detailed plans of the development proposals to provide further information.

9.5 Issues and recommendations

9.5.1 As with the other utilities, the key factor will be the timely dialogue with BT Openreach and other telecommunication providers so that works can be planned and implemented well in advance. This is well advanced with the Superfast Leicestershire programme, though continued work with these stakeholders and Harborough DC should continue to ensure all proposed development is covered in the strategic plans of all parties and the most appropriate method of broadband roll-out.

9.5.2 Larger developments will likely be included in BT Openreach plans for Fibre to the Premises (FTTP) and at no developer cost, and this is likely to be the same for other telecommunications providers where there is a heavy positive commercial outcome for them. Superfast Leicestershire are working with BT for the final contract stage of the claw back/gain share mechanism framework through BDUK and it is possible that this may succeed in reaching the vast majority of premises, Rural and harder to reach settlements will still need to be examined with the providers on a case-by-case basis; and additional funding may be required.

9.5.3 There are funding mechanisms in place such as BT Openreach Community Fibre Team who can assist in retrofit or bespoke connections that will suit some of the smaller settlements and the team should be contacted regarding these as need is determined.

9.5.4 Virgin Media and other smaller providers are also available for superfast broadband provision on a commercially driven basis, such as Gigaclear in the Welland Valley area who offer FTTP on an on-demand led basis, and HERBS[17] (a new wireless provider) who cover a significant area of east Harborough offering 30Mbps download speeds. Such wireless access may be the most viable offering for very rural and difficult to reach areas to meet 100% of coverage.

[16] Virgin Media – Cable My Street Website (February 2017): http://www.virginmedia.com/cablemystreet/

[17] HERBS Website offering Rural Broadband Connections in east Leicestershire (February 2017): http://www.herbsbroadband.co.uk/

9.5.5 The current view of communications for the proposed developments is that there should be no major issue in providing superfast broadband for them so long as plans are highlighted to BT early in the design process so they can be incorporated into the strategic rollout as part of the contract package with LCC.

10 TRANSPORT

10.1 Introduction

10.1.1 This section sets out a summary of the operation of the existing transport network, together with known issues and initiatives It considers the transport infrastructure required to support Local Plan growth, along with associated costs and funding opportunities. All that is reported here is based on a review of the existing evidence.

10.1.2 The cumulative impact of new homes and jobs in Harborough, development in neighbouring authorities and background traffic growth as a result of national transport trends, will all add to pressure on the existing transport networks. This will have an effect on both the local networks and strategic networks which serve the District and lead to the need for additional infrastructure to support growth and the prosperity of the area.

The consultations and evidence informing this assessment

10.1.3 The assessment has been informed by consultation inputs from the Transport team at Leicestershire County Council, the District Council's transport consultant's - Jacobs, and officers and their consultant representatives from Highways England.

10.1.4 This evidence base consists of a number of studies and reports produced, primarily within the last twelve months, which were commissioned by both Harborough District Council and Leicestershire County Council, and by the promoters of the strategic development areas (SDAs). This evidence provides information on existing constraints and on infrastructure requirements to meet the needs of the planned growth.

10.1.5 The key documents informing this assessment include:

- Spatial Planning Group[18] - Testing Through to 2031 – Transport Evidence Report (Jacobs, September 2015);
- South East Leicestershire Local Transport Plan Evidence (Edwards and Edwards Consultancy Ltd, October 2016);
- Harborough District's Strategic Transport Assessment (AECOM, September 2015)[19];
- Harborough District Local Plan Preliminary Traffic Impact Assessment (Jacobs, September 2016);
- Market Harborough Transport Study 2017 – 2031 (Leicestershire County Council, September 2016);
- Land East of Hamilton Lane, Scraptoft: Initial Transport Feasibility Assessment (RPS for the Scraptoft North SDA promoter, August 2016);
- Lutterworth East: Strategic Transport Assessment (AECOM for the East of Lutterworth SDA promoter, February 2016);

[18] Commissioned by Leicestershire County Council on behalf of the Spatial Planning Group.

It should be noted that each of the studies and reports which form the evidence base make assumptions regarding the level of development, background traffic and local development plan growth in accordance with the parameters of their own analysis and the wider context at the time of testing. Therefore, comparison between studies are not possible – the scale of growth incorporated has been refined to include Plan and post plan growth in subsequent studies by the scheme promoters – note PBA has not reviewed these.

- Route Strategies for the three Highways England Routes - which pass through the District, including the London to Scotland East, South Midlands and Felixstowe to Midlands routes (Highways England, April 2015); and

- Web research on Network Rail investment plans for the Harborough District area.

10.2 Transport infrastructure context

10.2.1 Harborough District is generally rural in nature, with direct access to one motorway, the M1, and a number of A roads serving the District. The largest towns in the district are Market Harborough in the south and Lutterworth in the south west. The north of the District wraps around the southern and eastern edges of Leicester City, with Scraptoft in the north of the district meeting the eastern edge of Leicester and forming part of the Principal Urban Area.

10.2.2 Journey to work information for the 2011 Census illustrates that the District has close economic links with neighbouring authorities, particularly those to the north, west and south, which corresponds with most of the major transport connections. The areas with the greatest level of out commuting from Harborough and in commuting to Harborough are Blaby and Leicester to the North, whilst the District retains 31% of commuting internally.

10.2.3 Market Harborough is connected to Leicester situated to the north by the A6, via Kibworth, and to destinations in the neighbouring Northamptonshire authorities to the south, such as Corby, Kettering and Northampton, by the A427, A6 and A508 respectively.

10.2.4 Lutterworth is connected to Leicester to the north by the M1, via Junction 20, and other strategic locations north and south of the District using the M1 motorway, such as Nottingham to the north and Northampton and Milton Keynes to the south. Alternative local routes from Lutterworth to Leicester include the A426 to the north and Gilmorton Road to the north east.

10.2.5 Lutterworth is also connected to destinations outside of the district to the north west using the A5, such as Hinckley, Tamworth and Lichfield; to the west using the A426 and M6 to Coventry and Birmingham; and to the south west using the A426, to Rugby.

10.2.6 Other key routes within the District include the A4304, which links Market Harborough and Lutterworth east-west, via M1 Junction 20 and A4303; Welford Road, which links Husbands Bosworth on the A4304 with South Leicester via Shearsby; and the B6047 which connects Market Harborough with Melton Mowbray to the north east of the District, via the A47 and Tilton on the Hill.

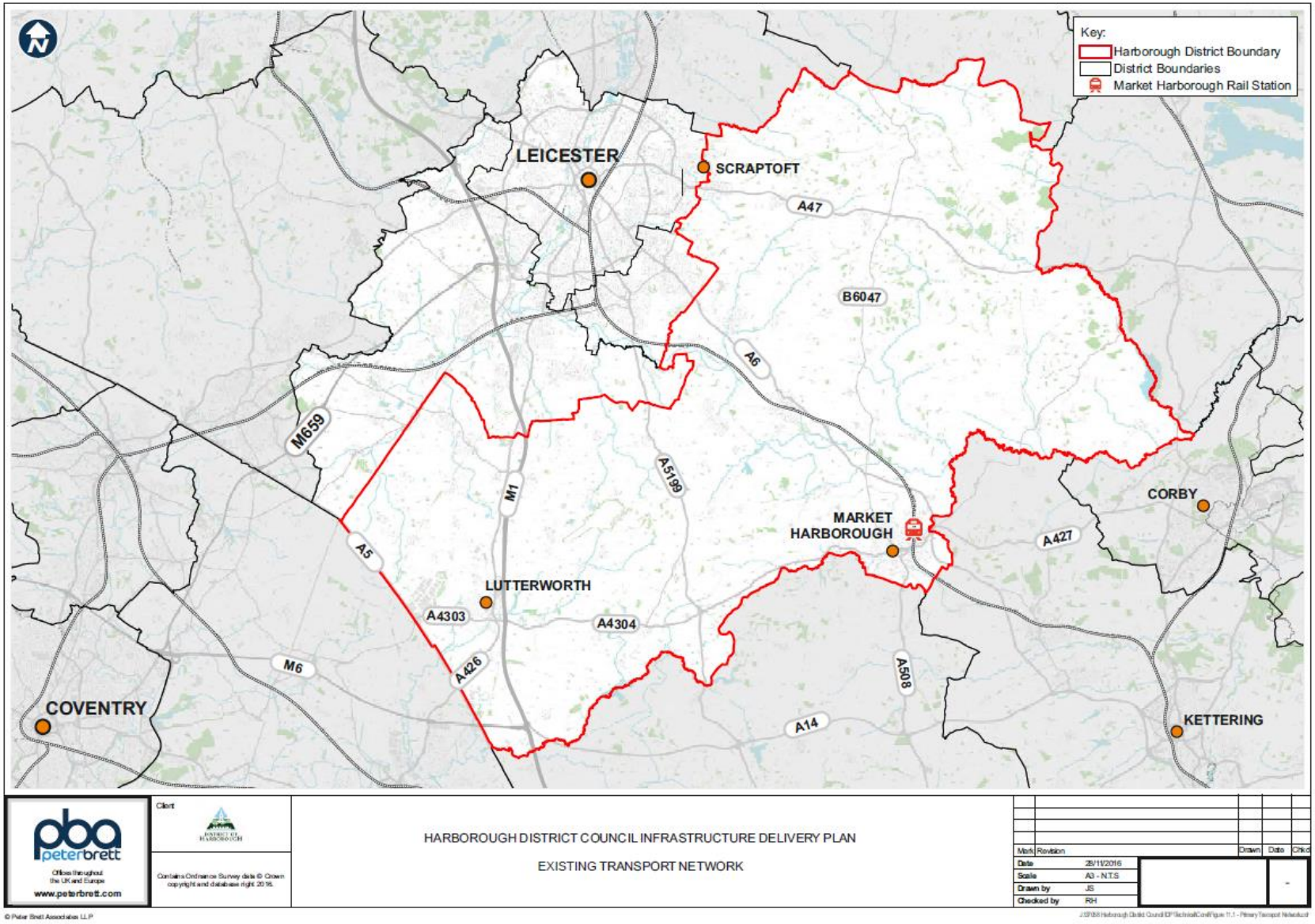
10.2.7 Within Harborough District the Strategic Road Network (SRN), which is managed and maintained by Highways England, includes sections of the M1, A5, M6 and A14. Notable SRN junctions within the district include M1 Junction 20 at Lutterworth, M1 Junction 19 with the M6 and A14 and the A5 junction with the A4303 at Magna Park.

10.2.8 The only railway station within Harborough District is located in Market Harborough, the station is on the Midland Mainline (MML), which runs between London St Pancras and Nottingham, Derby and Sheffield. Fastest journey times to London St Pancras are 55 minutes with two trains hourly throughout the day.

10.2.9 Within the District there are also a number of bus routes which primarily link the villages and Market towns with Leicester to the north.

10.2.10 The location of the existing transport network within the District is shown in figure 10.1 overleaf.

Figure 10.1 Existing transport network



The Local Transport Plan 3 policy context

10.2.11 Harborough District is currently covered by a number of transport related policies at both a county and district level; including those set in the Harborough District Core strategy and Leicestershire County Council Local Transport Plan 3 (LTP3).

10.2.12 Leicestershire County Council's Local Transport Plan 3 (LTP3) sets out how, in their role as Local Highway Authority, Leicestershire County Council will seek to ensure that transport plays an important role in helping the County to continue to be a prosperous, safe and attractive County.

10.2.13 LTP3 sets out the long term strategy for transport to 2026. The long-term vision for the County is to be "*recognised as a place that has, with the help of its residents and businesses, a first class transport system that enables economic and social travel in ways that improve people's health, safety and prosperity, as well as their environment and their quality of life*."

10.3 Infrastructure requirements and cost assumptions

10.3.1 The following paragraphs set out a summary of transport infrastructure which the evidence review suggests will be required to support the planned growth. As noted earlier, there are various studies and reports which inform the transport evidence upon which the issues and mitigation infrastructure included in this IDP have been informed. The studies have differing scopes, some are county wide, whilst others deal directly with impacts in one town or as a result of one strategic proposal.

10.3.2 It should also be noted that many of the studies specifically test a specific mitigation package or packages in the full build out scenario, incorporating the cumulative impact of committed development. In most cases it is not therefore possible to confirm at this time if the mitigation identified is the only or best solution, whether it is needed in all or in part or at what point in the delivery of the Local Plan the infrastructure is required. The phasing of infrastructure currently included in the IDP has therefore been informed by scheme promoters assessments where this has been provided, but noting that this will be refined as schemes move closer to planning application stage after taking account of the requirements of the relevant highway authorities.

East of Lutterworth SDA known infrastructure requirements

10.3.3 High levels of HGV traffic travelling through Lutterworth town centre has resulted in an Air Quality Management Area having been declared in July 2001. Various transport studies have been undertaken since that time, with consideration having been given to the issue of reducing the HGV traffic / addressing air quality impacts during the development of Local Transport Plans 2 and 3. The South West Leicestershire Transport Study (2011) concluded that, whilst an eastern bypass may remove some traffic from Lutterworth town centre, and perhaps improve the air quality - it was not considered that a case could be made for the scheme to be a public funding priority.

10.3.4 A Strategic Development Area (SDA) has been proposed to the east of Lutterworth which has been based on various transport assessments. The findings of the various assessments are summarised here and inform the IDP.

10.3.5 The Harborough District Local Plan Preliminary Traffic Impact Assessment (Jacobs, September 2016) tests the impact of the East of Lutterworth SDA. This demonstrates that development in this location would impact on the A4303/A426 (Frank Whittle Roundabout) junction and would create delays around a new junction on the A4304 to the east of the M1; delay at both of these locations would be further exacerbated with additional traffic from development at Magna Park. Delays are also expected to result in traffic diverting to Gilmorton Road and the A426, whilst further traffic would divert to the A5, M6 and A14.

10.3.6 The South East Leicestershire Local Transport Plan Evidence (Edwards and Edwards Consultancy Ltd, October 2016), illustrates points of stress on the highway network as a result

of development at Lutterworth East. This shows increased stress on the A4303, A4304, M1, Gilmorton Road and particularly on the A426 through and north of Lutterworth as well as to the south of the Frank Whittle Roundabout.

10.3.7 Whilst neither of the documents identified above went on to suggest measures to mitigate the impact of a Lutterworth SDA, the Lutterworth East Strategic Transport Assessment (AECOM, February 2016) produced on behalf of the scheme promoters does. The AECOM assessment identifies a number of junctions which are anticipated to operate above capacity in the future, which broadly correlates with the stress identified in the above studies, including the Frank Whittle Roundabout and A426 / Gilmorton Road and A426 / Bill Crane Way junctions.

10.3.8 The Lutterworth East Strategic Transport Assessment (AECOM, February 2016) identifies the following infrastructure requirements to mitigate the impact of residual development traffic:

- A new access junction on to the A4304 via a signalised crossroads;
- A new access junction on to the A426 via a roundabout;
- A new Spine road through the proposed development, to the east of the M1, linking the A4304 and A426 accesses. This would also provide an alternative route between the A426 and A304 and, depending on its form, potentially enable HGV traffic to reroute from Lutterworth town centre;
- Improvements to M1 Junction 20 in the form of full entry signalisation, increase in number of circulatory lanes and other improvements;
- A new footbridge across the M1 to the north of Gilmorton Road and a link into Central Park;
- A Mini-roundabout scheme at the A426/Gilmorton Road junction;
- Replacement of the Frank Whittle Roundabout junction with a signalised crossroads;
- An additional roundabout immediately north of the Frank Whittle junction to serve existing development; and
- Mitigation at the A426/Bill Crane Way junction in the form of a signalisation scheme.

10.3.9 With the exception of the A426 access and Spine Road connection, the tests set out in the Strategic Transport Assessment Follow Up Technical Note (AECOM, 2016) do not provide information on when these schemes will be required in the build out of the SDA. Assumptions regarding the phasing of when the infrastructure is required will be refined over time and in consultation with the lead Transport Authorities, for now these are based on inputs from the promoters estimates.

10.3.10 With regards to the A426 access and Spine Road connection, the promoters' consultants AECOM have indicated that approximately 75% of the residential development and all of the employment development at the East of Lutterworth SDA could come forward before the Spine Road connection to the A426 is necessary. This would suggest that the delivery of the Spine Road would be close to the end of the plan period or possibly post plan period (if there is any delay in housing delivery). Evidence on how the impact on the remainder of the network will be managed until this connection is in place will need to be investigated and infrastructure requirements and phasing refined as work on the SDA scheme progresses.

10.3.11 All of the evidence relevant to the East of Lutterworth SDA identifies increased stress along Gilmorton Road as a result of the proposed development. The Strategic Assessment also provides the results of capacity testing which demonstrates junctions in Gilmorton will go over capacity with the Local Plan growth. The SDA scheme promoters have not identified any mitigation measures along this route. Instead they propose developing a strategy which

discourages traffic from routing along Gilmorton Road and possibly providing some traffic management measures. How this will be managed has not yet been identified but may result in additional infrastructure necessary to support the scheme.

Magna Park strategic employment area known infrastructure requirements

10.3.12 The planned growth at Magna Park is considered as an additional option test in both the Harborough District Local Plan Preliminary Traffic Impact Assessment report (2016) and the Lutterworth East Strategic Transport Assessment. Both of these assessments consider the operation of the network with the cumulative impact of development at Lutterworth East and Magna Park.

10.3.13 In the Local Plan Preliminary Impact Assessment, the report first provides output for the east of Lutterworth SDA development in its own right, before adding in traffic associated with Magna Park. It is therefore possible to identify which locations are identified as requiring mitigation as a result of Magna Park development which would not otherwise be needed. This demonstrates a slight increase in delay at the Frank Whittle Junction and the new A4304 access to the Lutterworth east SDA, along with very minor increases in delay at the A5 junctions in close proximity to Magna Park. This assessment does not identify any locations within the district which are not already anticipated to be under stress as a result of the east of Lutterworth SDA.

10.3.14 In the Lutterworth East Strategic Transport Assessment, additional development at Magna Park has not been isolated in order to determine the direct impact of that development, instead the report provides cumulative outcomes. Therefore, the list of schemes identified as necessary to support the Lutterworth SDA also include some additional traffic associated with Magna Park and at this time must be considered necessary to support Magna Park expansion until evidence demonstrates otherwise.

Scraptoft North SDA known infrastructure requirements

10.3.15 The South East Local Plan Transport Evidence report (2016) (by Edwards and Edwards on behalf of Harborough District Council, Oadby and Wigston Borough Council, Leicestershire County Council and Leicester City Council) investigated the potential areas where traffic from individual developments might impact the highways network in the area to the South East of Leicester. This study provided a strategic overview and further work is required to quantify the impact in order to allow mitigation strategies or other transport interventions to be developed.

10.3.16 The South East Leicester Study identifies that there are a number of links which will be put under additional stress as a result of strategic development at Scraptoft. Many of these are outside of Harborough District, with traffic being drawn west into Leicester City, the links identified within the District as receiving a substantial increase in flows, other than those immediately surrounding the site, are:

- Station Lane in Scraptoft;
- Stoughton Road; and
- Ingarsby Road.

10.3.17 The Initial Transport Feasibility Assessment produced by RPS on behalf of the Scraptoft North SDA promoters in August 2016 investigates the likely impact of an SDA at Scraptoft North in more detail. The report concludes that, within Harborough, the greatest impacts of the scheme would be very local to the site, with a need to consider the operational capacity of the A47 / Station Road junction in the future. The report confirms that the greatest impact would likely be in the immediate vicinity of the site and westwards in Leicester City, in particular impacts would need to be mitigated at Keyham Lane and New Romsey Crescent.

10.3.18 The RPS initial assessment on behalf of the Scraptoft North SDA concludes by stating that there are 'no severe impact on the road network that cannot be mitigated. There is potential for a modal shift to sustainable transport. There are some link capacity issues at junctions at peak times. The SDA scheme identifies various infrastructure requirements, including proposed improvements to on street parking, widening carriageways, traffic calming/re-routing within Scraptoft and improving the existing Covert Lane / Station Lane mini roundabout. Specifically, the report identifies a need for the following mitigations:

- Formalised parking bays on key routes, including New Romney Crescent and Keyham Lane West;
- Create an appropriate level of carriageway width to maintain the flow of traffic on the key routes;
- Deter traffic using Hamilton Lane as an outer bypass;
- Reduce the attractiveness for traffic travelling through Scraptoft and offer alternative routing to such traffic;
- Provide enhanced areas around the school entrances to improve the safety of those accessing the schools;
- Provide a key link between Beeby Lane and Hamilton Lane to reroute traffic from the centre of Scraptoft; and
- Improve the operational capacity of the Covert Lane / Station Lane mini roundabout.

10.3.19 The report identifies a number of "strategic junctions" which would need to be considered in greater detail at a later stage, whilst not identifying a need for mitigation at this time, these include the junctions of:

- Hamilton Way / Maidenwell Avenue / Lower Keyham Lane;
- Tesco / Maidenwell Avenue / Preston Rise;
- Hungerton Boulevard / Colchester Road / Scraptoft Lane; and
- Uppingham Road / Station Road

10.3.20 Leicester City Council and Leicestershire County Council are currently working with the Scraptoft North SDA scheme promoters and their transport agents to agree the general principles and scope of the work for a detailed Transport Assessment. It has been agreed that the Leicester and Leicestershire Integrated Transport Model (LLITM) will be used as part of this assessment. RPS has agreed to develop a brief for the methodology of the model runs and the highway authorities are awaiting to receive this at the time of preparing this IDP.

10.3.21 The current known information based on the Initial Transport Assessment has been included in this IDP report, but note that this will need to be updated once the findings of the detail Transport Assessment are available regarding the scale of the transport impacts and the mitigation which would be required as well as the indicative costing's for infrastructure required within Leicester city arising from the growth proposed at Scraptoft North SDA.

Market Harborough known highway infrastructure requirements

10.3.22 The Harborough District Local Plan Preliminary Traffic Impact Assessment report (2016) tests the impact of planned development at Market Harborough and identifies that there would be a general increase in delay at junctions within the town. The report specifically notes stress at the A6/A226 roundabout and the A508/A4304 junction.

10.3.23 The impact of development in Market Harborough is tested in more detail in the Market Harborough Transport Strategy 2017 – 2031 (on behalf of LCC and HDC 2016). The Market Harborough Transport Strategy (2016) identifies eight key junctions which are either operating over capacity in the base year or are anticipated to operate above capacity in the future (2031), leading to significant queues and delays in the AM and PM peak hours if not addressed, including:

- The Square / St Mary's Road / Coventry Road;
- Northampton Road / Springfield Street;
- Northampton Road / Welland Park Road;
- St Mary's Road / Kettering Road / Clarence Street;
- Rockingham Road / Gores lane
- A6 / Harborough Road / Dingley Road / A4304;
- Sainsbury's Store Entrance / Springfield Street; and
- A6 / B6047.

10.3.24 The Market Harborough Transport Strategy (2016) tests a number of schemes for mitigation and identifies a three-staged approach to delivering a comprehensive strategy. The following list provides a summary of potential further investigations to inform the appropriate infrastructure measures:

- Undertake option appraisals for capacity improvements at each of the eight junctions identified above;
- Consider upgrading Welland Park Road to become the A4304, and downgrade Coventry Road;
- Determine viability of increasing underpass height on Rockingham Road Rail Bridge;
- Consider the scope to provide a Market Harborough southern relief road between the A508 and A6 to the south-east of the town;
- Upgrade Welland Park Road to become the A4304 and downgrade Coventry Road;
- Determine the viability of increasing the underpass height on Rockingham Road Rail bridge;
- Extend and enhance the walking /cycling network;
- Localised public transport infrastructure improvements;
- Identify behaviour change initiatives to promote sustainable modes of transport;
- Devise and implement a new traffic signing strategy;
- Review Parking Controls in the vicinity of the town centre;
- Review sites with excessive recorded speeds;
- Update and enforce HGV routing within the town, including prohibitions as a minimum to Ashley Road / Kettering Road between the A4304 and the A6; and

- Extend the public realm up to and around rail and bus terminals.

10.3.25 The Market Harborough Transport Strategy (2016) also considers whether a relief road to the south of Market Harborough town linking the A508 and the A6 may provide the opportunity for diverting primary route traffic from passing through the town centre. The initial assessment using LLITM software suggests that although morning traffic would improve, evening traffic may not and may even get worse, and that a very small proportion of the traffic heading for the town centre is in fact considered as through traffic. Initial scheme estimates suggest a relief road would cost £35m to £45m. Due to the high cost and low potential traffic improvements this scheme is unlikely to be considered as economical, and has not been included in this IDP. If at any future point the scheme is considered as necessary, then this can be included in a future update of the IDP.

10.3.26 The infrastructure requirements identified in this IDP are based on consultation with the lead officers from LCC responsible for preparing the Market Harborough Transport Strategy (2016), they have also informed the infrastructure categorisation and likely funding mechanisms to be adopted for the measures included in the IDP.

10.3.27 The strategic Airfield Farm development in Market Harborough which has planning consent for 1,500 residential dwellings, primary school and other associated community uses, has been assessed to have an impact on network capacity if not mitigated. The scheme is therefore committed to providing contributions towards mitigation at the A4304 Theddingworth Road / Foxton Road junction and the Gallowfield Road / Foxton Road junction, which will be upgraded to a mini-roundabout. The application commits to the provision of new bus stops and bus infrastructure within the development site and on the B6047 Harborough Road.

Rest of District known highway infrastructure requirements

10.3.28 The preliminary Traffic Impact Assessment for the Harborough District Local Plan (2016) assesses four options for Local Plan strategic development in the District. When considered together these give an indication of potential impact in the District from SDA's at Lutterworth, including expansion of Magna Park, Scraptoft and more housing at Market Harborough. However, the report makes it clear that all options require additional assessment at a local level to refine the conclusions and provide a comprehensive list of corresponding mitigation measures; as the study primarily reports stress on the network and does not go on to identify mitigation. Where this study reports impacts related directly to Lutterworth, Magna Park, Scraptoft and Market Harborough this has been identified in the preceding sections.

10.3.29 The following therefore provides an indication of other areas in the District which may receive increased stress or is affected by other issues and may therefore benefit from further investigation to inform any possible future mitigations:

- The B6047 / A6 junction north of Market Harborough;
- The Main Street / High Street Junction in Fleckney;
- The junction in Charlton Curlieu north of Kibworth;
- The B581 / Broughton Road junction in Primethorpe; and
- The Great Easton Road / A6003 junction Uppingham Road (outside the District).

10.3.30 To date there is no evidence of exact infrastructure requirements for other parts of the District, as reporting only goes so far as to identify some network stress elsewhere in the District and not whether this would lead to the need for additional infrastructure.

10.3.31 No scheme costs have been included in any of the assessments. The LCC LTP 3 does not currently include any new highway infrastructure projects for the rest of the District, though it is

possible that at a site specific level, some transport mitigation measures could be identified for those schemes spread out throughout the District.

Strategic highway known infrastructure requirements

10.3.32 Highways England (HE) set out in their Route Investment Strategies (RIS) issues and investment priorities for 2015 – 2020. Whilst three of HE's route strategies cross through the District, the only improvements to the strategic road network identified within those documents fall within the London to Scotland East RIS and are as follows:

- Resurface the M1 between junctions 20 and 21. The work includes improvements to markings, bridge joints and traffic count loops. The works are part of a maintenance scheme which is programmed to be complete by the end of Jan 2017;
- Improvement scheme for M1 Junction 19, including a new free flow carriageway linking the M1 southbound to the A14 eastbound. The project is due to be completed in December 2016; and
- Smart Motorway between M1 junctions 16 and 19. HE has identified that the scheme will improve capacity and relieve congestion by converting the hard shoulder to a running lane. The work is due to end in March 2017.

10.3.33 Although the investment identified above stemming from the national Route Investment Strategies is noted here, it is not directly related to the planned growth in HDC and so the infrastructure cost is not included in the IDP assessment as this is of a national level and fully funded by Highways England.

10.3.34 However, the Strategic Transport Assessment for the East of Lutterworth SDA, has identified growth related infrastructure requirements to upgrade the Strategic Highway Network with the following improvements to M1 Junction 20:

- full entry signalisation;
- increasing the number of circulatory lanes on the eastern side of the junction to three lanes; and
- Provision of a short flare on the westbound (A4304) entry to allow three entry lanes into the junction (two heading over the bridge, and one onto the southbound on-slip).

10.3.35 The assessment also incorporates additional Magna Park development traffic in the most recent test, so it is assumed that the works to the junction are required to support both schemes. To date it is not clear at what stage in the build out of the developments these works will be required, further evidence will need to be produced in order to ascertain the development thresholds. Discussions have been taking place with Highways England to discuss the proposed mitigations, though it is not clear that full agreement of the impact and proposed mitigation has been reached with Highways England. HDC should ensure dialogue with HE to ensure there are no issues relating to the strategic highway that may affect the Local Plan examination.

Railway known infrastructure requirements

10.3.36 Market Harborough railway station is planned to be improved in late 2017 and forms part of Network Rail's £40bn railway upgrade plan. The Market Harborough Transport Strategy 2017 – 2031, identifies the following improvements at Market Harborough railway station:

- Straighten or realign the track allowing trains to travel at higher speeds;
- Longer platforms (up to 260m) to handle longer trains with more seats;

- Add new station facilities;
- Improved access to the station, particularly for wheelchair users;
- A new access road to the car park to improve traffic flow;
- Encourage bus services that currently terminate at the town centre to terminate at the train station where this is commercially viable;
- Increase car parking capacity at the station; and
- Provide bike storage facilities.

10.3.37 £3m funding has been secured from the Leicester and Leicestershire Economic Partnership (LLEP) towards this scheme. Many of these improvements will be undertaken by the LCC and HDC in collaboration with Network Rail.

10.3.38 In addition to these measures, as a part of Network Rail's electrification programme, the Midland Main Line will be completely electrified by December 2023. This will result in higher capacity, faster trains with improved reliability for Market Harborough station users.

Bus known infrastructure requirements

10.3.39 Whilst Harborough is a rural district, the major towns and villages are connected to the local bus network.

10.3.40 The most significant bus connection is the half hourly X3 service, operated by Arriva, which connects Leicester to Market Harborough. As part of development proposals in Market Harborough, there may be opportunities to divert/ reroute the bus services or enhance the frequency of some services. This will need to be explored further.

10.3.41 In the Transport Assessment for Airfield Farm, the development proposes to enhance and re-route service 44 through the development to provide a public transport connection to Market Harborough rail station and the town centre.

10.3.42 There is ongoing discussion regarding bus services provision to serve the Lutterworth East SDA, with comfort being required from bus operators that a viable service can be provided. The Transport Feasibility Assessment for the East of Lutterworth SDA, the development suggests that existing bus services could be re-routed through the development along the proposed Spine Road. The promoters are aware that the LCC would not wish to see existing communities suffer from re-routing of the existing services to the new development. The public transport strategy for this scheme will therefore need to be progressed further before its details and corresponding costs can be determined.

10.3.43 Arriva buses have been providing public transport connections to Magna Park since April 2016. The X45 service connects Magna park with Lutterworth, Glen Parva, Narborough Road, Leicester City Centre, Beaumont Leys and Thurmaston, seven days a week. This service provides a sustainable alternative to the private car for employees working in Magna Park.

10.4 Summary of transport infrastructure costs

10.4.1 It is clear from the review of evidence that infrastructure required to support the Local Plan is concentrated around the strategic development areas of east of Lutterworth, including Magna Park expansion (the requirements of which have not been isolated in assessments), Scraptoft North and at Market Harborough.

10.4.2 To date there is no evidence of exact infrastructure requirements for other parts of the District, as reporting only goes so far as to identify some network stress elsewhere in the District and not whether this would lead to the need for additional infrastructure.

10.4.3 The infrastructure costs included in the IDP have been informed by assessments carried out by the scheme promoters for the East of Lutterworth SDA, the Scraptoft North SDA and the findings of the Market Harborough Transport Strategy 2017-2031 which sets out an estimation of costs for the schemes proposed in Market Harborough to address planned growth in the town.

10.4.4 Table 10.1 overleaf provides a summary of the estimated transport infrastructure costs based on information currently known.

10.4.5 It should be noted that the cost information informing this IDP is based on the latest available information provided for the two SDA's at the time of preparing this study. HDC has commissioned Jacobs to review some of the significant costs items included in the East of Lutterworth SDA scheme. For the purpose of this IDP assessment it is noted that transport assessments and costs for the two SDA will be continuously refined to reflect more detailed scheme assessments and inputs from service providers.

10.4.6 Where scheme costs have been provided by the SDA scheme promoters, these are on the proviso that the delivery of the scheme will be led by the scheme promoters (either through a S278 or S38 agreement) to a standard that will enable the adoption of the infrastructure by the Highway Authority. The County Council has made it clear throughout the IDP consultation process that the cost estimates to support the delivery of the infrastructure is based on the scheme promoter's assumptions and does not necessarily take account of any optimism bias which the County Council would apply if it was responsible for the delivery of the transport infrastructure.

Infrastructure funding assumptions

10.4.7 Infrastructure identified earlier as part of existing transport initiatives, is already committed, either through developer funding (such as that relating to the Airfield Farm development) or through other funding sources, such as the Highways England Route Investment Strategies and Network Rail programme for station and mainline improvements.

10.4.8 All infrastructure arising from the proposed SDA's is assumed to be funded by the scheme developer and has been treated as a 'cost input' in the strategic site appraisals (see Part 3 costs and funding section).

10.4.9 With regards to developer funding, this will likely be secured through a number of mechanisms, depending on the nature of the infrastructure. For example, onsite and site access infrastructure will be likely to be made a condition of any planning permission; off-site highway works would be secured through a Section 278 agreement; whereas other obligations, such as for sustainable travel measures, would be expected to be secured by way of a Section 106 agreement.

Table 10.1 Transport infrastructure costs by settlement and phasing

Transport infrastructure	Cost phase 1: 2016 to 2020	Cost phase 2: 2021 to 2025	Cost phase 3: 2026 to 2031	Plan period total cost (2016 - 2031)	Post plan period cost
East of Lutterworth SDA					
A426 Leicester/ Northern Access	£0	£0	£750,000	£750,000	£0
A426 Leicester/Bill Crane Way	£430,000	£0	£0	£430,000	£0
A426 Leicester/Gilmorton Road	£0	£315,000	£0	£315,000	£0
A426 Rugby Road/Travelodge Access	£348,081	£0	£0	£348,081	£0
A4303 Lutterworth Road/A426 Rugby Road (Frank Whittle Roundabout)	£1,848,270	£0	£0	£1,848,270	£0
A4304 Lutterworth Road/Main Access	£3,119,984	£0	£0	£3,119,984	£0
M1 footbridge crossing	£0	£1,000,000	£0	£1,000,000	£0
M1 Junction 20 (signalisation)	£1,331,179	£0	£0	£1,331,179	£0
New M1 road bridge improvements	£0	£10,000,000	£0	£10,000,000	£0
Primary Roads	£2,916,667	£2,916,667	£2,916,667	£8,750,000	£0
Public transport and travel demand measures	£166,667	£166,667	£166,667	£500,000	£500,000
Secondary Roads	£1,000,000	£1,000,000	£1,000,000	£3,000,000	£2,000,000
Spine Road/Gilmorton Road	£0	£800,000	£0	£800,000	£0
Pre-adoption costs and fees	£728,494	£728,494	£728,494	£2,185,482	£728,494
Access land	£9,130,000	£0	£0	£9,130,000	£0
East of Lutterworth SDA Total	**£21,019,341**	**£16,926,827**	**£5,561,827**	**£43,507,996**	**£3,228,494**
Scraptoft North SDA					
Bus service	£100,000	£100,000	£100,000	£300,000	£0
Covert Lane/Scraptoft Lane Junction	£350,000	£0	£0	£350,000	£0
Hamilton Lane Traffic Calming	£250,000	£0	£0	£250,000	£0
Keyham Lane West Upgrading Works	£1,000,000	£0	£0	£1,000,000	£0
Main Street	£437,500	£437,500	£0	£875,000	£0
New Romney Cres Works	£750,000	£0	£0	£750,000	£0
Other Potential S278 Works	£166,667	£166,667	£166,667	£500,000	£0
Pedestrian /Cycleway Works	£100,000	£0	£0	£100,000	£0
Scraptoft one-way System Works	£250,000	£0	£0	£250,000	£0
Pre-adoption costs and fees	£400,000	£400,000	£400,000	£1,200,000	£0
Square to local centre	£0	£200,000	£0	£200,000	£0
Travel Plan measures	£66,667	£66,667	£66,667	£200,000	£0
Scraptoft North SDA Total	**£3,870,833**	**£1,370,833**	**£733,333**	**£5,975,000**	**£0**
Market Harborough					
A6 / B6047 - Market Harborough	£216,667	£216,667	£216,667	£650,000	£0
A6/Rockingham Road / Dingley Road - Market Harborough	£366,667	£366,667	£366,667	£1,100,000	£0
Bus Shelters - Market Harborough	£10,667	£10,667	£10,667	£32,000	£0
Co-ordination and management Market Harborough	£266,667	£266,667	£266,667	£800,000	£0
Cycle Parking - Market Harborough	£10,000	£10,000	£10,000	£30,000	£0
Gores Lane / Rockingham Rd Market Harborough	£150,000	£150,000	£150,000	£450,000	£0
HGV weight restrictions and update sat-nav contacts Market Harborough	£25,000	£25,000	£25,000	£75,000	£0
Increasing underpass height on Rockingham Road rail bridge Market Harborough	£666,667	£666,667	£666,667	£2,000,000	£0
Information and behaviour change - Market Harborough	£400,000	£400,000	£400,000	£1,200,000	£0
Market Harborough route signing	£20,000	£20,000	£20,000	£60,000	£0
Miscellaneous transport - Market Harborough	£6,667	£6,667	£6,667	£20,000	£0
New routes, links, crossings etc - Market Harborough	£1,036,667	£1,036,667	£1,036,667	£3,110,000	£0
Northampton Road/ Springfield St / Welland Park Rd Market Harborough	£273,333	£273,333	£273,333	£820,000	£0
Parking controls, including consideration of residents parking Market Harborough	£25,000	£25,000	£25,000	£75,000	£0
Raised bus stop kerbs - Market Harborough	£12,667	£12,667	£12,667	£38,000	£0
Refurbishment of paved areas and street furniture Market Harborough	£150,000	£150,000	£150,000	£450,000	£0
South East Relief Road between the A508 and the A6 Market Harborough	£0	£0	£0	£0	£0
St Mary's Road / Kettering Road / Clarence Street Market Harborough	£93,333	£93,333	£93,333	£280,000	£0
The Square / St Mary's Rd/ Coventry Rd - Market Harborough	£233,333	£233,333	£233,333	£700,000	£0
Traffic calming (in support of walking / cycling network) Market Harborough	£100,000	£100,000	£100,000	£300,000	£0
Traffic directional signing Market Harborough	£33,333	£33,333	£33,333	£100,000	£0
Welland Park Rd / Northampton Rd /Springfields St - Market Harborough	£273,333	£273,333	£273,333	£820,000	£0
Works required to facilitate the upgrade of Welland Park Road to A4304 and respective downgrade of Covenry Road - Market Harborough	£233,333	£233,333	£233,333	£700,000	£0
Market Harborough Total	**£4,603,333**	**£4,603,333**	**£4,603,333**	**£13,810,000**	**£0**
Grand Total	**£29,493,508**	**£22,900,994**	**£10,898,494**	**£63,292,996**	**£3,228,494**

10.4.10 There is an expectation that all 'essential' infrastructure requirements identified for Market Harborough will be funded via developer contributions. Whilst the transport infrastructure identified as 'desirable' is expected to be funded via funding bids by the LCC and HDC.

10.4.11 The Leicester and Leicestershire Enterprise Partnership (LLEP) is contributing £3m from the Local Growth Fund towards Market Harborough station improvements. A package of measures to support the delivery of the Market Harborough Transport Strategy was recently considered by the LLEP but this was dismissed as the funding was oversubscribed.

10.4.12 Possible funding opportunities include Highways England Route's Investment Strategies, Department for Transport's Growth Deals, the Sustainable Transport Access Fund, and/or their equivalents at the time. Any non-developer funding source will likely require a bid to be submitted to the funding body based on the relevant criteria at that time, i.e. LLEP funding has an economic focus, whilst Access Fund funding has a sustainable travel focus.

10.4.13 With regards to Highways England's Route Investment Strategies, these cover a five year "road period", with the first period running from 2015 – 2020. Consultation has begun on the 2020-2025 RIS, and a further two road periods will take place during the life of the Local Plan. There may be opportunities to demonstrate the operation of, and provision of enhanced measures for example, at Junction 20 from this source.

10.5 Cross border infrastructure considerations

10.5.1 The Local Plan Preliminary Transport Impact Assessment (2016) indicates there may be some traffic impacts within Warwickshire as a result of the proposed East of Lutterworth SDA and proposed development at Magna Park.

10.5.2 Of particular importance highlighted by adjoining authorities relates to the impact on the A5 corridor from development proposed at the East of Lutterworth SDA and Magna Park. Improvements are likely to be required along the A5 as a result of the delivery of planned growth. Highways England is currently working with a number local authorities to seek the requisite improvements, some of which will be outside the District. These assessments are ongoing and impacts, mitigations and costs have not been included in the IDP as yet.

10.5.3 Impacts are also anticipated at the B4027 junctions with Coventry Road in Pailton and Street Ashton, as well as the B581 / Long Street junction in Stoney Stanton, B4109/ Temple Hill in Shelford, B4109 / B4065 in Wolvey, B4112 / Fosse Way near Street Ashton and locations in Hinckley. Any of these junctions may require highway mitigations, although this will be determined through more detailed modelling.

10.5.4 Work is currently underway between the promoters of the proposed Scraptoft North SDA, Leicester City Council and Leicestershire County Council to assess the range of mitigations likely to be required within Leicester City as a result of the proposed SDA.

11 EDUCATION INFRASTRUCTURE

11.1 Introduction

11.1.1 This section assesses the education infrastructure requirements stemming from the proposed growth, focusing on primary, secondary, sixth form provision and taking account of early years and special needs education.

11.1.2 Leicestershire County Council's (LCC) School Organisation Service, who is responsible for planning and commissioning of school places, has informed this assessment (referred to as LCC). This section has also been informed by the following reports:

- School funding in England Current system and proposals for a 'fairer school funding' House of Commons briefing paper March 2017; and
- School buildings and capital funding (England) House of Commons briefing paper February 2017.

11.2 Education infrastructure context

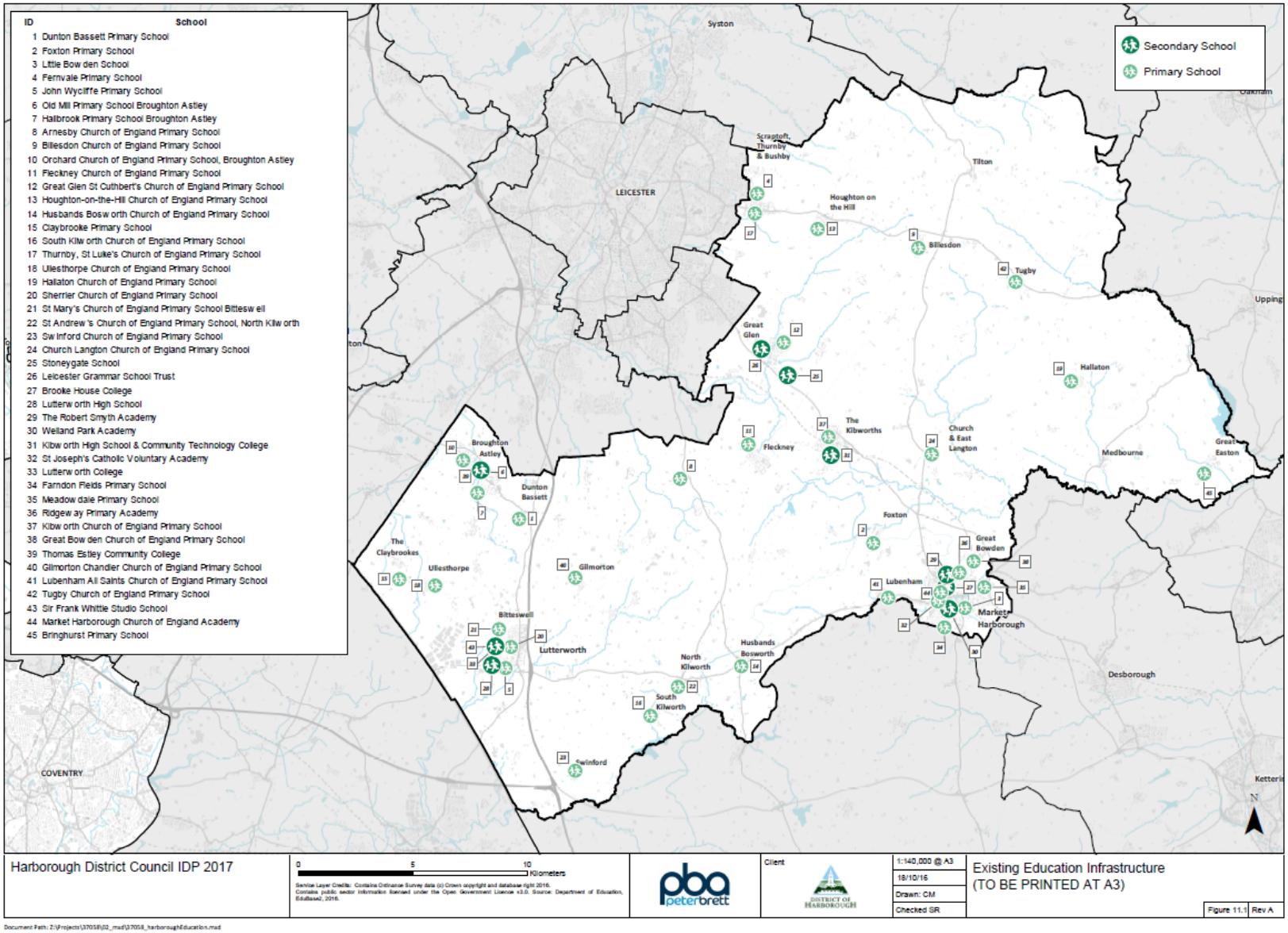
11.2.1 Leicestershire County Council has a statutory responsibility to ensure there is sufficient provision for school places to meet the needs of Leicestershire. 'This responsibility includes managing the supply and demand of primary and secondary school places. The Department of Education allocates capital funding to enable local authorities to provide sufficient school places'.[20]

11.2.2 All the secondary schools in HDC area are Academies, and 23 of the 42 primary schools have Academy status, 19 of the primary school remain as a mix of community, voluntary controlled, and voluntary aided schools or studio school. Those schools that have Academy status are responsible for their own running costs and receive funding directly from the Department for Education (DfE). Importantly for this assessment, schools with Academy status make their own decision on whether to expand to accommodate additional growth or to contract if they have surplus places. LCC does not have the powers to enforce an Academy to extend its premises if the Academy does not want to or if it considers the scale of growth is not economical to do so. Thus, where an Academy does not want to expand, then the local authorities are restricted in their ability to provide sufficient school places even if they wish to do so to fulfil their statutory duty.

11.2.3 Figure 11.1 overleaf shows the location of all existing schools (state and independent) in the Harborough District area.

[20] House of Commons Deb 1st November 2011 c612W

Figure 11.1 Existing education infrastructure in Harborough District area



11.2.4 There are three independent schools within the Harborough District area, these include the Leicester Grammar School and Stoneygate School in Great Glen, and Brook House College in Market Harborough. The assessment of future education infrastructure requirements does take account of there being some leakage to the Independent schools.

11.2.5 The assessment of future requirements has taken account of current known capacity as at 2017, after taking account of the pipeline of consented planning applications, which will absorb some of this capacity. The assessment by LCC also factors in capacity at neighbouring schools within Leicestershire and Rutland that also fall under the remit of LCC (or due to a historic agreement in the case of Rutland). This particularly affects schools in neighbouring District / Borough areas of Oadby and Hinckley and Bosworth.

11.2.6 The future requirement assessment excludes any potential capacity at Leicester City schools and the Independent schools as these do not fall within the responsibility of Leicestershire County Council's statutory responsibility.

11.2.7 Any surplus capacity is included in the assessment in arriving at future infrastructure requirements. Generally, there is a move away from having any surplus capacity, as this will affect pupil numbers and funding for neighbouring schools, and where a significant number of places are not filled, the schools own financial viability will be affected due to the overhead associated with facilities management costs.

11.3 Infrastructure requirements and cost assumptions

11.3.1 The pupil yield and cost assumptions informing this assessment are set out in table 11.1.

Table 11.1 Pupil yield and cost assumptions assumed

Assumption	Primary expansion	Secondary and sixth form	SEND primary	SEND secondary
LCC cost per pupil based on DfE 2009	£12,099	£18,118	£54,445	£83,707
Yield (pupils per dwelling)	0.24	0.2	0.0016	0.00318

Source: Leicestershire County Council 2016 (costs based on 2009 DfE cost estimates)

11.3.2 Note the cost assumptions adopted for this IDP are based on the LCC developer contributions SPD (which in turn is based on 2009 DfE cost estimates)[21]. The DfE costs are a little dated. We are informed that LCC will be reviewing their developer contributions policy in 2018 and the costs set out here are likely to change.

11.3.3 The following new build cost estimates have informed this IDP:

- 1 FE (210 pupil place) school cost approximately £4,035,000m (could support approximately 900 dwellings);
- 2 FE (420 pupil place) school cost approximately £6,641,000m (could support approximately 1800 dwellings); and
- 3FE (630 pupil place) school cost is approximately £8,896,250 (this is not very popular school size as it is uneconomical to operate).

[21] Note the SPD on developer contributions does include variations based on the type of school being provided (e.g. post 16 education included or excluded).

11.3.4 These cost assumptions for new build school estimates provided by LCC based on other similar schools developed in Leicestershire. In reality, the cost of delivering a capital project can vary considerably depending on the local site-specific circumstances and build specification.

11.3.5 LCC generally look for new schools to be provided during the September prior to the development of the 300th dwelling.

Land requirements for new schools

11.3.6 Where a new school is required, LCC would also generally require the land for the school from the developer. The preferred size of school is to provide a 2FE, however primary schools are often constructed as 1FE in the first instance and extended at a later date. As such, LCC would normally require a 2-hectare site for a 2FE school. In some cases, where the quantum of development is uncertain, LCC may request a site for a 1FE school with additional land adjacent for potential future expansion.

11.3.7 In certain circumstances, where there is limited capacity to expand existing schools yet the proposed development does not generate a new school in itself, LCC may consider requesting a pro-rata financial contribution along with the land required.

Potential capacity to support the SDA on land to the north of Scraptoft

11.3.8 The following three very popular schools situated in Oadby, have received approval to increase their age ranges from September 2017:

- Manor High School 11 – 16 years;
- Gartree High School 11 – 16 years; and
- Beauchamp College 11 – 19 years.

11.3.9 The secondary school requirements for the proposed SDA on land to the north of Scraptoft would fall within the catchment of these three secondary schools.

11.3.10 This extension in age ranges, has created some additional capacity. LCC have stated that any increase in capacity due to this age range expansion is expected to be absorbed by current consented schemes and will not be available for the SDA on land to the north of Scraptoft. However, it is noted that any final consideration of capacity will be assessed at planning application stage.

11.3.11 There is capacity at Hamilton College, which is very close to the proposed SDA on land to the north of Scraptoft, however, this college falls with the Leicester City Council boundary area. Taking account of parental choice, it is highly likely that the residents at the new SDA, will generally favour the top performing and very popular catchment schools at Oadby than the nearby (but out of catchment) Hamilton College. Therefore, there is a high risk of failing to meet the statutory obligation to provide sufficient capacity within County schools if the capacity at Hamilton College is assumed to be meet the needs of the SDA. For this reason, the capacity at Hamilton College is not factored into the IDP assessment.

Potential capacity to support the east of Lutterworth SDA

11.3.12 There are currently some 800 secondary school surplus places forecast at the following Lutterworth schools:

- Lutterworth High School 11 – 16 years; and
- Lutterworth College 11 – 19 years.

11.3.13 The 800 pupil surplus capacity number does not include any capacity that may be available at the Sir Frank Whittle Studio School in Lutterworth which serves 14 – 19 year olds. Once this is included, the capacity of 800 places increases to approximately 1050.

11.3.14 The secondary school requirements for the proposed Lutterworth East SDA would fall within the catchment of these three secondary schools, and we have assumed that this capacity will be used to serve all the East of Lutterworth SDA's requirement for secondary school infrastructure.

11.3.15 It is worth noting that the levels of surplus capacity experienced in Lutterworth are unlikely to be unsustainable and the Academies may choose to review the situation, and potentially close one school entirely or 'mothball' one school until additional capacity is required.

11.3.16 Therefore, by the time, the secondary education infrastructure is required for the East of Lutterworth SDA; the existing secondary surplus capacity may not be available. A potential risk management and contingency arrangements should be considered by the SDA promoters to allow for the possible loss of capacity (i.e. to assume there is no longer secondary school surplus capacity to meet the all or some of the needs of the proposed SDA at Lutterworth East and plan for need to have to fund some additional expiation costs).

Recent investment programmes and current funding bids

11.3.17 Recent investment and funding bids will help to meet the requirements of consented and commenced development, as well as natural changes in birth-rates.

11.3.18 Recent investment in education infrastructure in the Harborough District area includes:

- Kibworth C of E primary school;
- St Cutherberts C of E Primary School, Great Glen;
- Great Bowden Academy (primary);
- Welland Park Academy (secondary), south Market Harborough; and
- The Robert Smyth (secondary and sixth form) north Market Harborough.

11.3.19 There are current funding bids or investment plans for the following schools in the Harborough District area:

- Farndon Fields primary school, south Market Harborough;
- Little Bowden primary school;
- Thurnby St Lukes primary school;
- Fernvale primary school, Thurnby;
- Old Mill primary school, Broughton Astley;
- Houghton on the Hill primary school;
- The Kibworth School, secondary; and
- Airfield Farm Primary school, Market Harborough.

Early years infrastructure requirements and provision

11.3.20 LCC have stated that although they have a duty to secure sufficient early learning and childcare provision, it does not have to be the provider. As much of the Early Years provision is delivered through the private businesses, the capacity and supply can fluctuate depending on new providers entering and leaving the market and in response to short-term changes in demographics of a specific area.

11.3.21 Larger developments of over 100 houses are likely to require some new early year's provision. LCC estimate the larger planned development will need to consider the following early years places:

- East of Lutterworth SDA 234 places;
- Scraptoft North SDA 102 places; and
- Market Harborough 96 places.

11.3.22 As the majority of Early Years provision is currently met either by private companies or voluntary organisations a cost assessment has not been included for Early Years infrastructure provision in this study. LCC have indicated, that the review of the planning obligation policy in 2018 may trigger the requirement for future contributions towards Early Years education infrastructure.

Special education needs and disability provision

11.3.23 Under the current planning obligations policy LCC only require Special education needs and disability provision (SEND) contributions towards scheme of 250 dwellings or more. However, the contributions threshold is being reviewed and it is possible this could be reduced down to 100 dwellings from 2018. For this IDP we have only assumed SEND infrastructure costs for the two SDA's and no cost has been factored in for the wider planned growth.

11.4 Summary of education infrastructure costs

11.4.1 Tables 11.2 and 11.3 set out the estimated primary, secondary (including sixth form) and SEND school costs to support the planned growth.

Table 11.2 Summary of estimate education infrastructure costs to support planned growth

Education infrastructure	Cost phase 1: 2016 to 2020	Cost phase 2: 2021 to 2025	Cost phase 3: 2026 to 2031	Plan period total cost (2016 - 2031)	Post plan period cost
Primary school new build	£0	£10,676,000	£943,722	£11,619,722	£4,397,970
Primary school extension	£209,071	£2,705,820	£2,662,748	£5,577,639	£0
Primary school SEND	£6,965	£176,408	£231,616	£414,989	£106,168
Secondary school extension	£297,135	£5,533,237	£5,939,080	£11,769,453	£0
Secondary school SEND	£21,827	£552,873	£725,895	£1,300,596	£332,735
Grand Total	**£534,998**	**£19,644,339**	**£10,503,061**	**£30,682,398**	**£4,836,873**

Table 11.3 Education infrastructure cost estimates by phase and settlement

Education infrastructure	Cost phase 1: 2016 to 2020	Cost phase 2: 2021 to 2025	Cost phase 3: 2026 to 2031	Plan period total cost (2016 - 2031)	Post plan period cost
Primary school new build					
East of Lutterworth SDA	£0	£6,641,000	£0	£6,641,000	£4,397,970
Scraptoft North SDA	£0	£4,035,000	£943,722	£4,978,722	£0
Primary school new build Total	**£0**	**£10,676,000**	**£943,722**	**£11,619,722**	**£4,397,970**
Primary school extension					
Billesdon	£0	£34,845	£0	£34,845	£0
Bitteswell	£0	£87,113	£0	£87,113	£0
Church & East Langton	£0	£0	£0	£0	£0
Dunton Bassett	£0	£36,297	£0	£36,297	£0
Fleckney	£0	£290,376	£566,233	£856,609	£0
Foxton	£0	£0	£0	£0	£0
Gilmorton	£0	£78,402	£0	£78,402	£0
Great Easton (with Bringhurst)	£0	£0	£0	£0	£0
Great Glen	£0	£0	£0	£0	£0
Hallaton	£0	£101,632	£0	£101,632	£0
Houghton on the Hill	£0	£0	£0	£0	£0
Lubenham	£0	£101,632	£0	£101,632	£0
Medbourne	£0	£0	£0	£0	£0
Market Harborough	£180,033	£1,370,575	£1,719,026	£3,269,634	£0
South Kilworth	£0	£0	£0	£0	£0
Swinford	£0	£120,990	£0	£120,990	£0
The Claybrookes	£0	£96,792	£0	£96,792	£0
Tilton	£0	£96,792	£0	£96,792	£0
Tugby	£29,038	£0	£14,519	£43,556	£0
Windfall	£0	£290,376	£362,970	£653,346	£0
Primary school extension Total	**£209,071**	**£2,705,820**	**£2,662,748**	**£5,577,639**	**£0**
Primary school SEND					
Billesdon	£0	£1,019	£0	£1,019	£0
Bitteswell	£0	£2,548	£0	£2,548	£0
Church & East Langton	£0	£2,548	£0	£2,548	£0
Dunton Bassett	£0	£3,397	£0	£3,397	£0
East of Lutterworth SDA	£0	£34,993	£92,408	£127,401	£106,168
Fleckney	£0	£8,493	£16,562	£25,056	£0
Foxton	£849	£0	£0	£849	£0
Gilmorton	£0	£2,293	£0	£2,293	£0
Great Easton (with Bringhurst)	£0	£2,633	£0	£2,633	£0
Great Glen	£0	£0	£2,973	£2,973	£0
Hallaton	£0	£2,973	£0	£2,973	£0
Houghton on the Hill	£0	£4,247	£1,104	£5,351	£0
Lubenham	£0	£2,973	£0	£2,973	£0
Medbourne	£0	£2,633	£0	£2,633	£0
Scraptoft North SDA	£0	£44,675	£57,246	£101,921	£0
Market Harborough	£5,266	£40,089	£50,281	£95,636	£0
South Kilworth	£0	£1,784	£0	£1,784	£0
Swinford	£0	£3,397	£0	£3,397	£0
The Claybrookes	£0	£4,247	£0	£4,247	£0
Tilton	£0	£2,973	£0	£2,973	£0
Tugby	£849	£0	£425	£1,274	£0
Windfall	£0	£8,493	£10,617	£19,110	£0
Primary school SEND Total	**£6,965**	**£176,408**	**£231,616**	**£414,989**	**£106,168**

Education infrastructure	Cost phase 1: 2016 to 2020	Cost phase 2: 2021 to 2025	Cost phase 3: 2026 to 2031	Plan period total cost (2016 - 2031)	Post plan period cost
Secondary school extension					
Billesdon	£0	£43,483	£0	£43,483	£0
Bitteswell	£0	£108,708	£0	£108,708	£0
Church & East Langton	£0	£108,708	£0	£108,708	£0
Dunton Bassett	£0	£144,944	£0	£144,944	£0
East of Lutterworth SDA	£0	£0	£0	£0	£0
Fleckney	£0	£362,360	£706,602	£1,068,962	£0
Foxton	£36,236	£0	£0	£36,236	£0
Gilmorton	£0	£0	£0	£0	£0
Great Easton (with Bringhurst)	£0	£112,332	£0	£112,332	£0
Great Glen	£0	£0	£126,826	£126,826	£0
Hallaton	£0	£126,826	£0	£126,826	£0
Houghton on the Hill	£0	£181,180	£47,107	£228,287	£0
Lubenham	£0	£126,826	£0	£126,826	£0
Medbourne	£0	£112,332	£0	£112,332	£0
Scraptoft North SDA	£0	£1,906,014	£2,442,306	£4,348,320	£0
Market Harborough	£224,663	£1,710,339	£2,145,171	£4,080,174	£0
South Kilworth	£0	£0	£0	£0	£0
Swinford	£0	£0	£0	£0	£0
The Claybrookes	£0	£0	£0	£0	£0
Tilton	£0	£126,826	£0	£126,826	£0
Tugby	£36,236	£0	£18,118	£54,354	£0
Windfall	£0	£362,360	£452,950	£815,310	£0
Secondary school extension Total	**£297,135**	**£5,533,237**	**£5,939,080**	**£11,769,453**	**£0**
Secondary school SEND					
Billesdon	£0	£3,194	£0	£3,194	£0
Bitteswell	£0	£7,986	£0	£7,986	£0
Church & East Langton	£0	£7,986	£0	£7,986	£0
Dunton Bassett	£0	£10,648	£0	£10,648	£0
East of Lutterworth SDA	£0	£109,670	£289,613	£399,282	£332,735
Fleckney	£0	£26,619	£51,907	£78,526	£0
Foxton	£2,662	£0	£0	£2,662	£0
Gilmorton	£0	£7,187	£0	£7,187	£0
Great Easton (with Bringhurst)	£0	£8,252	£0	£8,252	£0
Great Glen	£0	£0	£9,317	£9,317	£0
Hallaton	£0	£9,317	£0	£9,317	£0
Houghton on the Hill	£0	£13,309	£3,460	£16,770	£0
Lubenham	£0	£9,317	£0	£9,317	£0
Medbourne	£0	£8,252	£0	£8,252	£0
Scraptoft North SDA	£0	£140,015	£179,411	£319,426	£0
Market Harborough	£16,504	£125,641	£157,583	£299,728	£0
South Kilworth	£0	£5,590	£0	£5,590	£0
Swinford	£0	£10,648	£0	£10,648	£0
The Claybrookes	£0	£13,309	£0	£13,309	£0
Tilton	£0	£9,317	£0	£9,317	£0
Tugby	£2,662	£0	£1,331	£3,993	£0
Windfall	£0	£26,619	£33,274	£59,892	£0
Secondary school SEND Total	**£21,827**	**£552,873**	**£725,895**	**£1,300,596**	**£332,735**
Grand Total (primary and secondary)	**£534,998**	**£19,644,339**	**£10,503,061**	**£30,682,398**	**£4,836,873**

11.4.2 LCC as the Education Service Commissioner has made the following general comments regarding education infrastructure requirements in the Harborough District area:

- Airfield Farm school in Market Harborough will be a new school provision. However, if the Overstone Park development comes forward, then none of primary schools in Market Harborough have the capacity to expand any further to meet future planned growth. The existing schools at Little Bowden, Meadow Dale, Farndon Field have all been expanded. So the southern catchment area of Market Harborough will be considerably stretched in providing for additional primary capacity on existing school sites;

- The Kibworth primary school is at capacity, and piecemeal developments in this catchment do not generate sufficient capacity to support a new school, the existing school has poor access and the playing field serving the site is leased from the Kibworth Foundation;

- There is no requirement for a new secondary school, instead, LCC will seek to accommodate additional requirement through the expansion of existing schools in Market Harborough, Scraptoft North (Oadby Schools), Lutterworth; and

- Sixth form provision will be met in part at the Robert Symth school. The development at Scraptoft North is likely to be in the Beauchamp College catchment.

Infrastructure funding assumptions

11.4.3 The Basic Needs capital allocations from central government is made to Leicestershire County Council to support the capital requirements for providing new pupil places by expanding existing maintained schools, free schools or academies and by establishing new schools.

11.4.4 As summarised in table 11.4 below, the total Basic Needs Capital allocation for Leicestershire County Council for the period 2017 – 2020 is £31,832,675. This is intended to support 2,264 places during this same timeframe. There is no breakdown on how this is distributed by the school planning areas. However, assuming a simplified distribution of this allocation between each of the seven local authorities within Leicestershire, may result in approximately £4.6m over the next three years for Harborough District Council. It is noted that the LCC allocations will not be distributed in such a simplistic way, though this provides a starting point until further refined information is available.

Table 11.4 Basic Needs Funding for Leicestershire 2017 – 2020

Year	Leicestershire wide
2017-18	£3,377,290
2018-19	£16,938,910
2019-20	£11,516,475
Total estimate	£31,832,675

Source: DfE Basic Needs Allocation (based on data from 2016 School Capacity Survey)

11.4.5 The information in table 11.4 above relates to short term funding as most service providers only deal in three to five yearly investment cycles. Longer-term funding assumptions have been forecast as part of this IDP as this information is not available and most funders are unlikely to provide this.

11.4.6 Longer-term levels of capital available via Basic Needs funding from the Department for Education (DfE) are unclear but it is assumed that this will based on population growth and pupils on roll within school census data to meet local demographic needs. It is important to note that the housing growth in this assessment stems from forecast population growth (i.e. demographic growth); thus the housing growth identified in this study will bear some relation to the demographic growth referred to in assessing future Basic Need funding.

11.4.7 Developer funding is expected to fund all housing growth related schemes and provide the land. This infrastructure is categorised as essential to the delivery of planned growth.

11.4.8 At planning application stage, the amount sought from any particular development scheme will be determined based on the specific circumstances relating to each application.

Changes in the delivery of education infrastructure

11.4.9 There are a number of changes in the way education infrastructure is delivered and this is also linked to various changes in the delivery bodies set up to support this delivery.

11.4.10 LocateEd**,** branded as Britain's biggest property start-up, is a new property company wholly owned by the Government, and has about £2bn to invest in buildings and sites to create up to 500 new Free Schools by 2021. The company has been set up to meet the demand for new free schools, and will be engaged in a wide range of acquisition and development opportunities, including brownfield, greenfield, mixed-use sites, and existing buildings that can deliver 10,000 to 175,000 sq.ft. gross internal floor area.

11.4.11 A school can now be set up as a Free School, possibly by-passing LCC, and seek start-up funding, and potentially some capital support direct from the Central Government's Education Funding Agency (EFA)[22]. It is likely that with the setting up of LocateEd, there will be some form of a relationship between the EFA and LocateEd. So the picture regarding education infrastructure funding is changing.

Alternatively means of funding school infrastructure

11.4.12 There is a recent example in Lubbesthorpe, Blaby District Council area (2016), where a school is to be constructed by the developer to a specification prepared by LCC, and the developer has brought on board an Academy who are applying to the Regional School Commission though the 'direct route' to set up a school at the Lubbesthorpe site. This is based on some advanced funding from Central Government (CLG). There is still an expectation of some S106 contribution, however, the precise amount is not clear, and this could follow the development, thus helping with developer cash flow.

11.5 Cross border infrastructure considerations

11.5.1 Given the location of HDC, there are various cross border movements of pupils from Harborough and adjoining authorities. The LCC School Organisation Services has provided the following commentary to inform cross border infrastructure considerations:

- There is a historic agreement with neighbouring Rutland Council and there is free cross border movement;
- There is considerable in-flow into Oadby schools from Leicester City;
- There is some in-flow into Market Harborough from Northamptonshire; and
- Warwickshire area does not impact much into the schools in HDC area.

Other issues

11.5.2 On-going discussions with the service providers will be critical to provide timely delivery.

11.5.3 A watching brief is needed on the approach to addressing the existing surplus capacity at Lutterworth secondary schools and the needs that might arise from the planned SDA.

[22] Since April 2017 is known as the Education and Skills Funding Agency

11.5.4 Cross border school movements from Leicester may impact on the capacity of schools serving the Scarptoft North SDA and should be investigated further with LCC as the scheme moves closer to planning application stage.

11.5.5 The delivery and funding of new schools is changing considerably, and the establishment of new Free Schools and LocateEd are likely to see a changing landscape in the type of schools coming forward from traditional style set-ups.

12 HEALTH INFRASTRUCTURE

12.1 Introduction

12.1.1 This section assessed the health infrastructure requirements stemming from planned growth focusing on doctor's surgeries.

12.1.2 This section has been informed by inputs from the East Leicestershire & Rutland Clinical Commissioning Group (CCG), the West CCG (see Appendix 1) and a review of the following documents:

- NHS Five Year Forward View;
- Leicestershire Better Care Fund Plan – 2016/17;
- East Leicestershire and Rutland Clinical Commissioning Group – Operational Plan 2016/17; and
- Health Building Note 00-08 Addendum 2 – A guide to town planning for health organisations – Department of Health March 2015.

12.2 Health infrastructure context

12.2.1 The delivery of health care is going through considerable change as part of the NHS Five Year Forward View[23]. Part of the changes are proposal for greater delivery of health services taking place locally; and breaking down barriers of how care is provided between family doctors, hospitals, between physical and mental health, between health and social care. The future will see more care delivered locally, possibly in specialist centres. The NHS Forward View recognises that England is too diverse for a 'one size fits all' solution. Health infrastructure responses to local delivery will need to respond to the national strategic changes.

12.2.2 Sub regionally, the development of the Sustainability and Transformation Plan (STP) signals a move away from an annual planning process that has delivered incremental, organisational-specific improvement to a longer-term view that delivers transformational change across organisational boundaries.

12.2.3 The co-production of the five-year STP will enable the health and social care community across LLR to continue to plan together with confidence and set out the work of Better Care Together alongside the Better Care Fund and emerging new models of community placed based care in a way that demonstrates collaboration of partners across organisational boundaries. It will represent the combined strategy of East Leicestershire and Rutland CCG (ELRCCG), West Leicestershire CCG (WLCCG), Leicester City CCG, the three Leicester, Leicestershire and Rutland Health and Wellbeing Boards and in doing so set the framework for joint working across health, social care and public health.

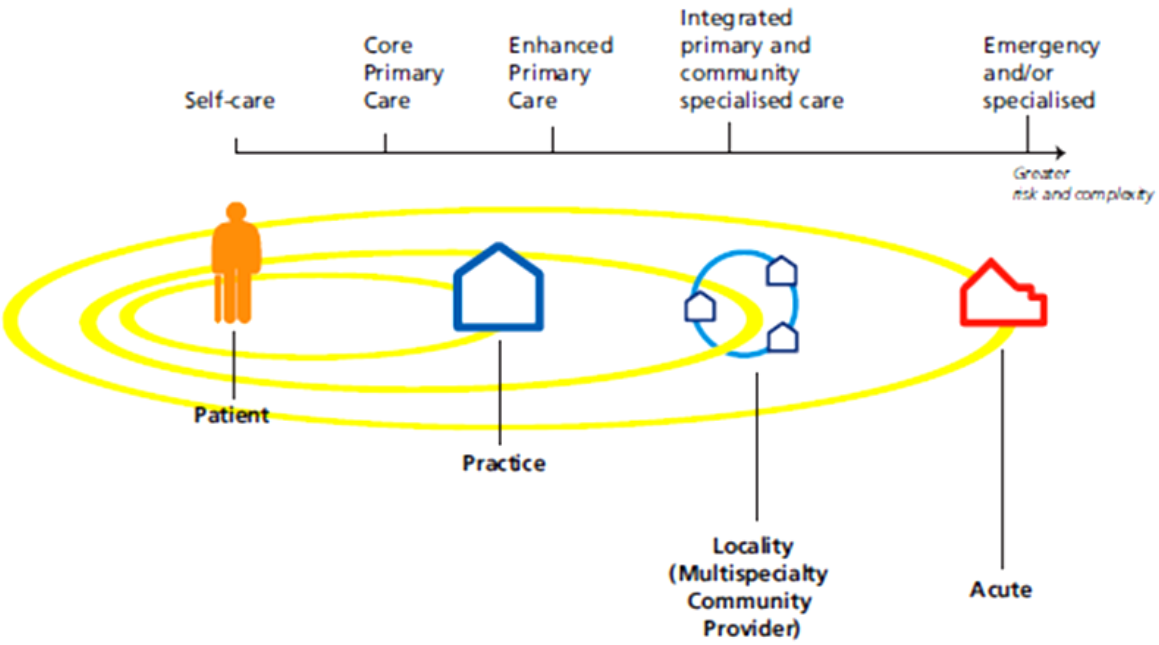
The longer-term strategic direction is to integrate health and social care

12.2.4 The plan places the patient at the centre, with the GP as the primary route for accessing care. The model of integration wraps around the patient and their GP practice, extending the care and support delivered in a 'community setting' through multidisciplinary working. The aim being to reduce the amount of care and support delivered in acute settings (hospitals), so that only care that must be delivered in the acute setting will take place there in the future.

[23] www.England.nhk.uk

12.2.5 Figure 12.1 below illustrates how the model of integrated care in localities would operate in practice.

Figure 12.1 Illustration of the integrated care in localities model



Source: Leicestershire Better Care Fund Plan – 2016/17

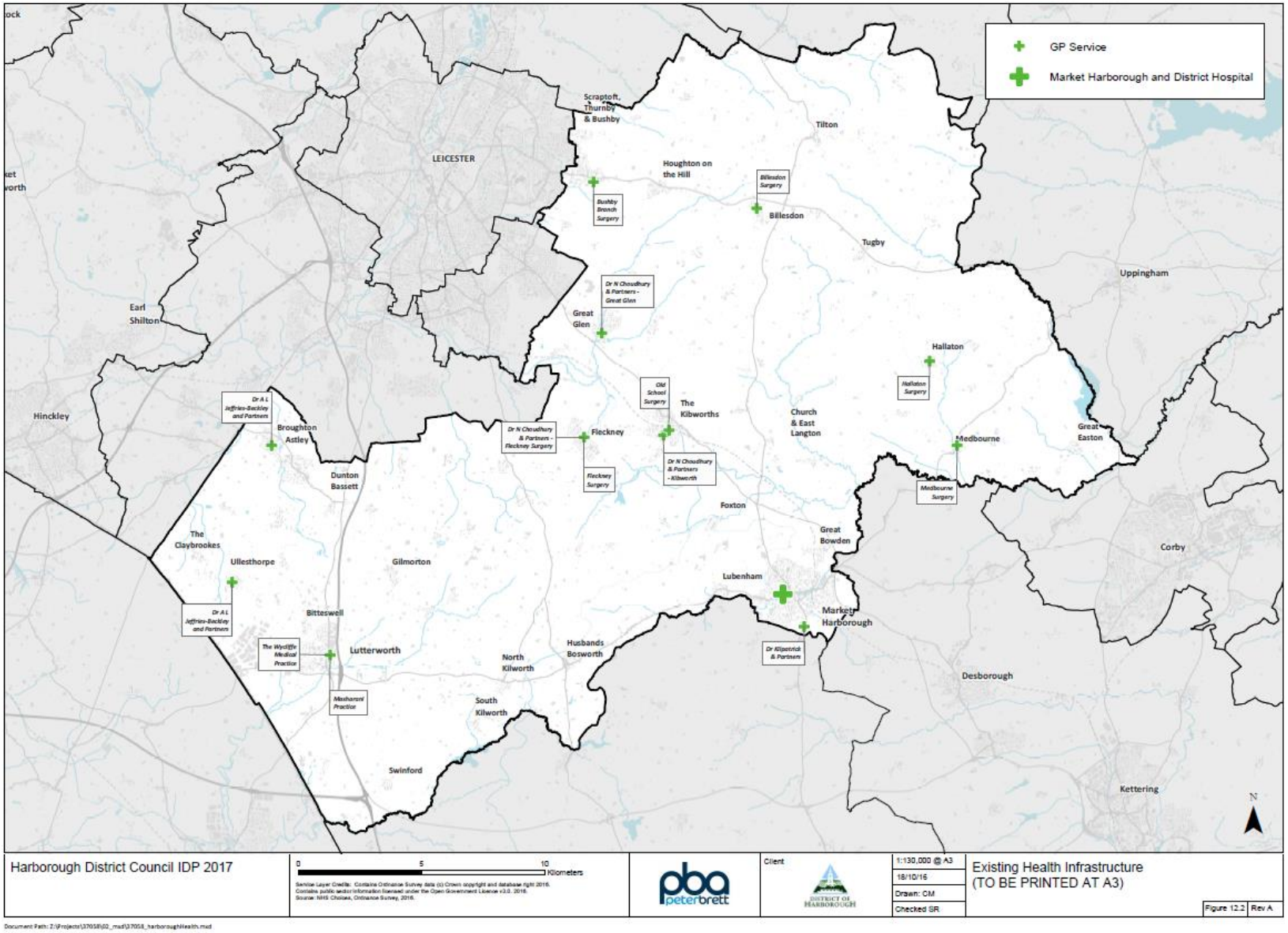
12.2.6 The role of the CCG and the aim of co-commissioning is to focus on general practice to act as an enabler to facilitate the changes needed both for improved patient outcomes and new ways of working. This means challenging traditional ways of delivering health care and look to redevelop how the following services/people interact - GPs or groups of GPs, district nurses / intermediate care teams, health and social care coordinators / social care / crisis response teams, community / virtual beds, mental health services, voluntary sector etc.

12.2.7 The various CCG's will need to develop primary care estate strategies as part of delivering the new approach to service delivery. The focus for investment in health infrastructure is likely to be about creating efficiency and joint working in a different way to maximise the use of facilities, sharing properties, rationalising property portfolios by focusing care onto sites where there is potential for improved service delivery. When development plans progress toward the future health care delivery strategy, including site-specific delivery, the health requirements, and where service delivery should take place, then the information in the live IDP will need to be kept under review and updated.

12.3 Infrastructure requirement and cost assumptions

12.3.1 Figure 12.2 overleaf shows the location of existing health infrastructure with the Harborough District area.

Figure 12.2 Existing health infrastructure



12.3.2 To date, our consultation with the CCG did not inform the changes in infrastructure likely to be required to meet the changing direction of travel. The key guiding principle identified from the East Leicestershire and Rutland Clinical Commissioning Group (CCG) is that they are not looking to commission any new GP surgeries; but instead, are looking for opportunities to develop bigger surgeries on existing sites. The following points should be noted:

- When the development plans progress to implement the new strategy, then the live IDP should be updated to capture the relevant information;
- The generic cost assumptions adopted for this assessment will vary depending on costs and size of facility;
- There is a general move away from very small GP practices towards primary care and extended primary care centres (hubs and spokes model). The cost and size of the facility will vary depending on the role of the facility provided;
- Given the potential for considerable variations to the final approach to delivery, a pragmatic approach has been adopted in informing the infrastructure requirements and cost estimates to include in this IDP, noting that this will need to be kept under review; and
- It is assumed that there is no spare capacity, apart from at the Husbands Bosworth practice which has spare capacity to meet the planned growth needs of north and south Kilworth, Swinford, and Husbands Bosworth.

12.3.3 The assumptions set out in below have informed the GP infrastructure assessment:

- CCG cost assumption is based on 2011 PCT Cost Model (informed by cost consultants Summers Inman) – this equates to a cost of £2,964 per m2 - GIA including land for new build cost for a medium sized surgery space of 500sqm to 1,500sq.m. and
- CCG identified GP floorspace ranges from 0.16 per patient to 0.89 depending on current floorspace of practice and patient numbers. PBA assumed a generic floorspace assumption based on 1800 patients to 190sq.m based on recent research for other IDP studies. This equates to an average floorspace requirement of 0.11 per person.

12.4 Summary of GP infrastructure costs

12.4.1 Table 12.1 overleaf sets out a summary of the estimated infrastructure costs to support the planned growth.

Funding health infrastructure

12.4.2 It is expected that developer funding will fund the cost of health infrastructure required to support planned growth. This infrastructure is categorised as essential to the delivery of planned growth.

12.4.3 The amount sought from any particular development scheme will be determined based on the specific circumstances relating that particularly application.

12.4.4 Future delivery of health infrastructure could be funded by means of third party investors who will look to provide the capital investment and look for a rental return on this. This could mean that 100% of the health infrastructure costs could be met by investors.

Table 12.1 Estimated infrastructure costs for GP surgeries based on planned growth

GP facilities	Cost phase 1: 2016 to 2020	Cost phase 2: 2021 to 2025	Cost phase 3: 2026 to 2031	Plan period total cost	Post plan period cost
Billesdon	£0	£8,999	£0	£8,999	£0
Bitteswell	£0	£22,497	£0	£22,497	£0
Broughton Astley	£0	£0	£0	£0	£0
Church & East Langton	£0	£22,497	£0	£22,497	£0
Dunton Bassett	£0	£29,996	£0	£29,996	£0
East of Lutterworth SDA	£0	£308,956	£815,882	£1,124,838	£937,365
Fleckney	£0	£74,989	£146,229	£221,218	£0
Foxton	£7,499	£0	£0	£7,499	£0
Gilmorton	£0	£20,247	£0	£20,247	£0
Great Bowden	£0	£0	£0	£0	£0
Great Easton (with Bringhurst)	£0	£23,247	£0	£23,247	£0
Great Glen	£0	£0	£26,246	£26,246	£0
Hallaton	£0	£26,246	£0	£26,246	£0
Houghton on the Hill	£0	£37,495	£9,749	£47,243	£0
Husbands Bosworth	£0	£0	£0	£0	£0
Lubenham	£0	£26,246	£0	£26,246	£0
Lutterworth	£0	£0	£0	£0	£0
Medbourne	£0	£23,247	£0	£23,247	£0
North Kilworth	£0	£0	£0	£0	£0
Scraptoft North SDA	£0	£394,443	£505,427	£899,870	£0
Market Harborough	£46,493	£353,949	£443,936	£844,378	£0
Scraptoft, Thurnby and Bushby	£0	£0	£0	£0	£0
South Kilworth	£0	£0	£0	£0	£0
Swinford	£0	£0	£0	£0	£0
The Claybrookes	£0	£37,495	£0	£37,495	£0
The Kibworths	£0	£0	£0	£0	£0
Tilton	£0	£26,246	£0	£26,246	£0
Tugby	£7,499	£0	£3,749	£11,248	£0
Ullesthorpe	£0	£0	£0	£0	£0
Windfall	£0	£74,989	£93,737	£168,726	£0
Grand Total	**£61,491**	**£1,511,782**	**£2,044,955**	**£3,618,229**	**£937,365**

Estates and Technology Transformation Fund

12.4.5 The Estates and Technology Transformation Fund is a multi-year £1billion investment programme to help general practice make improvements, between 2016 to 2020, including in premises and technology. It is part of the NHS Five Year Forward View. The fund is designed to accelerate investment in infrastructure to enable the improvement and expansion of joined-up out of hospital care for patients.

National sustainability and transformation package to support GP practices

12.4.6 NHS England is investing £500m in a one off five-year national sustainability and transformation package to support GP practices, and includes additional funds from local clinical commissioning groups (CCGs). Part of this funding is to support upgrades to practice premises.

13 CEMETERY AND BURIAL INFRASTRUCTURE

13.1 Introduction

13.1.1 This section considers the cemetery, burial and cremation infrastructure requirements for the District and draws on the District of Harborough's Open Spaces Strategy 2016 – 2021, Harborough Cemetery and Burial Strategy 2016 and consultation with Harborough District Council's Neighbourhood and Green Spaces officer.

13.1.2 Anyone whose name is on the electoral roll at the time of death has the common law right of burial in the churchyard or other consecrated burial ground of their parish.

13.1.3 Harborough District Council recognises the challenges with ensuring sufficient and appropriate burial space in the District and has adopted to take a strategic approach to addressing the delivery of this infrastructure.

13.2 Infrastructure requirement and cost assumptions

13.2.1 The approach to assessing the burial and cremation infrastructure requirements, and cost estimate is based on a review of the latest mortality rate and proportion of burials and cremations research carried out by Enzyo on behalf of HDC.

13.2.2 The 2016 Cemetery Strategy identifies the following locations where cemetery provision is required:

- Towards the south of the District around Market Harborough. There is a significant shortage of capacity within Market Harborough, and a small shortage around Foxton, Lubenham and Great Bowden;
- There is a shortage towards the north of the District around Thurnby, Bushby and Houghton on the Hill; and
- Fleckney has a substantial shortage of capacity, although parishes surrounding Fleckney have surplus capacity.

East of Lutterworth SDA

13.2.3 The 2016 Cemetery Strategy notes that the Lutterworth Cemetery is a new provision to meet the needs of the town. However, this recent investment does not account for the requirements stemming from the East of Lutterworth SDA, and estimates that based on known information at the time about the scale of growth of approximately 1,950 dwellings, there is an estimated requirement for an additional 283 burial plots and 258 plots for cremation of ashes to 2036. Taking account of the estimated capacity from the recent cemetery investment, there will be a shortfall of 124 burial plots.

13.2.4 The East of Lutterworth SDA is expected to provide sufficient cemetery space for burials over the lifetime of a cemetery (assumed as approximately 100 years). HDC have stated that their current understanding is that a cemetery site has been identified to the west of the M1 to meet the needs of the SDA.

Scraptoft North SDA

13.2.5 The 2016 Cemetery Strategy notes that the natural burial ground within Scraptoft is estimated to have 2000 burial spaces and the study states that there is sufficient capacity to support growth well beyond the plan period, including the proposed SDA at Scraptoft North. The 2016 Cemetery Strategy does note, that this is a private burial ground and is available to people beyond the District boundary. Given the proximity to Leicester City, this infrastructure is

expected to service the needs of a much wider catchment area. As this is a private service, plots cannot be safeguarded for District residents.

13.2.6 The Scraptoft North SDA is expected to provide a cemetery to meet all its needs for the planned growth in the plan period. HDC officers have stated (based on discussions with the site promoters) that onsite provision is constrained. Further work will be required to identify a suitable site for this burial requirement.

Cost assumptions

13.2.7 The following cost assumptions, based on discussions with HDC officers have informed this IDP:

- The cost of creating a cemetery and burial ground is estimated at £242,491 per ha (excluding the cost of land);
- It is assumed the space required per burial is 2.2 m2 (based on 75% cremation plots and 25% burial plots);
- A hectare of land can accommodate approximately 3,400 burials and cremations based on net usable area of 75%. Whilst 25% of land area is required for non-burial facilities;
- The estimated deaths per annum in the District are approximately 8 deaths per 1000 population;
- Assumed lifetime of a cemetery is approximately 100 years; and
- Based on the above assumptions, HDC estimated the burial infrastructure cost per person at £57.00 or £131 per dwelling based on 2.3 people per dwelling.

13.3 Summary of cemetery and burial infrastructure costs

13.3.1 Table 13.1 overleaf sets out a summary of the estimated infrastructure costs for cemetery and burial ground infrastructure costs.

Infrastructure delivery

13.3.2 The preferred option of meeting the future infrastructure requirement will be through the intensification or extension of existing sites. Where this is not possible, the need for new provision will be required.

13.3.3 Future infrastructure delivery is likely to be led and managed by the Parish and District Council, though there is also the scope for private sector provision.

Cross boundary implications

13.3.4 Generally, residents are buried within the Parish they are a resident of and few residents are buried outside of their Parish. The private natural burial ground within Scraptoft currently has capacity, however it is expected to meet the needs of a wider catchment area, including City residents.

Table 13.1 Summary of cemetery infrastructure costs

Cemetery and burial Infrastructure	Cost phase 1: 2016 to 2020	Cost phase 2: 2021 to 2025	Cost phase 3: 2026 to 2031	Plan period total cost (2016 - 2031)	Post plan period cost
Billesdon	£0	£1,573	£0	£1,573	£0
Bitteswell	£0	£3,933	£0	£3,933	£0
Church & East Langton	£0	£3,933	£0	£3,933	£0
Dunton Bassett	£0	£5,244	£0	£5,244	£0
East of Lutterworth SDA	£0	£54,013	£142,637	£196,650	£163,875
Fleckney	£0	£13,110	£25,565	£38,675	£0
Foxton	£1,311	£0	£0	£1,311	£0
Gilmorton	£0	£3,540	£0	£3,540	£0
Great Easton (with Bringhurst)	£0	£4,064	£0	£4,064	£0
Great Glen	£0	£0	£4,589	£4,589	£0
Hallaton	£0	£4,589	£0	£4,589	£0
Houghton on the Hill	£0	£6,555	£1,704	£8,259	£0
Lubenham	£0	£4,589	£0	£4,589	£0
Medbourne	£0	£4,064	£0	£4,064	£0
Scraptoft North SDA	£0	£68,959	£88,361	£157,320	£0
Market Harborough	£8,128	£61,879	£77,611	£147,619	£0
South Kilworth	£0	£2,753	£0	£2,753	£0
Swinford	£0	£5,244	£0	£5,244	£0
The Claybrookes	£0	£6,555	£0	£6,555	£0
Tilton	£0	£4,589	£0	£4,589	£0
Tugby	£1,311	£0	£656	£1,967	£0
Windfall	£0	£13,110	£16,388	£29,498	£0
Grand Total	**£10,750**	**£272,295**	**£357,510**	**£640,555**	**£163,875**

14 OPEN SPACE, SPORT AND RECREATION

14.1 Introduction

14.1.1 This section brings together a range of open space, sport and recreation infrastructure requirements. The assessment draws on evidence contained in the District of Harborough's Open Spaces Strategy 2016 – 2021 and consultation with Harborough District Council's Neighbourhood and Green Spaces Officer.

14.2 Infrastructure requirement and cost assumptions

14.2.1 The open space and recreation infrastructure relevant to Harborough District Council and the assumptions informing requirements are set out in table 14.1 below.

Table 14.1 Open space, sport and recreation infrastructure requirements

Infrastructure	Ha / 1000 population
Parks and gardens	0.4
Natural and semi natural areas - rural	8.5
Natural and semi natural areas - urban areas (Market Haroborough, Lubenham, Lutterworth and Broughton Astley)	1.5
Amenity greenspace	0.9
Provision for children and young people	0.4
Natural and semi-natural areas rural	8.5
Natural and semi-natural areas urban	1.5
amenity greenspace	0.9
provision for children and young people	0.3
outdoor sports facilities	1.6 *
allotments and community gardens	0.35
green corridors	varies
civic spaces	varies
*HDC will work towards a Playing Pitch Strategy which will refine this minimum target.	

Source: HDC provision for open space sport and recreation 2015

14.2.2 The Open Space Sport and Recreation Strategy notes that there is a shortfall of open space throughout the District, and that although there is generally good quality space, there are areas where the standards are poor and the facilities require upgrading. At a site specific planning application stage, account will be taken of the quality and accessibility to existing facilities.

14.2.3 To inform site specific developer contribution assessment, the Open Space Sport and Recreation Strategy provides a detailed breakdown of costs by enhancement or new provision, by type of facility, and by urban and rural location.

14.2.4 For the purpose of this plan wide assessment, it was agreed with Harborough District Council to adopt a simplified, blended average cost estimate of £4973[24] per dwelling to inform the planned growth Infrastructure Delivery Plan. This cost represents a blended average cost by area for a three-bedroom property.

14.3 Summary of open space, sport and recreation costs

14.3.1 Table 14.2 below sets out a summary of the estimated open space, sport and recreation infrastructure costs by location and phasing.

Table 14.2 Open space, sports, allotments, parks and semi natural spaces estimated infrastructure costs

Open space, sports, allotments, natural and semi natural space	Cost phase 1: 2016 to 2020	Cost phase 2: 2021 to 2025	Cost phase 3: 2026 to 2031	Plan period total cost (2016 - 2031)	Post plan period cost
Billesdon	£0	£76,032	£0	£76,032	£0
Bitteswell	£0	£190,080	£0	£190,080	£0
Church & East Langton	£0	£190,080	£0	£190,080	£0
Dunton Bassett	£0	£253,440	£0	£253,440	£0
East of Lutterworth SDA	£0	£1,486,908	£3,926,592	£5,413,500	£4,511,250
Fleckney	£0	£633,600	£1,235,520	£1,869,120	£0
Foxton	£63,360	£0	£0	£63,360	£0
Gilmorton	£0	£171,072	£0	£171,072	£0
Great Easton (with Bringhurst)	£0	£196,416	£0	£196,416	£0
Great Glen	£0	£0	£221,760	£221,760	£0
Hallaton	£0	£221,760	£0	£221,760	£0
Houghton on the Hill	£0	£316,800	£82,368	£399,168	£0
Lubenham	£0	£221,760	£0	£221,760	£0
Medbourne	£0	£196,416	£0	£196,416	£0
Scraptoft North SDA	£0	£3,332,736	£2,432,466	£4,330,800	£0
Market Harborough	£223,758	£2,990,592	£2,136,528	£4,063,734	£0
South Kilworth	£0	£133,056	£0	£133,056	£0
Swinford	£0	£253,440	£0	£253,440	£0
The Claybrookes	£0	£316,800	£0	£316,800	£0
Tilton	£0	£221,760	£0	£221,760	£0
Tugby	£63,360	£0	£31,680	£95,040	£0
Windfall	£0	£497,250	£621,563	£1,118,813	£0
Grand Total	**£350,478**	**£11,899,998**	**£10,688,477**	**£20,217,407**	**£4,511,250**

Source: PBA (based on HDC input) May 2017

Infrastructure funding assumption

14.3.2 Open space, sports, allotments, parks natural and semi natural space is categorised as 'essential' infrastructure to support planned growth.

14.3.3 Developer funding is expected to contribute to some sports, leisure and green infrastructure costs. This could be in various forms such as land transfers for allotments, and cemeteries or funding.

14.3.4 At planning application stage, the amount sought from any particular development scheme will be determined based on the specific circumstances relating that particularly application.

14.3.5 Some sports and greenspace infrastructure will be an onsite requirement of development e.g. children's play area on developments, or amenity greenspace, or green infrastructure which might be incorporated as part of SUDs schemes.

14.3.6 The main source of non-developer funding will be from grant funding opportunities promoted by Sport England such as the following:

[24] Note the cemetery provision cost has been excluded from the blended average cost assumption used for this section as cemeteries and burial infrastructure is considered in a separately.

- Protecting Playing Fields Grant Fund - up to £100,000 grant for improving and preserving playing surfaces;
- Inspired Facilities Fund –various annual rounds;
- Improvement Fund - discretionary grants for between £150,000 to £500,000 for 'locally needed sustainable' projects; and
- Strategic Facilities Fund – discretionary grants.

15 LIBRARY INFRASTRUCTURE

15.1 Introduction

15.1.1 This section sets out the infrastructure assessment for library infrastructure. The assessment is based on stakeholder consultations with the library service officer from Leicestershire County Council.

15.2 Infrastructure requirement and cost assumptions

15.2.1 The library services have gone through considerable change due to various efficiency and cost saving measures. As a result, a number of library facilities including at Fleckney, Great Glen, and Kibworth are now operated by community groups who are also responsible for future decisions relating to the facility. Plans for any longer-term changes to these community-managed sites are unknown.

15.2.2 Leicestershire County Council (LCC) is responsible for the three libraries at Market Harborough, Broughton Astley and Lutterworth. The Market Harborough library has recently been refurbished and is now operated as a shared facility with Harborough District Council offices and the Harborough Museum.

15.2.3 LCC have stated that there are no plans for any new libraries or expansion of the three properties it currently manages. However, LCC would be interested in exploring the potential for multi-use service provision at the libraries in Lutterworth and Broughton Astley if this results in service efficiencies and cost savings.

15.2.4 LCC usually seek to secure developer contributions as part of site-specific planning applications towards book stock, study support material, self-service adaptions, mobile library service and other works to support the library facilities. The contributions range from approximately £15 to £40 per dwelling. For this study, a blended average estimate of £27.50 per dwelling has been assumed to inform the cost for library infrastructure to support future planned growth.

15.3 Summary of library costs

15.3.1 Table 15.1 overleaf summarises the estimated infrastructure costs to support the plan and post plan growth.

Table 15.1 Estimated library infrastructure costs by phase

Library expansion / enhancements	Cost phase 1: 2016 to 2020	Cost phase 2: 2021 to 2025	Cost phase 3: 2026 to 2031	Plan period total cost (2016 - 2031)	Post plan period cost
Billesdon	£0	£330	£0	£330	£0
Bitteswell	£0	£825	£0	£825	£0
Church & East Langton	£0	£825	£0	£825	£0
Dunton Bassett	£0	£1,100	£0	£1,100	£0
East of Lutterworth SDA	£0	£11,330	£29,920	£41,250	£34,375
Fleckney	£0	£2,750	£5,363	£8,113	£0
Foxton	£275	£0	£0	£275	£0
Gilmorton	£0	£743	£0	£743	£0
Great Easton (with Bringhurst)	£0	£853	£0	£853	£0
Great Glen	£0	£0	£963	£963	£0
Hallaton	£0	£963	£0	£963	£0
Houghton on the Hill	£0	£1,375	£358	£1,733	£0
Lubenham	£0	£963	£0	£963	£0
Medbourne	£0	£853	£0	£853	£0
Scraptoft North SDA	£0	£14,465	£18,535	£33,000	£0
Market Harborough	£1,705	£12,980	£16,280	£30,965	£0
South Kilworth	£0	£578	£0	£578	£0
Swinford	£0	£1,100	£0	£1,100	£0
The Claybrookes	£0	£1,375	£0	£1,375	£0
Tilton	£0	£963	£0	£963	£0
Tugby	£275	£0	£138	£413	£0
Windfall	£0	£2,750	£3,438	£6,188	£0
Grand Total	**£2,255**	**£57,118**	**£74,993**	**£134,365**	**£34,375**

Source: PBA based on service provider input May 2017

15.3.2 For this IDP, the library infrastructure requirement has been categorised as 'desirable'. At planning application stage, the amount sought from any particular development scheme will be determined based on the specific circumstances relating to that particularly application.

Lutterworth SDA and library infrastructure

15.3.3 LCC as the library service provider would be interested in investigating the opportunity to provide a shared facility with other services, e.g. doctors surgeries, leisure infrastructure etc. if efficiencies can be achieved. This may include classroom space, as the library service also manages the Adult Learning Services.

Scraptoft SDA and library infrastructure

15.3.4 The Great Glen Community Library would service the library infrastructure for the Scraptoft North SDA. Future consultation with the community group operating the library is recommended to ascertain plans for infrastructure requirements.

16 COMMUNITY FACILITIES INFRASTRUCTURE

16.1 Introduction

16.1.1 This section sets out the infrastructure assessment for community facilities infrastructure. This assessment is based on the findings contained in the HDC Refresh of Community Facilities Infrastructure Study 2016.

16.1.2 Figure 16.1 overleaf shows the location of existing community facilities infrastructure.

16.2 Infrastructure requirement and cost assumptions

16.2.1 The community facilities infrastructure, for the purpose of this study, is defined as mainly buildings, which are either purpose-built or converted buildings such as community centres, sports clubs, village halls, scout huts, sports pavilions.

16.2.2 The range of activities that takes place in a community building can vary greatly from toddler groups to indoor bowls, IT training, sports activities, dance, theatre productions etc. Some community buildings provide only one type of activity to serve a particular group, while others may provide for diverse range uses.

16.2.3 Village and community buildings can vary in size and use, though they also tend to have some common features. There is usually a main activity or assembly space, together with some ancillary space for toilets, storage, kitchens and possibly additional halls and spill out space.

16.2.4 In most settlements, apart from the SDAs, community infrastructure requirements will most likely entail either an expansion or upgrade of existing facilities (based on local consultations).

16.2.5 For this assessment, a 0.3 sq. m per person space standard is used to reflect the community facilities space requirements based on the findings of the Refresh of Community Facilities Infrastructure Study 2016.

16.2.6 Actual cost of community infrastructure can vary considerably depending on the specification and the quality of scheme. Contributions may range from £556 to £1,483 per dwelling for new build facilities, and £556 to £1483 for refurbishments as set out in table 16.1 below.

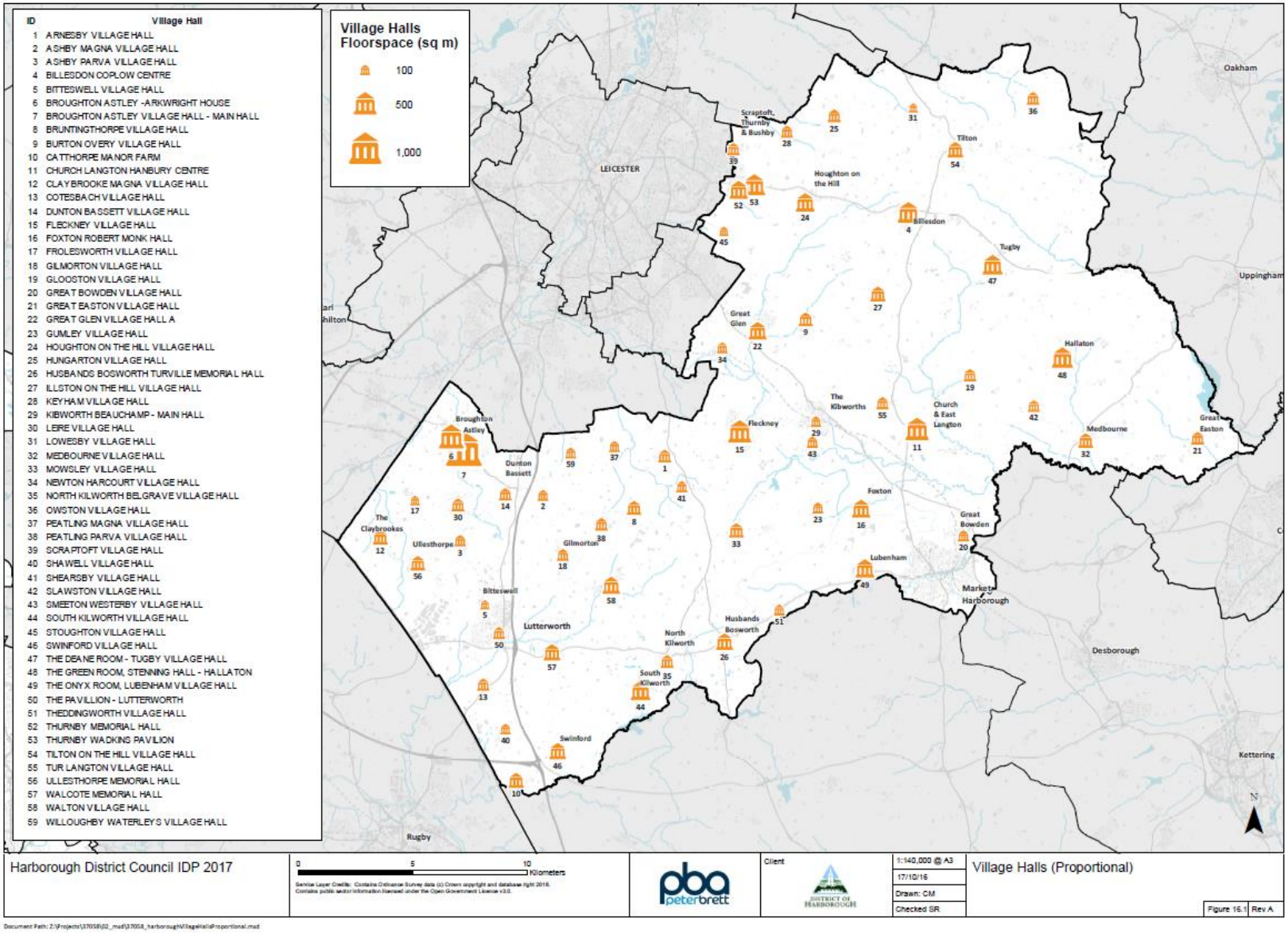
16.2.7 The three-bedroom new build cost of £1,185 per dwelling has been used to inform the SDA infrastructure assessment and the £853 cost has been used to inform the refurbishment / extension cost per dwelling for the rest of the planned development.

Table 16.1 Community infrastructure cost contributions by size of dwelling

No of bedrooms	1	2	3	4	5+
Assumed no of residents per dwelling	1.50	2.00	2.30	3.00	4.00
Charge per dwelling (per person charge of £515) for an extension or new build facility	£773	£1,030	£1,185	£1,545	£2,060
Refurbishment costs assessed at 75% of extension / new build cost	£556	£742	£853	£1,112	£1,483

Source: Refresh of Harborough District Community Infrastructure Assessment (2016)

Figre 16.1 Existing community facilities infrastructure



16.3 Summary of community facilities infrastructure costs

16.3.1 Table 16.2 below provides a summary of the estimated community facilities infrastructure costs.

Table 16.2 Community facilities estimate cost by phase

Community space	Cost phase 1: 2016 to 2020	Cost phase 2: 2021 to 2025	Cost phase 3: 2026 to 2031	Plan period total cost (2016 - 2031)	Post plan period cost
Billesdon	£0	£10,236	£0	£10,236	£0
Bitteswell	£0	£25,590	£0	£25,590	£0
Church & East Langton	£0	£25,590	£0	£25,590	£0
Dunton Bassett	£0	£34,120	£0	£34,120	£0
East of Lutterworth SDA	£0	£488,220	£1,289,280	£1,777,500	£1,481,250
Fleckney	£0	£85,300	£166,335	£251,635	£0
Foxton	£8,530	£0	£0	£8,530	£0
Gilmorton	£0	£23,031	£0	£23,031	£0
Great Easton (with Bringhurst)	£0	£26,443	£0	£26,443	£0
Great Glen	£0	£0	£29,855	£29,855	£0
Hallaton	£0	£29,855	£0	£29,855	£0
Houghton on the Hill	£0	£42,650	£11,089	£53,739	£0
Lubenham	£0	£29,855	£0	£29,855	£0
Medbourne	£0	£26,443	£0	£26,443	£0
Scraptoft North SDA	£0	£623,310	£798,690	£1,422,000	£0
Market Harborough	£52,886	£402,616	£504,976	£960,478	£0
South Kilworth	£0	£17,913	£0	£17,913	£0
Swinford	£0	£34,120	£0	£34,120	£0
The Claybrookes	£0	£42,650	£0	£42,650	£0
Tilton	£0	£29,855	£0	£29,855	£0
Tugby	£8,530	£0	£4,265	£12,795	£0
Windfall	£0	£85,300	£106,625	£191,925	£0
Grand Total	**£69,946**	**£2,083,097**	**£2,911,115**	**£5,064,158**	**£1,481,250**

Source: PBA (based on Refresh of Community Facilities Report 2016

Community facilities for the SDA's

16.3.2 Community buildings and the uses applied to them need to be flexible to adapt over time to reflect the changing needs of the settlement population and economic sustainability. The buildings can vary considerably and there is a growing trend towards developing joint service delivery (e.g. health, police, local authority combined with an element of community space). A degree of flexibility should be included in the infrastructure requirement to inform the delivery of any new provision, particularly at the SDA's.

16.3.3 The provision of community facilities is an important infrastructure requirement in generating a sense of community and improving the quality of life of a settlement, however, where there is no existing community; it is hard to predict the needs of the community over the long term. For the SDA's, it will therefore be important to build in some flexibility in determining the final type of facility to be provided.

Funding sources

16.3.4 Potential developer funding is expected to contribute to some community facilities infrastructure costs. Community facilities infrastructure is categorised as 'essential' to support the delivery of planned growth.

16.3.5 Community groups may also raise additional funding through fund raising activities and grant applications to various trusts and Sport England.

17 WASTE AND RECYLING INFRASTRUCTURE

17.1 Introduction

17.1.1 This section sets out the infrastructure requirements relating to the collection, treatment and disposal of waste related to the proposed growth in housing within the district of Harborough.

17.1.2 The assessment has been informed by consultation with officers from LCC and HDC (see Appendix A) as service providers and reference to the following documents:

- Minerals and Waste Local Plan pre submission draft, Leicestershire County Council, 2016;
- Waste Needs Assessment, Leicestershire County Council, December 2015;
- Minerals and Waste Safeguarding (Harborough District) Leicestershire County Council, 2015;
- Harborough District Council Waste and Recycling web pages (https://www.harborough.gov.uk/directory_record/573/harborough_district_council_waste_contract);
- Gate Fees Report – WRAP 2016; and
- Environment Agency Waste Conversion Factors.

17.2 Waste infrastructure context

17.2.1 HDC are responsible for household waste collection in the area, whilst LCC are responsible for waste disposal. LCC are also responsible for minerals and waste planning policy across the county, including in Harborough District.

17.2.2 HDC currently provides household waste collection and management through a private waste services contract with FCC Environment. The contract, last issued in 2009, is due to be reviewed in 2017 for the period until 2023.

17.2.3 LCC let private contracts with commercial companies for waste disposal within the county, but they maintain responsibility for management and operation of household waste recycling centres (HWRCs).

17.2.4 LCC are currently reviewing existing waste policy, with the aim of producing a joint Minerals and Waste Local Plan (MWLP) to cover the period to 2030 / 2031. The MWLP will replace the Leicestershire and Leicester Waste Development Framework Core Strategy and Development Control Policies.

17.2.5 Although not yet formally adopted, LCC produced a pre-submission draft of the MWLP in April 2016. The draft Local Plan provides a spatial vision, spatial strategy, strategic objectives, and core policies to guide the future form of waste management in the county. It seeks to significantly increase reuse and recovery of waste and move away from landfill.

17.2.6 In support of the MWLP, LCC produced a Waste Needs Assessment in December 2015, which sets out the current estimate of waste arising, capacity and requirement to 2030/2031 and the current methods of managing waste across the county.

Waste collection facilities

17.2.7 Currently, households in the District are provided with three bins (at a cost of £40 per bin) for non-recyclables; mixed recyclables (cardboard, tins, glass, aerosols, foil, plastic and paper) and garden waste.

17.2.8 Recyclable and non-recyclable waste is collected every two weeks on alternating weeks. Garden waste is collected throughout the summer on the same weeks as recyclable waste. The collection of garden waste is a chargeable service, costing £40 per property.

Waste disposal facilities

17.2.9 There are eight waste disposal facilities serving the HDC area ranging from household waste recycling centres, landfill sites, depots / transfer centres and energy recovery facilities. Details relating to these facilities are summarised in Table 17.1 below.

Table 17.1 Waste disposal facilities serving Harborough District

Waste facility	Type	Operator	Operational throughput (tpa)
Kibworth	Recycle - composting	SITA	15805
Kibworth	Recycle - HWRC	LCC	3991
Lutterworth	Recycle - HWRC	LCC	3734
Market Harborough	Recycle - HWRC	LCC	4629
Oadby	Recycle - HWRC	LCC	8557
Shawell Quarry	Residual - Landfill (non inert, non-	Lafarge Tarmac	268505
Cotesbach MBT (Shawell Quarry)	Recovery	New Earth Solutions	50009
Welham Lane Depot, Waterbeach.	Depot for sorting and transfer treatment	FCC	9500

Source: Data extracted from Waste Needs Assessment, Leicestershire County Council (December 2015)

17.2.10 Consultation with HDC indicated that of the residual (i.e. non-recyclable) waste collected from householders within the District, approximately 90% is disposed of at Shawell Quarry, with the remaining 10% going to the waste transfer station at Coalville. This is managed through contracts held by LCC.

17.2.11 According to the Waste Data Flow Website (http://www.wastedataflow.org/) the total household residual waste collected by HDC in 2014/2015 was 15,781.63 tonnes.

17.2.12 Recyclable waste is taken to the FCC transfer depot at Welham Lane and bulked; it is then taken to the Waterbeach materials recycling facility (MRF) in Cambridge.

17.2.13 Additionally, LCC provides a total of 14 household waste and recycling centres (HWRC), for use by residents of the County. Three of these sites are in the Harborough District area at Kibworth, Lutterworth and Market Harborough, (as shown above in Table 17.1 above).

Waste Collection

17.2.14 Consultation with HDC has indicated that refuse collections are not currently running at or over capacity, and that the plan assumed level of growth is unlikely to place undue strain on waste collection resources.

17.2.15 The current domestic waste collection contract between HDC and FCC has a built in level of housing increase per year over the life of the contract (currently from 2009 – 2023). Although no exact figures were available at the time of writing this report, HDC indicated that the built in increase in housing numbers was broadly aligned with the figures outlined in this IDP report (4,886 properties over 15 years).

17.2.16 The assumed level of growth in housing is taken into account for household waste collection services to 2023 (2,440 new homes). In the period from 2022/23 - 2030/31 the estimated housing growth is a further 2,921 properties. When a new waste services contract is let in 2022/23, similar provision should be included for an increase in properties and built into the lifetime of the contract.

Waste collection infrastructure requirements and cost assumptions

17.2.17 The planned growth is likely to involve the following additional costs:

- 3 bins per dwelling at a cost of £40 per bin.
- HDC have confirmed that no new vehicles will be required to meet the needs of planned growth.

17.2.18 Waste collection service is a revenue cost funded through Council Tax receipts and it is assumed this mechanism will continue to fund waste collection in the future. Note HDC are looking to save £1.4m per year on the overall waste budget due to various incentives ending, Central Government budget cuts and a reduction in sale of recyclable materials.

Waste Disposal

17.2.19 The pre submission draft MWLP states that there is sufficient waste management capacity to deal with the current levels of municipal waste generated by the county through a combination of HWRC, landfill, composting, MRF and waste transfer.

17.2.20 In the 2015 Waste Needs Assessment (WNA), LCC have assumed that the number of households in the county will increase by around 1% each year and each household will generate similar quantities of waste, as is currently the case. Therefore, the WNA has assumed an average increase in LACW of 1% per year to 2030/31.

17.2.21 Policy LW1 of the pre-submission draft MWLP states that LCC will commit to making provision for new waste management and disposal facilities to meet this anticipated growth and assumes an increase in recycling rates from the existing 47% in 2014/15 to 58% by 2030.

17.2.22 The planned growth of 4,886 new homes in Harborough to the period 2030/31 represents an increase of approximately 14% new properties over 15 years, or <1% per year. Therefore, the provision made by LCC under Policy LW1 of the pre-submission draft MWLP already reflects levels slightly above the planned growth. Generally, no issues are anticipated regarding waste disposal and management infrastructure as a result of the planned growth.

Waste disposal infrastructure requirements and cost to support planned growth

17.2.23 The estimated infrastructure capacity requirement for the planned growth in household waste disposal is summarised in table 17.2 overleaf.

Table 17.2 – Summary of household waste generation over plan period

Waste disposal / treatment method	No of households over plan period 2016- 2031	Total waste tonnage[25]	% per waste stream[26]	Total tonnage per waste stream
Recycling	4,886	6010	58%	3486
Recovery	4,886	6010	21%	1262
Residual	4,886	6010	21%	1262

Source: PBA based on LCC Waste Needs Assessment (December 2015) and consultation with LCC (2016)

Residual waste infrastructure requirement and cost estimates

17.2.24 The pre-submission draft MWLP, along with consultation with HDC and LCC indicates that there is likely to be sufficient capacity to meet the growth requirements for household waste disposal in terms of infrastructure capacity for landfill. Shawell Quarry alone has capacity for 90,000 tpa waste beyond 2031. Therefore, there is no additional requirement for infrastructure or cost assumed for 'residual waste' disposal facilities.

Recovery waste infrastructure requirement and cost estimates

17.2.25 The pre submission draft Leicestershire MWLP states that taking into account the predicted growth across the county over the next 15 years, there is likely to be a shortfall in waste recovery facilities (for both household waste and commercial and industrial waste) to deal with approximately 98,448 tpa.

17.2.26 The total increase in household waste requiring recovery as a result of the planned growth in Harborough District is approximately 92 tpa, (or 0.09% of the total estimated shortfall for the County), which is considered as negligible.

17.2.27 There are a number of options to meet this county wide shortfall; including developments that have been granted planning permission. The following new waste facilities have received planning permission (although not yet built):

- Extension to the 3.2MW Anaerobic Digestion plant at Huncote, operated by Shropshire Biogas; and
- Energy Recovery Facility (ERF) on the site of the former Newhurst Quarry at Shepshed, with a throughput of 300,000 tpa.

17.2.28 Consultation with LCC has indicated that providing the ERF at Newhurst Quarry is built, this will provide capacity for all additional waste 'recovery' (residential, commercial and industrial) requirements associated with planned growth across the county until 2030/31.

17.2.29 There is no increase in cost of infrastructure estimated from this private sector provision, as the cost will be recouped through the gate fees for receiving the waste produce or possibly a payment for receiving the waste product depending on the contractual agreement.

Recycling waste infrastructure requirement and cost assumptions

[25] Assumes 1 tonne per household per year over total plan period to 2031 (based on PBA estimates using UK data)

[26] Aspirational targets for 2020 taken from Waste Needs Assessment December 2015

17.2.30 The approach to assessing current and future capacity issues with household waste recycling centres (HWRC) has been informed in consultation with LCC. As set out in Table 17.1 earlier, the HWRC currently serving the Harborough District are: Market Harborough, Oadby, Kibworth and Lutterworth. LCC have stated that they will make an assessment on which RHWS facility residents of a proposed development are likely to use and whether said RHWS has a capacity shortfall at the time of the application for additional residential development.

17.2.31 Whilst the Waste Needs Assessment has stated that there is current capacity to deal with recycling of waste arising from planned growth, there are often more localised issues with HWRC, for instance Market Harborough is at capacity.

17.2.32 It is therefore likely that any additional housing in the vicinity of these HWRCs will place additional strain and there will be a requirement for either expanding existing facilities or building new, larger facilities.

17.2.33 Funding for additional capacity at HWRC is secured through S106 agreements from developers. The requested contributions are used to upgrade and expand existing facilities but also could be used (depending on the specific project) towards a new facility (although there are no known plans to do this).

17.2.34 There is area based variations in the level of contribution requested – this reflects the cost of providing the relevant RHWS per household. The contribution requested is based on the cost of providing the relevant RHWS per household multiplied by the number of proposed dwellings (net) at a proposed development and is set out in the LCC Planning Obligations Policy (November 2014 v4).

17.2.35 Based on the planning obligations policy, the cost estimate assumed for this IDP for RHWS sites is assumed at approximately £80 per dwelling for growth in Market Harborough and Lutterworth, and £45 per dwelling for all other areas in HDC.

East of Lutterworth SDA requirements and costs

17.2.36 LCC have stated that it is not possible at the current time to comment with any certainty whether there may be a need for a new RHWS infrastructure or upgrades to existing facilities in the future. This is something that will be considered over the next year. It is also the case that the obligations policy is itself currently under review, so how it is applied by the Environment and Waste team in the future could be subject to change.

Scraptoft North SDA requirements and costs

17.2.37 LCC have stated that the Oadby RHWS have both recently had an evidenced capacity shortfall, and residents at Scraptoft North SDA are expected to use the facility at Oadby. For now, the best cost estimate available is to use that set out above to inform the IDP.

Treatment of commercial waste

17.2.38 The provision of waste collection services to domestic properties is a statutory requirement for HDC, whilst it is optional to provide waste collection for commercial properties and is available on request for a reasonable charge.

17.2.39 As commercial waste contracts are not the responsibility of HDC or LDC, their disposal would fall to the developer / owner of commercial properties. Commercial and industrial waste is also much less likely to stay within the district and will be more geographically mobile than household waste.

17.2.40 LCC have assumed an increase of approximately 0.2% per year of waste arising from commercial and industrial development and have committed to making provision for new waste management and disposal facilities to meet this anticipated growth.

17.2.41 Consultation with LCC has indicated that they do not foresee any issues with meeting the waste disposal and management infrastructure needs of the anticipated growth stemming from the commercial and industrial development in the Harborough District area.

17.2.42 The pre submission draft MWLP states that there is likely to be additional waste recycling facilities required to meet a shortfall of approximately 65,373 tpa of commercial and industrial recycling waste. Although this requirement for additional recycling and recovery facilities is not totally dictated by the increased levels of development in Harborough, they do contribute to the overall need across the county.

17.2.43 HDC or LCC do not have control over commercial and industrial waste, as separate, private contracts are agreed with commercial waste operators for each development on an individual basis. The provision of commercial and industrial waste is primarily dependent on market factors and private waste management contracts. For this reason, costs of managing commercial and industrial waste have not been included in this IDP.

17.3 Summary of waste and recycling infrastructure costs

17.3.1 A summary of the estimated waste recycling infrastructure likely to be required to meet the planned growth is set out below in table 17.3

Table 17.3 summary of waste management and recycling infrastructure costs

Waste recycling	Cost phase 1: 2016 to 2020	Cost phase 2: 2021 to 2025	Cost phase 3: 2026 to 2031	Plan period total cost (2016 - 2031)	Post plan period cost
Billesdon	£0	£540	£0	£540	£0
Bitteswell	£0	£1,350	£0	£1,350	£0
Church & East Langton	£0	£1,350	£0	£1,350	£0
Dunton Bassett	£0	£1,800	£0	£1,800	£0
East of Lutterworth SDA	£0	£32,960	£87,040	£120,000	£100,000
Fleckney	£0	£4,500	£8,775	£13,275	£0
Foxton	£450	£0	£0	£450	£0
Gilmorton	£0	£1,215	£0	£1,215	£0
Great Easton (with Bringhurst)	£0	£1,395	£0	£1,395	£0
Great Glen	£0	£0	£1,575	£1,575	£0
Hallaton	£0	£1,575	£0	£1,575	£0
Houghton on the Hill	£0	£2,250	£585	£2,835	£0
Lubenham	£0	£1,575	£0	£1,575	£0
Medbourne	£0	£1,395	£0	£1,395	£0
Scraptoft North SDA	£0	£42,080	£53,920	£96,000	£0
Market Harborough	£4,960	£37,760	£47,360	£90,080	£0
South Kilworth	£0	£945	£0	£945	£0
Swinford	£0	£1,800	£0	£1,800	£0
The Claybrookes	£0	£2,250	£0	£2,250	£0
Tilton	£0	£1,575	£0	£1,575	£0
Tugby	£450	£0	£225	£675	£0
Windfall	£0	£6,250	£7,813	£14,063	£0
Grand Total	**£5,860**	**£144,565**	**£207,293**	**£357,718**	**£100,000**

17.3.2 Developer funding is expected to meet planned growth requirements. This infrastructure is categorised as 'essential' to the delivery of planned growth.

Cross boundary waste movement

17.3.3 The latest draft of the Leicestershire Waste Needs Assessment provides data from the Environment Agency's Waste Data Interrogator, which allows the movements, since 2006, of waste in and out of waste management facilities with Environmental Permits to be tracked. The importance of movements (both in and out of the County) has been given greater emphasis with the revocation of the Regional Plan and the duty to cooperate.

17.3.4 The principal commercial and industrial waste movements into Harborough from other Waste Planning Authorities are summarised below in table 17.4.

Table 17.4 Waste movements into Harborough

Waste Planning Authority	Waste Category	Quantity (tpa)	Receiving Site
Warwickshire	Non-hazardous	700.67	Shawell Quarry - Cotesbach
Warwickshire	Hazardous	573.96	Shawell Quarry - Cotesbach
Derbyshire	Non-hazardous	5299.21	Shawell Quarry – Cotesbach

17.3.5 Additionally, LCC export both hazardous and non-hazardous waste to a number of other Waste Planning Authority areas including Birmingham City, Coventry City, Northamptonshire, Nottinghamshire and Warwickshire.

17.3.6 Additionally, recyclable waste is taken by FCC Environment to their transfer depot at Welham Lane and bulked, it is then taken to the Waterbeach materials recycling facility (MRF) in Cambridge.

17.3.7 Consultation undertaken by LCC as part of the Waste Needs Assessment revealed that it is more than likely a valid assumption that the current relationships and quantities and types of waste moving between waste planning authorities would continue throughout the life of the plan.

17.3.8 Local Authority collected waste was not included as this type of waste is, typically, less likely to move between authorities. However, given Harborough's geographical location, in the south of the county, it is likely that residents will also make use of HWRCs in surrounding districts, such as Corby. However, it is difficult to judge the extent to which this is happening.

18 SURFACE WATER DRAINAGE AND FLOOD DEFENCE

18.1 Introduction

18.1.1 New developments need to take account of flood risk which may involve new flood defence or surface water drainage infrastructure where necessary and appropriate, as part of the development. However, in some instances strategic infrastructure may also be required to manage the cumulative impact of multiple developments. This section is mainly concerned with this later, cumulative impact, but also outlines the development-specific requirements.

18.1.2 It is a requirement that new developments consider the Water Framework Directive (WFD)[27], which was transposed into UK law in 2003. Developers should ensure that the new development does not result in deterioration of designated WFD water bodies and should aim for improvement towards the 'Good' overall status of receiving water bodies.

18.1.3 This section has been informed by consultation with Harborough District Council (HDC), Leicestershire County Council (LCC) who are the Lead Local Flood Authority (LLFA), the Environment Agency (EA) and a review of the following documents:

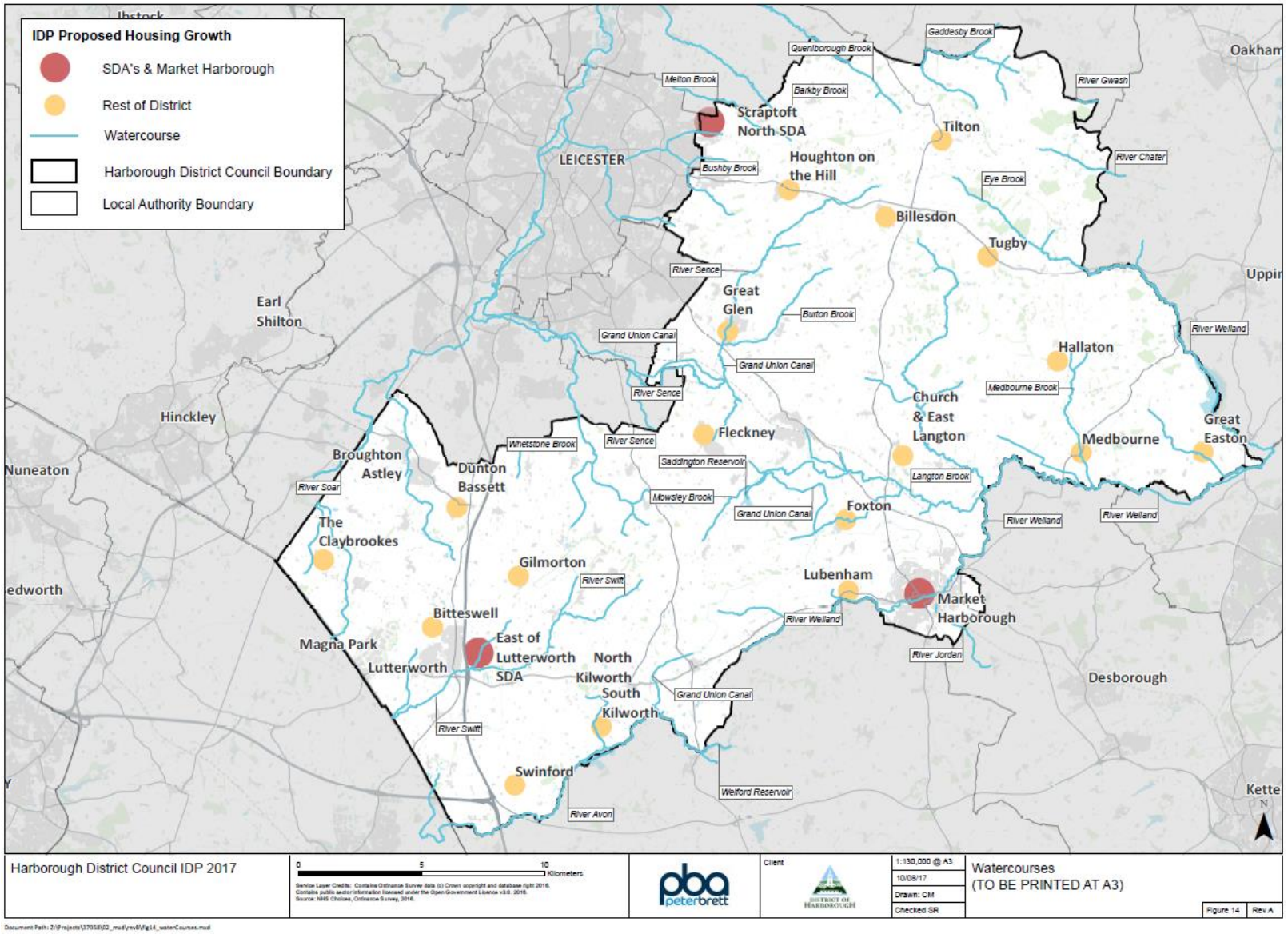
- The Harborough Water Cycle Study (HDC, December, 2015)
- Level 1 Strategic Flood Risk Assessment (HDC, April, 2009)[28]
- Market Harborough, Town Centre Flood Report (Leicestershire County Council, March, 2014)
- Welland for People and Wildlife (Welland Rivers Trust and EA)
- Catchment flood management and river basin management plans for the Severn, Humber and Anglian Regions (EA)

18.1.4 Figure 18.1 overleaf shows the existing named watercourses located within the Harborough District Council region overlain onto the map of the planned housing growth.

[27] http://www.wfduk.org/

[28] Note a county wide strategic flood risk assessment has been commissioned, the findings will be available in late summer and will be used to update future reviews of the IDP.

Figure 18.1 Existing water courses in the vicinity of planned growth



18.2 Water drainage and flood defence infrastructure context

Responsibility for surface water drainage

18.2.1 The responsible bodies for surface water drainage are as follows:

- Anglian Water and Severn Trent are responsible for the public surface water sewers within their respective designated areas within the Harborough District;
- The EA is responsible for watercourses which have been designated as Main River and have a duty to ensure that increased flood risk does not result from new development;
- LCC, the LLFA, is responsible for the annual inspection of six ordinary watercourses in the Harborough District, located in Billesdon, Fleckney, Foxton, Little Bowden, Lutterworth and Walcote;
- LCC in their role as the LLFA have the lead operational role in managing the risk of flooding from surface water and groundwater and from ordinary watercourses in the District; and
- Sustainable Urban Drainage Systems (SUDs) in the District are managed by the organisation which has adopted the features. This is typically private developers or homeowners but can also be adopted by HDC, the LLFA, Anglian Water or STW, although this is much less likely than private adoption.

Responsibilities for flood defence infrastructure

18.2.2 The EA is responsible for flood defences on Main Rivers. There are a number of 'Main Rivers' in Harborough District whose flood defences are the responsibility of the EA.

18.2.3 The Main River catchments and their associated tributaries in the vicinity of the growth proposed are listed in table 18.1 below.

Table 18.1 EA Main Rivers in the vicinity of planned growth areas

Growth location	Main river catchment	Tributaries
Broughton Astley, Great Glen, Fleckney	Humber- Upper Soar	River Sense, Burton Brook
Lutterworth	Severn-Upper Avon	River Swift
Market Harborough	Anglian- River Welland and Grand Union Canal	River Jordan, River Chater, Eye Brook
Kibworths	Langton Brook	Mowsley Brook, Saddington Brook
Scraptoft	Willow Brook	Bushy Brook, Thursby Brook, Scraptoft Brook

Source: Harborough Water Cycle Study, December 2015

Managing surface water drainage

18.2.4 HDC's draft local plan promotes the use of SUDs to manage surface water drainage stemming from the planned growth. SUDs aim to mimic natural surface water drainage by dealing with surface water runoff as near to its source as possible.

18.2.5 A range of SUDs techniques can be implemented into a development to prevent the increased risk of flooding and to control pollution risk. This can be achieved through the use of source control (e.g. green roofs, permeable paving, rainwater recycling) and the attenuation and treatment of water through the drainage systems (e.g. using filter drains, swales, basins and ponds). SUDs often involve a "management train" of different techniques to manage runoff and pollution on a site.

18.2.6 The use of SUDs techniques can also help improve the water quality of runoff discharging from a site and therefore contribute to improving or maintaining the WFD status of the downstream water body.

18.2.7 The LLFA's approach in assessing site-specific requirements relating to planning applications is to follow Defra's Non-Statutory Technical Standards for Sustainable Drainage Systems (March 2015), in conjunction with the National Planning Policy Framework (NPPF) and Planning Practise Guidance (PPG). This sets the minimum standards; though acknowledging the impermeable nature of soils in the District, the LLFA would in some instances find it beneficial to reduce runoff rates to below the existing greenfield runoff rates to: reduce the risk of flooding off-site; help improve sediment management; and contribute to improving both the ecological status and amenity value of the downstream water body.

Flood and drainage infrastructure requirements and cost assumptions

18.2.8 There is currently no action plan for strategic flood defence and surface water infrastructure for the District. A working group consisting of the EA, LLFA and HDC (facilitated by PBA) met in November 2016 to discuss potential future flood defence and surface water infrastructure requirements for the District. This work is at an early stage and details of any identified requirements will be refined over time by HDC as part of a live IDP.

18.2.9 The following sets out a professional assessment of the likely flood mitigation measures likely to be required to support future planned growth stemming from the working group meeting mentioned above.

Market Harborough past flood event and potential future infrastructure requirements

18.2.10 Market Harborough, especially the town centre, has been subject to surface water flooding to varying degrees on numerous past occasions. The Market Harborough Town Centre Flood Report details the flooding which occurred on 27th July 2013, in which intense rainfall in the catchment exceeded the design capacity of the public sewer system.

18.2.11 Over the 24-hour period of the 27th and 28th July 2013, 60mm of rain fell in the catchment. This exceedingly high rainfall total resulted in the surcharge of the combined surface water and sewer system. In excess of 50 properties in Harborough town centre were flooded. The flood event was attributable entirely to surface water flooding, with no fluvial influence.

Subsequent remediation works

18.2.12 The surface water storage tank owned and maintained by Anglian Water located beneath the Commons Car Park at the time had a capacity of 3 million litres of water, providing a Standard of Protection (SoP) to the 1 in 30 annual probability event. This tank worked as planned to its specified SoP and filled from empty in just 2 hours, demonstrating that the event was of much greater magnitude than the 1 in 30 annual probability event.

18.2.13 The surface water storage tank beneath Commons Car Park has subsequently been upgraded by Anglian Water in 2014 at a cost of £2 million to provide an increased SoP to the 1 in 100 annual probability event. Works included increasing both the capacity of the tank and controlling sewer outfall to the River Welland.

18.2.14 As a result of the infrastructure upgrades, surface water flood risk in Market Harborough Town Centre is now managed more effectively.

Other flood risk management work in Market Harborough

18.2.15 The re-naturalisation of 2.3km of the River Welland and River Jordan through Market Harborough was completed by the Welland Rivers Trust in 2015, in association with a number of stakeholders. This included the removal of weirs and the creation of a new two-stage channel. Works have not compromised the flood defence capabilities of the high flow channel.

18.2.16 Since the re-naturalisation work, the EA have updated their hydraulic modelling of the River Welland. Results indicate that flows have increased but water level in the River Welland has decreased in the order of 0.5m, freeing up capacity within the channel. It is likely that current Flood Zone designations within Market Harborough will alter, (awaiting confirmation from the EA).

Possible future flood defence measures in Market Harborough

18.2.17 There are flood defence embankments and walls located along the River Welland through Market Harborough with a SoP to the 1 in 75 annual probability event. These defences are inspected on an annual basis by the EA and this level of protection is considered adequate for the existing level of development in the River Welland catchment.

18.2.18 The River Jordan is a narrow watercourse with a flashy[29] profile and is hydro logically sensitive to additional flows. There is the potential risk of flooding at the confluence of the River Jordan and River Welland in Market Harborough. It will be necessary to ensure that the flow within the River Jordan is not increased as a consequence of discharging surface water runoff from development sites within its catchment.

18.2.19 Further investigation could be carried out to inform the perceived[30] risk of flooding from the River Jordan. This would provide the evidence to inform possible strategic actions as part of a future IDP project. Evidence could also help with the formulation of planning policy to prevent increasing future flood risk from the River Jordan and provide the LLFA a policy basis to seek reductions in greenfield runoff rate below national policy levels as part of site specific applications which affect the River Jordan. The use of mutually beneficial flow attenuation techniques and sediment traps could help to improve the confluence's resilience.

18.2.20 The upgraded surface water storage tank beneath Commons car park and its sewer outfall in Market Harborough has a SoP to the 1 in 100 annual probability event. This may need upgrading again in the future to take into account the effects of climate change, as indicated by the EA. Any future works should also consider how water quality is managed from the tank.

18.2.21 Natural Flood Risk Management (NFRM) pilot schemes are in operation upstream of Market Harborough. Although the flood risk benefits of NRFM have not yet been quantified, it is likely that the EA and Rivers Trust will support further NFRM schemes within rural areas of the Harborough District as an opportunity to undertake further research and obtain datasets useful for assessing their benefits in greater detail. It is very likely that NFRM techniques would help to improve water quality and should benefit the WFD status of downstream urban water bodies. There is a strong link between a healthy river environment and health and well-being.

[29] A watercourse with a flashy profile responds to a rainfall event quickly. A flashy watercourse also returns back to normal flow and level conditions quickly after the cessation of a rainfall event, represented by a steep falling limb on the hydrograph.

[30] The EA state that the risk of flooding along the River Jordan is often perceived to be higher than it actually is. The confluence of the River Jordan and River Welland is the active floodplain and is designed to flood in high magnitude flood events.

18.2.22 The EA have stated that the FRM activities in Market Harborough will continue in much the same manner as they do currently, i.e. silt removal within the River Jordan and general maintenance activities. The EA suggest that a low flow channel and berms could be introduced into the River Jordan; pools and riffles would also be beneficial in terms of flood risk and water quality improvements. The centre of Market Harborough is to continue to be maintained by HDC, the riparian owner and it is important that developers and owners are aware of riparian rights and responsibilities. The EA have confirmed however that they are looking into improving telemetry at Dunmore Road.

18.2.23 Overall, surface water flood risk is the main cause for concern within Market Harborough, rather than flooding from a fluvial source such as the River Welland or its tributary, the River Jordan. In order to ensure that the risk of surface water flooding is not increased further, developments on existing greenfield sites must maintain the greenfield runoff rate up to the 1 in 100 annual probability event and brownfield sites must aim for rates as close to greenfield as reasonably practicable and the existing surface water networks assessed accordingly.

Planned growth at East of Lutterworth SDA

18.2.24 The River Swift flows to the south of Lutterworth in a westerly direction. There is a large area of land within Flood Zone 3 at the confluence of an unnamed watercourse and the River Swift to the east of Lutterworth / north west of Misterton.

18.2.25 Any development proposed in the flood zone would need to follow guidance in the NPPF with regards to the Sequential and Exception Tests and require a site-specific FRA.

18.2.26 Development at the east of Lutterworth SDA would necessitate the construction of new bridges across watercourses for access purposes. The bridges should be designed with adequate freeboard above the 1 in 100 annual probability event, with allowance for climate change, flood level of the watercourse.

18.2.27 Any bridges should be designed with a clear span, with any structures located entirely within Flood Zone 1.

Planned growth at Scraptoft North SDA

18.2.28 Bushy Brook, the tributaries of which are Thurnby Brook and Scraptoft Brook, flows to the south of Scraptoft in a westerly direction. There is a FSR in Scraptoft at the confluence of Thurnby Brook and Bushby Brook, which is assumed to provide a SoP to the 1 in 50 annual probability event.

18.2.29 Bushy Brook flows in a westerly direction towards Willow Brook, with subsequently discharges into the River Soar in Leicester to the west of Scraptoft.

18.2.30 Willow Brook is currently liable to flash flooding due to its narrow, modified channel. In order to ensure that flood risk is not increased within the catchment, new development should discharge at greenfield or preferably below greenfield rates if possible.

18.2.31 There is currently no work planned by the EA to re-naturalise the Willow Brook, or undertake any additional FSRs or upgrade the SoP of any existing FSR in Scraptoft or along Willow Brook.

18.2.32 Correspondence with the Trent Rivers Trust indicates that an enhanced flood storage area could be supported within the Local Nature Reserve. Any scheme should be based on local community engagement to inform the mitigation works.

Rural areas and general measures for the wider Harborough District

18.2.33 There are EA flood defences, predominantly made up of soft-engineered defences, located in Great Glen at the confluence of the River Sense and Burton Brook. The LLFA are currently assessing the need to carry out some general modelling work and an information gathering exercise to inform future works in Great Glen.

18.2.34 The Trent Rivers Trust indicate that a silt trap or an alternative aesthetic SUDs feature could be created downstream of Fleckney to prevent deposition downstream blocking watercourses which run through farming land. This would be beneficial for both flood risk and water quality, including benefits such as attenuation, sustainable cleansing of water (especially phosphates which cause excessive weed growth in the channel) and reduced frequency of maintenance to the channel.

18.2.35 Currently, there are 23 FSRs within the District which are maintained to a good standard and provide additional benefits such as amenity and biodiversity. Although no construction of additional FSRs are currently planned, FSR upgrades to incorporate climate change resilience in strategic locations would be a practical continuation of the current FRM strategy in the District and ensure that flood risk is not increased within the catchment due to the effects of climate change. FSRS also provide water quality benefits by acting as sediment traps which positively impact downstream urban areas.

18.2.36 The Trent Rivers Trust suggest that a flood storage area could be created in Stoughton, along with plans to open up an existing culvert watercourse to create a new restored channel with enhanced public access. No residential or commercial growth is currently planned in Stoughton but the works could help to reduce flood risk downstream of this area.

18.2.37 The EA indicates that a Water Friendly Farming project is currently being undertaken within the District. The findings of the project will be able to inform any future modelled benefits of natural attenuation measures.

18.2.38 The EA note that Quarry and Energy installation in rural areas have provided proven opportunity to encourage natural flood risk and water quality improvements. This could be included to guide future installations such as a proposed quarry site near to Husbands Bosworth.

18.2.39 NFRM is a key focus of EA and Rivers Trust work, with numerous pilot schemes currently operational in the District. There is a strong possibility that the EA and Rivers Trust would approve further schemes which could help to quantify the flood risk benefits of NFRM, especially in upland rural areas.

18.2.40 Due to the generally impermeable nature of the soils in the District, the existing greenfield runoff rate in some development areas is likely to be high, as only small quantities of surface water will infiltrate into soils. This issue was discussed at the working group meeting led by PBA held in November 2016. In areas with especially impermeable soils, the LLFA may seek to informally encourage developers to consider their impact upstream and downstream by aiming for a reduction in greenfield run-off rates as part of the planning application process, however, recognising that this is not a requirement of the NPPF or Non-Statutory Technical Standards and would be achieved with the cooperation of the developer only and their willingness to help reduced flood risk in the local catchment.

18.2.41 The EA are considering incorporating a climate change allowance to existing Flood Storage Reservoirs (FSRs) where new development is proposed in order to improve the future resilience of these features. The EA are currently assessing this at a strategic level and have no current plans to implement upgrades.

18.2.42 After consulting with the key stakeholders about the need for possible future flood and surface water infrastructure requirements, no specific cumulative scheme has been identified for the wider District area. Site specific measures are identified, and the approach to managing fluvial and surface water drainage will continue to be the main mechanism for future flood risk management.

18.2.43 The success of proposed infrastructure depends on the wider maintenance scheme. Weed growth and silt build-up results in greater pressure in terms of pollution and waste, i.e. phosphates to be processed at Water Recycling Centres (WRCs) increases and not all WRCs are large enough to warrant phosphate stripping which could result in excessive weed growth and reduced channel capacity.

18.3 Summary of water drainage and flood defence infrastructure costs

18.3.1 Table 18.2 below sets out a summary of the estimated flood and drainage infrastructure costs informing this IDP.

Table 18.2 Estimated water drainage and flood defence infrastructure costs

Drainage and flood mitigation	Cost phase 1: 2016 to 2020	Cost phase 2: 2021 to 2025	Cost phase 3: 2026 to 2031	Plan period total cost (2016 - 2031)	Post plan period cost
East of Lutterworth SDA					
Bridge structures crossing River Swift and tributaries	£965,625	£965,625	£965,625	£2,896,875	£965,625
Foul water pumping station, foul and surface water onsite drainage, balancing ponds	£2,087,667	£2,087,667	£2,087,667	£6,263,000	£2,087,667
East of Lutterworth SDA Total	**£3,053,292**	**£3,053,292**	**£3,053,292**	**£9,159,875**	**£3,053,292**
Fleckney					
Fleckney watercourse enhancements	£13,333	£13,333	£13,333	£40,000	£0
Fleckney Total	**£13,333**	**£13,333**	**£13,333**	**£40,000**	**£0**
Scraptoft North SDA					
Culvert crossing	£66,667	£66,667	£66,667	£200,000	£0
Foul water pumping station, foul and surface water onsite drainage, balancing ponds	£725,000	£725,000	£0	£1,450,000	£0
Scraptoft Local Nature Reserve flood storage	£15,000	£0	£0	£15,000	£0
Scraptoft North SDA Total	**£806,667**	**£791,667**	**£66,667**	**£1,665,000**	**£0**
Grand Total	**£3,873,292**	**£3,858,292**	**£3,133,292**	**£10,864,875**	**£3,053,292**

18.3.2 The costs relating to the SDA sites have been informed by the SDA site promoters and note that some of these costs are categorised as site enabling infrastructure.

18.3.3 An enhanced flood storage area within the Local Nature Reserve at Scraptoft, as outlined above, could be implemented at an estimated cost of £15,000.

18.3.4 The creation of a silt trap or aesthetic SUDs feature downstream of Fleckney is estimated to cost between £30,000 and £40,000, (with the potential for the total cost to be higher depending on the quality and scale of works carried out).

18.3.5 Works planned by the Trent Rivers Trust in Stoughton, will cost in the region of £200,000. The public access and amenity works could be sectioned off and estimated to cost between £5,000 and £25,000.

18.3.6 The Environment Agency are responsible for the construction of new flood defences and the long term maintenance of defences which protect existing assets along Main Rivers. The EA will not construct or upgrade flood defences to promote new development within flood risk areas. Where new or renewed flood defences provide protection for both new and existing properties, costs for the flood defences are pro-rata between developers and the EA.

18.3.7 The LLFA are responsible for construction of new flood defences and long term maintenance of defences which protect assets from Ordinary Watercourses.

18.3.8 Any onsite flood protection measures and SUDs requirements identified within a site specific FRA will be part of the developers' site opening up costs for each individual development. Where connections to existing public surface water sewers are necessary the developer will be responsible for any costs incurred as part of the site opening costs.

Infrastructure funding

18.3.9 New surface water drainage infrastructure will be developer funded for each individual site. A commuted sum may also be payable by the developer where third party adoption of SUDs assets takes place to secure long term maintenance and repair.

18.3.10 The enhanced flood storage area within the Local Nature Reserve at Scraptoft would require developer funding.

18.3.11 It is likely that the cost for the silt trap downstream of Fleckney will be met via grant applications from future funding streams.

18.3.12 Any planned NFRM works and pilot schemes in upland and rural reaches could be funded by the EA or Rivers Trusts, both of which are focussing on NFRM research within the Harborough District. If a catchment approach to NFRM is undertaken, this could strengthen HLF bids by Catchment Based Partners such as Welland Valley Partnership.

18.3.13 The Trent Rivers Trust are currently bidding for NFRM funding for proposed works in Stoughton from the Trent Regional Flood and Coastal Committee (RFCC), the EA, LCC and Defra. This should constitute the majority of funding for the proposed works.

18.3.14 Central Government Funding is sourced mainly from Defra which gives the majority of floods funding to the EA as Grant-in-Aid. The EA spends this directly on FCERM or passes some onto Local Authorities and IDBs as grants. LLFAs receive part funding from Defra and DCLG via DCLG Local Services Support Grant (LSSG) and Settlement Funding Assessments (SFA) for Local Authorities.

19 STRATEGIC DEVELOPMENT AREA INFRASTRUCTURE ASSESSMENT

19.1 Introduction

19.1.1 This section summarises some of the main infrastructure findings for the two SDAs. Further details are set out in each of the preceding infrastructure sections.

19.2 Delivery of planned growth at the East of Lutterworth SDA

19.2.1 The planned development at the East of Lutterworth SDA is for 2,750 dwellings and associated commercial development. The proposal is for 1,500 dwellings to be provided during the plan period and 1,250 dwellings to be provided post 2031. The site is to the east of Lutterworth town Rural Centre, and is separated from Lutterworth by the M1 motorway.

19.2.2 Various transport studies have been undertaken and are ongoing on behalf of the scheme promoters, HDC and Highways England to inform the impacts and mitigations associated with this scheme. The transport studies undertaken to date have been based on various levels of planned growth as part of an iterative process. However, as plans have progressed and been informed by the various assessments, it is clear that the post plan growth is an important consideration to the SDA scheme viability and so any assessments should reflect both the plan and post plan growth. So any transport assessments informing the deliverability of the SDA should reflect both the plan and post plan growth, and factor in planned and consented growth in nearby areas, including the strategic employment site at Magna Park.

19.2.3 This is particularly relevant when assessing the impact and capacity of the Frank Whittle roundabout as there is a finite capacity to the level of mitigation works that can be accommodated at this roundabout. We understand the mitigations proposed by the scheme promoters are based on assessments reflecting the plan and post plan growth and growth at Magna Park - whilst the assessments undertaken on behalf of HDC to date reflect the plan growth only and some of the planned growth at Magna Park. Given the capacity constraints of the Frank Whittle roundabout, the Council should be assured that the mitigation measures proposed at the Frank Whittle roundabout can indeed accommodate the level of development proposed during the plan, post plan and surrounding consented and planned growth at Magna Park.

19.2.4 With regards to the A426 access and Spine Road connection, the promoters' consultants AECOM have indicated that approximately 75% of the residential development and all of the employment development at the East of Lutterworth SDA could come forward before the Spine Road connection to the A426 is necessary, this would suggest that the delivery of the Spine Road would be close to the end of the plan period or possibly post plan period if there is any delay in the housing delivery. Evidence has not yet been provided to demonstrate how this would be achieved, and the impact on the remainder of the network until this connection is in place and should be further investigated by HDC.

19.2.5 All of the evidence relevant to the East of Lutterworth SDA identifies increased stress along Gilmorton Road as a result of the proposed development, whilst the Strategic Assessment also provides the results of capacity testing which demonstrates junctions in Gilmorton will go over capacity with Local Plan growth. The SDA scheme promoters have not however identified any mitigation measures along this route. Instead they propose developing a strategy which discourages traffic from routing along Gilmorton Road and possibly providing some traffic calming or traffic management measures. How this will be managed has not yet been identified, but HDC should be aware that this may result in additional infrastructure necessary to support the scheme.

19.2.6 The East of Lutterworth SDA, has identified a requirement for the following improvements to the Strategic Road network at Junction 20 of the M1:

- full entry signalisation;
- increasing the number of circulatory lanes on the eastern side of the junction to three lanes; and
- Provision of a short flare on the westbound (A4304) entry to allow three entry lanes into the junction (two heading over the bridge, and one onto the southbound on-slip).

19.2.7 It is not clear at what stage in the build out of the developments these works will be required, further evidence will need to be produced in order to ascertain the development thresholds and phasing. There has been an ongoing dialogue with Highways England (HE) to discuss the proposed East of Lutterworth SDA proposal and HE have provided an agreement in principle to the proposed mitigation works at this local plan stage, noting that any works at this site will need to be closely monitored and carefully designed and be subject to a detailed Transport Assessment at planning application stage.

19.2.8 There is ongoing discussion regarding bus services provision to serve the Lutterworth East SDA. The Transport Feasibility Assessment for the East of Lutterworth SDA, the development suggests that existing bus services could be re-routed through the development along the proposed Spine Road. The promoters are aware that the LCC would not wish to see existing communities suffer from re-routing of the existing services to the new development. The public transport strategy for this scheme will therefore need to be progressed further before its details and corresponding costs can be determined.

19.2.9 The IDP cost inputs have been informed by the latest understanding of the scale of works and mitigations required. The largest element of the infrastructure costs includes a new road bridge crossing the M1 and acquiring the associated land for the M1 crossing. Other works include the main spine road; secondary roads; works to upgrade the capacity of the Frank Whittle Roundabout; various junction upgrades; signalisation works to junction 20 of the M1; and land profiling and earth works associated with the site's location adjacent to the Miserton Marshes SSSI, and to areas at risk of flooding. The transport costs provided by the site promoters have also been reviewed by HDC's transport consultants Jacobs. Further off site costs are likely to be identified as a result of more detailed assessments – particularly in relation to cross border works and impacts on surrounding settlements.

19.2.10 Seven Trent Water (STW) has stated that the East of Lutterworth SDA is likely to require a new pumping station to pump foul water flows under the existing watercourse across to the trunk sewer. This is likely to require drainage under the M1 motorway to connect to the trunk sewer to the west of the M1 junction 20. They state that the delivery of the physical sewerage infrastructure is feasible, but will require early planning with STW.

19.2.11 STW may need to secure modifications to their current water discharge permit for this site from the Environment Agency. Due to recent changes to the Water Framework Directive and the need to upgrade the water quality, the Environment Agency (as the water discharge licensing body) may require STW to undertake modifications to their existing discharge permit, in order for it to meet the requirements of the Water Framework Directives (WFD). If the Water Framework Directive standards cannot be met, it could preclude the pumping station from being able to adequately treat sewerage flows from new developments, in which case STW and the Environment Agency may raise concerns about the scale of growth. It is more likely, however, that by explaining the proposed development plans to STW, well in advance, and by working with STW to ensure that the development is included in STW's strategic plans, any modification to the discharge permit imposed by the Environment Agency should be factored into STW's planning framework well in advance of when these might be required. To avoid any delays to the planned delivery of the SDA, it is important for HDC to fully understand the implications of securing a discharge permit, including any additional upgrades that might

be required to the existing pumping station, by initiating early dialogue between STW, the Environment Agency and the scheme promoters.

19.2.12 The education infrastructure includes provision for a two-form entry and a one form entry primary schools, with scope for expansion, together with special education needs provision. There is considerable existing secondary school capacity in Lutterworth which could accommodate all of the SDA requirements. It is possible however that the Lutterworth Academies may choose to review the current surplus capacity situation, and potentially close one school entirely or 'mothball' one school until additional capacity is required. If this was to happen, then by the time the secondary education is required for the East of Lutterworth SDA, the existing surplus capacity may not be available.

19.2.13 The IDP has not included a cost for secondary school infrastructure in the IDP assessment due to the considerable existing capacity. However, contingency arrangements should be considered by the scheme promoters to allow for the possibility that there may not be any secondary school capacity to meet the needs of the proposed SDA when it is wanted. Secondary education to support this scale of development is estimated to cost in the region of £10m and we understand this could be accommodated from the contingency allowance included in the viability assessment for this scheme. The promoters should consider early engagement with the secondary school operators in Lutterworth to discuss how to safeguard the SDA growth requirements.

19.2.14 The social and community infrastructure includes provision for some additional health, community facilities and library upgrades. No specific details are available of the type of upgrades likely to be required, so, for the time being, a cost estimate has been included in the cost schedule. The library and health service providers have expressed the desire to consider the possibility of exploring the potential for a 'joint service delivery facility' if there are cost efficiencies to be gained.

19.2.15 Aside from impact on Lutterworth town centre, the cross border implications of this proposal are largely expected to be in neighbouring parts of Warwickshire along the A5 corridor. Highways England are engaged with various local authorities and are assessing the implications on the strategic highway network. Further cross border work may be required to understand the impacts and mitigation on the A5.

19.2.16 The cost estimates for the various identified infrastructure and works are summarised in the next section.

19.3 Delivery of planned growth at the Scraptoft North SDA

19.3.1 The Scraptoft North SDA proposal is for the delivery of 1,200 dwellings within the plan period. The scheme is within the Principal Urban Area, adjoining development on the Leicester City boundary and Scraptoft village.

19.3.2 The SDA connects into the existing road and public transport networks, and its design and associated proposals seek to improve traffic movements in Scraptoft village. The infrastructure assessments undertaken thus far have identified various traffic management measures for Keyham Lane, Uppingham Road, Hamilton Lane, Scraptoft village, and New Romney Crescent together with offsite junction improvements and various cycling, walking, bus measures.

19.3.3 The promoters are currently working with Leicester City Council and Leicestershire County Council to undertake a detailed Transport Assessment and modelling to inform the precise nature of the transport mitigation measures that might be required for offsite works. This will refine the cost assessments included in the IDP, particularly the costs relating to cross border infrastructure requirements. For now, an estimate allowance for 'other works has been included in addition to the contingency allowance in the scheme viability appraisal.

19.3.4 Anglian Water who would service the Scraptoft North SDA area has stated that there are no capacity or connection issues to the Wanlip Water Recycling Centre (WRC). All the utilities network connections are nearby and an allowance of £2.5m is included in the IDP for possible upgrades.

19.3.5 The proposed on site Sustainable Urban Drainage scheme and drainage measures take account of the topography and existing water features. The Willow Brook in the vicinity of the site is currently liable to flash flooding due to its narrow, modified channel. There is currently no work planned by the Environment Agency to re-naturalise the Willow Brook. Consultation with the Trent Rivers Trust indicates that an enhanced flood storage area could be included within the Local Nature Reserve. A cost estimate of £15,000 has been included in the infrastructure schedule to reflect this.

19.3.6 HDC officers have stated that the site would need to allocate space for an onsite cemetery or ensure provision within easy access to meet the needs of this site. Currently no land has been allocated, and officers are working with the site promoters to explore how best to meet the cemetery and burial requirements for this SDA.

19.3.7 Cross boundary considerations relate to the relationship with Leicester City, particularly in terms of transport, but also other infrastructure such as education, open space and cemetery provision. The travel movements from the SDA are most likely to be between the SDA and the City and this is well recognised by various transport studies and by the promoters. Detailed transport assessment is ongoing to assess and quantify the impact of travel growth on the city network. The site is also within easy access of the various social and retail facilities at the Hamilton shopping centre and City employment areas.

19.3.8 In relation to education infrastructure, although the site is immediately adjacent to the City's Hamilton School, which has capacity, this is a failing school and may be less attractive to parents. The site is within the County's education planning area, and pupils would be eligible for some of the County's top performing schools in Oadby - parent choice is expected to favour this. A cost estimate has been included in the IDP for onsite primary school and additional classroom space, and for contributions towards increasing capacity of the County secondary schools serving this catchment.

19.3.9 This is a relatively uncomplicated SDA scheme with little in the way of significant infrastructure requirements for a site of this scale. The main challenges relate to the relocation of the existing Scraptoft golf course to an alternative site that has been identified in the County, refining the offsite transport mitigation measures within Leicester City and the identification of cemetery land to meet the needs of the site. We understand that there are plans in hand to manage the golf course relocation. Work is ongoing with LCC to assess the offsite transport works and HDC are working with the site promoters to identify possible solutions for the cemetery site. HDC should continue to work with the site promoters to continue to refine the scheme assessment, cross boundary implications particular in relation to transport and education infrastructure requirements.

19.3.10 The cost estimates for the various identified infrastructure and works are summarised in the next section.

PART 3: INFRASTRUCTURE COSTS AND FUNDING

This section sets out the estimated infrastructure costs and funding to support the delivery of the Local Plan.

The findings are brought together to understand the scale of the remaining funding gap.

20 INFRASTRUCTURE FUNDING

20.1 Introduction

20.1.1 The successfully delivery of the infrastructure identified in this study is necessary to support the delivery of the planned growth.

20.1.2 This section sets out the difficulties in identifying mainstream public sector funding to support the delivery of plan growth.

20.1.3 It then considers recent legislative changes in developer funding mechanisms, and draws on the emerging findings stemming from the Harborough District Viability Study[31] to inform the scale of potential developer contributions to support the delivery of this IDP.

20.2 Public sector funding

20.2.1 Most service providers consulted are going through an intense period of 'retrenchment' looking at cutting back on capital expenditure and minimising revenue expenditure through efficiency savings and looking at innovative ways of service delivery. There are considerable national and legislative changes affecting service delivery – particularly for education and health services. In some instances, control of service delivery will transfer to other bodies such as Academies or GPs. Due to staff resources and other priorities, it was not possible to engage with the police and fire service.

20.2.2 Service providers have been cautious in their responses to the IDP, particularly in terms of revealing any potential mainstream funding to fund infrastructure. This is often due to the fact they cannot predict detailed requirements beyond the next two or three years. £31.8m Basic Needs Education funding was identified at a County Level, (see Education Section), though it was not possible to ascertain how much of this is available for Harborough District projects. We were informed by the education service provider that this funding is allocated for projects to meet population change needs and is not available for planned housing growth. Nationally, we have noticed that some education service providers are starting to look at partially supporting planned growth related education infrastructure costs.

20.2.3 In the case of health infrastructure greater use is likely to be made of existing underused capacity (e.g. evening and weekend opening times) to support growing need. In addition, nationally, we are aware that some bodies are looking at innovative funding mechanisms linked to third party investors who can benefit from a low risk income stream for their capital outlay. Thus, in the future, health infrastructure funding may be entirely from private sector / institutional investment.

20.2.4 There is also greater devolution from central to sub regional delivery vehicles – such as the Leicester and Leicestershire Enterprise Partnership (LLEP). Interviews with officers from the LLEP and Harborough District Council responsible for some potential public sector funding have informed this IDP. It was clear that there is very little funding and considerable competition for the available funding. The key point to note from these bodies was that the majority of funding is for those projects that have the maximum economic impact.

20.2.5 The LLEP is currently contributing £3m from the Local Growth Fund towards major improvements to the Market Harborough railway station – this is part of a national project led by Network Rail to increase the rail capacity and improve the facilities. This project is not included in the IDP as it is a national project, but its contribution to wider Plan objectives is included in the Transport section.

[31] Harborough District Whole Plan Viability Study by Aspinall Verdi (based on interim findings in June 2017 pre final publication)

20.2.6 Harborough DC is participating in the County Council led project to secure 'Superfast Broadband'; this project is being funded nationally. The national objective of this project is to ensure 95% of coverage - however it is possible that some rural areas in the District may not be able to benefit and will be reliant on other means to secure service delivery.

20.2.7 The funding of strategic transport schemes could come from various sources in the future, including the LLEP, and is expected to be linked to the delivery of housing and employment outputs, national funding rounds or some LCC funding programmes – though these are limited and generally for maintenance purposes. There is greater uncertainty over the scale of contributions that might be available, and no specific funding is currently identified to meet the needs of transport infrastructure to support the planned growth.

20.2.8 Central Government have recently launched the Housing and Infrastructure Fund[32] which could provide a potential gap funding or upfront infrastructure loan. This is something which HDC could lead on to support the delivery of the two SDA's. However, any bids would need to comply with the Treasury Green Book appraisal process and score sufficiently on selected criteria. It is understood that the deadline for the first round of submission is September 2017.

20.2.9 Although no specific funding has been identified from mainstream service providers, some mainstream infrastructure funding is likely to become available to supplement the needs of planned infrastructure; and similarly new innovative mechanisms for funding infrastructure via third party investments may also be identified in the future (e.g. for health for instance). Service providers should not assume that all infrastructure identified in this IDP will necessarily be funded by developers. At site specific delivery level, account will be taken of any existing capacity, viability and other infrastructure funding that might be available to support the delivery of the infrastructure.

20.3 National policy on developer funding

20.3.1 HDC has not yet decided whether to adopt a Community Infrastructure Levy (CIL) charging schedule as a means of capturing developer contributions to pay for infrastructure costs. Therefore, at present, the mechanism available to the District for capturing developer contributions (besides site enabling costs) is via S106 developer contributions (and for highways schemes S278 or S38).

20.3.2 It is useful to briefly consider the recent changes to developer contributions legislation and possible future changes stemming from the recent review of the CIL and the implications of these on the way HDC captures developer contributions.

The Community Infrastructure Levy

20.3.3 The Planning Act 2008 introduced the power to charge a Community Infrastructure Levy (CIL). The CIL came into force in England and Wales on 6 April 2010 via the CIL Regulations 2010. The intended purpose of the CIL was to provide a simple transparent way of charging for a range of strategic growth related infrastructure costs. CIL is optional - a planning authority does not have to introduce a CIL and could continue to use S106.

20.3.4 At the time the CIL Regulations came into force, they also placed various restrictions on the use of the S106 planning obligations. The Community Infrastructure Levy Regulations 122 and 123 placed limits on the use of planning obligations. The CIL 2010 (as amended) Regulation 122(2) states that a planning obligation[33] may only constitute a reason for granting planning permission for the development if the obligation is:

- Necessary to make the development acceptable in planning terms;

[32] https://www.gov.uk/government/publications/housing-infrastructure-fund

[33] In the CIL Regulations "planning obligation" means a planning obligation under section 106 of TCPA 1990.

- Directly related to the development; and
- Fairly and reasonably related in scale to the development.

20.3.5 Thus the guidance on the S106 'necessity test' became a statutory test, intended to avoid any duplication between the use of CIL and S106 planning obligations.

Legal restrictions on pooling contributions

20.3.6 As of April 2015[34], the CIL Regulations also placed pooling restrictions of up to five agreements on the number of section 106 agreements used to fund a specific project. The aim being to encourage authorities to adopt the optional CIL charge to fund strategic infrastructure.

20.3.7 Authorities who refer to generic types of infrastructure (e.g. 'education'), rather than specific projects, in their s106 agreements, are therefore unable to collect more than 5 contributions towards those generic funding pots once the pooling restriction is in force in 2015.

Review of the Community Infrastructure Levy

20.3.8 There is a general expectation that the approach to CIL is likely to change following the independent CIL review panel's report 'A New Approach to Developer Contributions – a report by the CIL Review Team'[35] published in February 2017 (referred to here as the CIL Review Report).

20.3.9 The CIL Review report notes that the current CIL is not achieving the intended objectives of creating a simple transparent charging mechanism and recommends that the Government should replace the CIL with a hybrid system of a broad and low level 'local infrastructure tariff' (LIT) and Section 106 for larger developments. In addition, it recommends that Combined Authorities should be enabled to set up an additional Mayoral Strategic Infrastructure Tariff (SIT). The report recommends that the pooling restrictions set out in the current CIL Regulations should be removed.

20.3.10 The current CIL charge is based on a development's net increase in gross internal area, on a per square metre basis, and allows local authorities to set differential rates depending on the type of development, scale and location. The CIL Review report proposes an alternative simplified approach to charge setting, replacing CIL with LIT which could be based on a national formula, suggested as a rate of between 1.75% to 2.5% of the sale price of a 'standard 100 square metre three bed family home'.

20.3.11 The Housing White Paper states that the Government will 'examine the options' presented by the CIL Review and will make a formal response in the Autumn 2017 Budget. The current CIL regime is therefore unchanged – the necessity test and pooling restrictions remain in place for the time being.

20.4 Developer funding

Harborough District Viability Study

20.4.1 Viability is an important consideration of the NPPF recognising that the developer's residual pot is finite, and development should not be subject to such a scale of obligations and policy burdens that their ability to be developed viably is threatened.

[34] At that point, no more may be collected in respect of a specific infrastructure project or a type of infrastructure through a section 106 agreement, if 5 or more obligations for that project or type of infrastructure have already been entered into since 6 April 2010 – note that although the pooling restriction only came into force in 2015, it applies to contributions collected since 2010.

[35] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/589637/CIL_REPORT_2016.pdf

20.4.2 It is also noted that the planning process, through its role in land allocation for development, contributes to creating a land value uplift and some of this uplift is expected to fund the infrastructure and policy requirements stemming from the planned growth.

20.4.3 To reflect the NPPF requirements, the emerging findings from the Harborough District Viability Study[36] have been taken account of in informing the scale of potential developer contributions that might be viably sought to support the range of infrastructure requirements.

20.4.4 The Viability Study has taken account of development costs and assumed sales values to assess the economic viability of each of the SDA's and a set of development typologies which reflect the development in Market Harborough and the rest of the District.

20.4.5 An iterative process was then adopted. The emerging findings from the interim Viability Study (June 2017) were discussed with Aspinal Verdi to consider how much overage was likely to be available to support the developer contributions required to meet the cost of infrastructure stemming from the IDP assessment. This in-turn then informed the refinements to the Viability Study by providing a revised S106 input to inform the final viability assessment (which is expected to be issued sometime in late summer 2017).

Approach to developer funding

20.4.6 The approach to developer funding for the different infrastructure categories adopted for this IDP is set out in the table 20.1 overleaf and reflects the iterative process outlined above. The table compares the infrastructure costs arising from the IDP study with the potential developer contribution overages based on the interim findings of the Harborough District Viability Study (June 2017). The infrastructure categories adopted for this IDP are set out below:

i. **Critical enabling infrastructure -** this category would apply to infrastructure which would be required as a direct result of the proposed growth and would have to be implemented if the development was to go ahead, for instance utilities, sewerage, drinking water, site access.

ii. **Essential mitigation infrastructure -** this category includes all infrastructure that is necessary to mitigate the impacts arising from the development. The usual examples of essential mitigation are projects which mitigate impacts from trips or population associated with a development, including school places, health requirements, cemeteries, public transport etc.

iii. **Desirable infrastructure** includes all projects that are deemed to be of benefit but would not prevent, on balance, the development from occurring or from being acceptable if they were not taken forward.

Summary of developer funding to support infrastructure

20.4.7 The findings and approach to developer funding assumed for the IDP is based on the interim Harborough Viability Study (June 2017) findings and the estimate developer contribution ranges summarised in table 20.1 overleaf.

20.4.8 Note the Viability Study assessed a wide range of development typologies. After consideration of the type and where the bulk of the plan wide non-SDA growth is expected to take place, it was agreed with HDC officers to focus on the interim Viability Study findings relating to the Market Harborough 100 unit and the District Wide 30 unit typologies to inform the IDP assessment.

[36] Harborough District Whole Plan Viability Study and SDA Viability Appraisals by Aspinall Verdi (emerging findings June 2017)

Table 20.1 Approach to developer infrastructure funding mechanism adopted for the IDP assessment

Infrastructure type / category	East of Lutterworth and Scraptoft North SDAs	Market Harborough (100-unit scenario)	District Wide (30-unit scenario)
Critical infrastructure	All SDA master plan critical infrastructure cost estimates identified by the scheme promoters have been included in the viability appraisals to inform the residual value.	An externals allowance of 15% has been included in the plan wide viability appraisal to reflect the generic typology site opening cost allowance, and there is a 3% contingency allowance.	An externals allowance of 15% has been included in the plan wide viability appraisal to reflect the generic typology site opening cost allowance, and there is a 3% contingency allowance.
Essential infrastructure	All SDA master plan essential infrastructure costs estimates identified in the IDP have been included in the development appraisals to inform the residual value.	An overage of £20k to £24.5k was identified in the interim findings of the Viability Study and this was compared with the IDP costs support essential infrastructure costs. The interim findings have been used to inform the funding gap analysis.	An overage of £15k to £23k was identified in the interim findings of the Viability Study and this was compared with the IDP costs to support essential infrastructure costs. The interim findings have been used to inform the funding gap analysis.
Desirable infrastructure	Some costs such as library services have been factored into the SDA viability appraisal to inform the residual value.	Any contributions towards desirable infrastructure will be dependent on funding gap analysis and compliance with CIL Regs 122.	Any contributions towards desirable infrastructure will be dependent on funding gap analysis and compliance with CIL Regs 122.

Source: PBA based on the interim findings of the Harborough District Viability Study discussed with Aspinal Verdi (June 2017)

20.4.9 The East of Lutterworth SDA residual land value figure is positive after taking account of the critical site enabling, essential and scheme specific desirable infrastructure cost estimates. It is understood that further work to refine the viability assessment is taking place with the site promoters and the findings will be reflected in the final Harborough Viability Study.

20.4.10 The Scraptoft North SDA residual land value figure is positive after taking account of the all the critical site enabling and essential development sustainability infrastructure cost estimates. It is understood that further work to refine the viability assessment is taking place with the site promoters and the findings will be reflected in the final Harborough Viability Study.

20.4.11 At this Plan level assessment, it is considered that the proposed development in Market Harborough is able to meet all it's critical site enabling infrastructure costs and contribute £20k to £24.4k per dwellings towards essential infrastructure cost requirements. Currently no allowance is included for desirable infrastructure costs[37]. Based on a total of 1126 dwellings proposed in Market Harborough, this is estimated to result in approximately £22.5m to £27.6m in developer contributions (providing the CIL 122 developer contributions tests are met and there are no pooling restrictions).

20.4.12 At present there is no developer contribution assumed towards the cost of the Market Harborough transport costs which have been categorised as 'desirable'- this is because, at

[37] As Market Harborough library has recently been relocated / upgraded and identified desirable category transport costs are unlikely to meet the CIL Regs 122 tests.

present, without a CIL in place, it is unlikely that any developer contributions can be captured for this type of 'plan wide' infrastructure items. This infrastructure will therefore be dependent on funding and grant bids from mainstream public sector sources for the time being. The schemes identified in this category are desirable, but would not prevent the planned growth from proceeding.

20.4.13 At this Plan level assessment, it is considered that the proposed development in the rest of the District (excluding the SDAs and Market Harborough) is able to meet all its site enabling costs and contribute £15k to £23k per dwellings towards essential and desirable infrastructure costs. Based on a total of 1,060 dwellings proposed in the rest of the District, this could result in approximately £16m to £24m in developer contributions (providing the CIL 122 developer contributions tests are met and there are no pooling restrictions).

21 INFRASTRUCTURE COSTS AND FUNDING GAP

21.1 Introduction

21.1.1 This section sets out a summary of the identified infrastructure costs and presents this information by infrastructure category, timeframes and by settlement.

21.1.2 The estimated developer funding information from the previous section is introduced to inform the infrastructure funding gap.

21.1.3 Finally, an approach is set out on how infrastructure delivery might be funded and prioritised to support the timely delivery of the Harborough District Local Plan.

21.2 Summary of estimate infrastructure costs

21.2.1 The following section provides a summary of the various IDP estimated infrastructure costs by category and settlement to reflect the unconsented planned growth for Harborough District.

21.2.2 Appendix B includes a summary of all infrastructure projects by infrastructure category, priority, location, lead delivery agency, developer funding mechanism and costs.

21.3 Non SDA estimate infrastructure costs

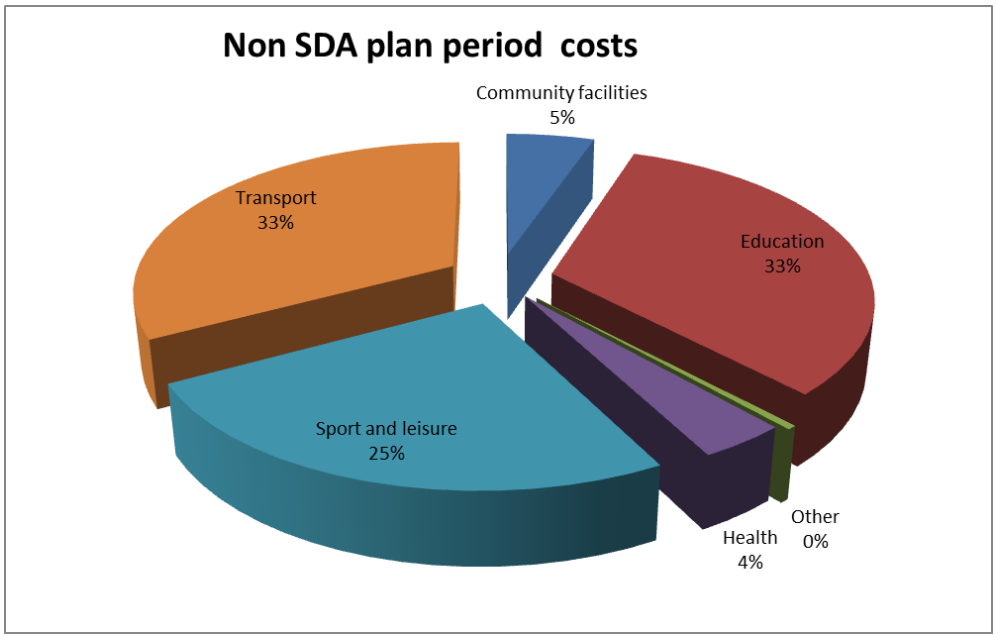
21.3.1 Table 21.1 below sets out a summary of the estimated plan period total costs for all the non SDA planned growth. This shows a total cost of just over £42m, of which approximately £38m is classed as essential infrastructure requirements to support the plan growth.

Table 21.1 Non SDA infrastructure cost estimates

Plan period total cost (2016 - 2031) - for non SDA settlements	Sub Regional Centre	Rural Centre	Selected Rural Village	Plan wide - windfall	Grand Total
Essential					
Community space	£960,478	£345,465	£366,790	£191,925	£1,864,658
GP facilities	£844,378	£303,706	£276,710	£168,726	£1,593,521
Primary school extension	£3,269,634	£891,454	£763,205	£653,346	£5,577,639
Primary school SEND	£95,636	£34,398	£36,522	£19,110	£185,666
Secondary school extension	£4,080,174	£1,467,558	£1,058,091	£815,310	£7,421,133
Secondary school SEND	£299,728	£107,806	£114,461	£59,892	£581,888
Transport cycleways	£3,110,000				£3,110,000
Transport highways	£5,520,000				£5,520,000
Transport public transport & travel demand	£1,200,000				£1,200,000
Cemeteries	£147,619	£53,096	£56,373	£29,498	£286,585
Civic amenity and waste management	£90,080	£18,225	£19,350	£14,063	£141,718
Open space, sports, allotments, parks, natural and semi natural space	£4,063,734	£2,566,080	£2,724,480	£1,118,813	£10,473,107
Essential Total	**£23,681,460**	**£5,787,789**	**£5,415,982**	**£3,070,682**	**£37,955,913**
Desirable					
Drainage and flood mitigations		£40,000			£40,000
library expansion	£30,965	£11,138	£11,825	£6,188	£60,115
Tranport traffic management	£250,000				£250,000
Transport - pedestrian routes / public realm	£750,000				£750,000
Transport cycleways	£90,000				£90,000
Transport highways	£2,000,000				£2,000,000
Transport public transport & travel demand	£890,000				£890,000
Desirable Total	**£4,010,965**	**£51,138**	**£11,825**	**£6,188**	**£4,080,115**
Grand Total	**£27,692,425**	**£5,838,926**	**£5,427,807**	**£3,076,869**	**£42,036,028**

21.3.2 Figure 21.1 overleaf shows the estimated infrastructure costs for the non-SDAs by category. This highlights the main categories making up the bulk of the costs as transport, education and open space. The transport costs identified from this Plan level assessment all arise in the sub regional centre of Market Harborough.

Figure 21.1 Non SDA estimated infrastructure costs by category



21.4 SDA estimate infrastructure costs

21.4.1 Table 21.2 below shows a summary of the plan period estimate total costs for all the SDAs. This shows a total cost of just under £113m, of which approximately £62m is classed as critical costs necessary as part of the strategic site opening costs for the two SDAs. Of this, approximately 87% of the total critical infrastructure costs are attributable to the East of Lutterworth SDA scheme.

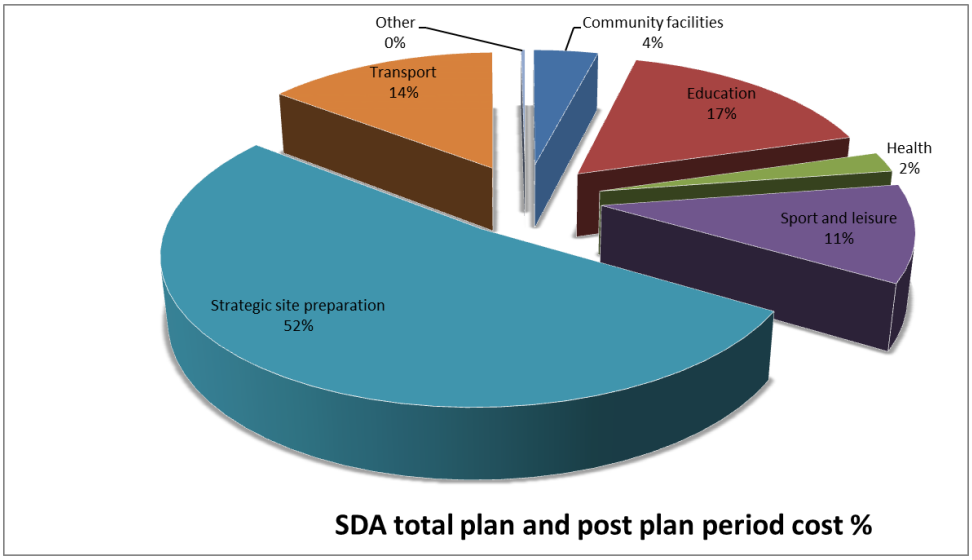
21.4.2 An estimated £51m is classed as essential infrastructure requirements to support the planned growth.

Table 21.2 All SDA estimate infrastructure costs

SDA cost for plan period (2016 - 2031)		East of Lutterworth SDA	Scraptoft North SDA	Grand Total
Critical				
	Strategic site preparation	£53,771,093	£7,925,000	£61,696,093
Critical Total		**£53,771,093**	**£7,925,000**	**£61,696,093**
Essential				
	Education	£7,167,684	£9,748,389	£16,916,073
	Health	£1,124,838	£899,870	£2,024,708
	Sport and leisure	£5,413,500	£4,330,800	£9,744,300
	Strategic site preparation		£250,000	£250,000
	Transport	£14,772,530	£3,700,000	£18,472,530
	Flood management		£15,000	£15,000
	Community facilities	£1,974,150	£1,579,320	£3,553,470
	Waste management	£120,000	£96,000	£216,000
Essential Total		**£30,572,702**	**£20,619,379**	**£51,192,081**
Desirable				
	Community facilities	£41,250	£33,000	£74,250
Desirable Total		**£41,250**	**£33,000**	**£74,250**
Grand Total		**£84,385,044**	**£28,577,379**	**£112,962,424**

21.4.3 Figure 21.2 below shows the estimated infrastructure costs for the SDAs by category. This highlights that over 50% of the total costs are attributable to strategic site preparation costs, which includes various transport infrastructure requirements necessary to 'open up the site'.

Figure 21.2 SDA estimated costs by category



21.5 Total estimated infrastructure costs for the SDAs and Non SDAs

21.5.1 Table 21.3 below summarises the total estimate infrastructure costs for the SDA's and non SDA's by plan period and post plan period and by five-year development phases. This shows the total IDP estimated costs for the plan period is approximately £155m, and approximately £20m for the post plan growth (which relates to the proposed at the East of Lutterworth SDA).

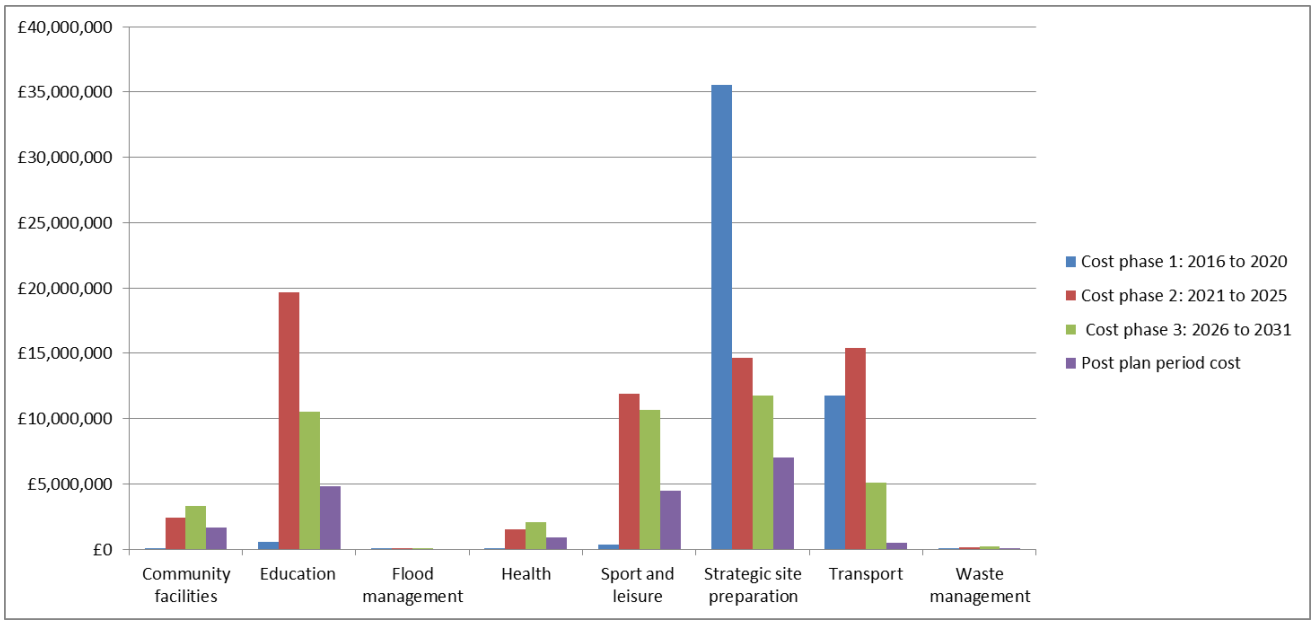
Table 21.3 Total estimated infrastructure costs by plan phases

Total costs all phases	Cost phase 1: 2016 to 2020	Cost phase 2: 2021 to 2025	Cost phase 3: 2026 to 2031	Plan period total cost (2016 - 2031)	Post plan period cost
Community facilities	£82,951	£2,412,509	£3,343,617	£5,839,078	£1,679,500
Education	£534,998	£19,644,339	£10,503,061	£30,682,398	£4,836,873
Flood management	£28,333	£13,333	£13,333	£55,000	£0
Health	£61,491	£1,511,782	£2,044,955	£3,618,229	£937,365
Sport and leisure	£350,478	£11,899,998	£10,688,477	£20,217,407	£4,511,250
Strategic site preparation	£35,574,188	£14,623,452	£11,748,452	£61,946,093	£7,031,786
Transport	£11,760,863	£15,418,333	£5,103,333	£32,282,530	£500,000
Waste management	£5,860	£144,565	£207,293	£357,718	£100,000
Grand Total	**£48,399,163**	**£65,668,312**	**£43,652,522**	**£154,998,451**	**£19,596,774**

21.5.2 Figure 21.3 overleaf depicts the information contained in table 21.3 above as a bar chart. The blue bars clearly show that the first five years of the plan costs are dominated by the strategic site preparation costs (relating to the two SDAs). Some of these costs will be incurred before any income is realised from the development.

21.5.3 During the second phase of the plan (depicted by the red bars), education, transport, sport and leisure and strategic site preparation costs are all amongst the highest theme costs, particularly the education costs.

Figure 21.3 total estimated infrastructure costs by development phases



21.6 The infrastructure funding gap

21.6.1 The infrastructure costs identified in this IDP reflect inputs from various service providers and Strategic Development Area (SDA) scheme promoters. The costs identified reflect estimated known costs to support sustainable development at a plan level. The actual costs for a site specific planning application will be refined further to reflect detailed assessments at the point of the planning application and will incorporate any other site specific mitigations or transport requirements.

21.6.2 As noted earlier, there is currently no identified public sector funding sources to meet the needs of the planned growth. There has been, and it is expected that, some form of Basic Needs Education funding and various transport and community infrastructure funding programmes will be available in the future and these will be sought by the service providers to help support strategic infrastructure requirements as and when funding opportunities become available, and these will also support site specific requirements where possible.

21.6.3 The main source of funding assumed to support the infrastructure requirements for the planned growth will be from developer contributions. This section draws on the interim Viability Study findings[38]. The emerging findings from the Viability Study have helped to inform the scale of the developer contributions likely to be available to support the infrastructure to meet the delivery of the planned growth.

21.6.4 We arrive at a view on the potential infrastructure funding gap by comparing the estimated costs and the estimated developer funding for each area at this plan level strategic assessment. As viability and costs vary across the development areas, the most appropriate way of assessing the funding analysis in the case of the planned growth in HDC is to present the findings by development areas and then bring the findings together.

[38] Based on the emerging findings of the Harborough District Whole Plan Viability Study by Aspinall Verdi (June 2017)

21.7 East of Lutterworth SDA infrastructure funding gap

21.7.1 Tables 21.4 below provide a detailed breakdown of all the identified costs factored into the IDP for the East of Lutterworth SDA. The information is presented by five-year development timeframes and infrastructure priority categories.

Table 21.4 East of Lutterworth SDA estimate plan and post plan costs

East of Lutterworth SDA	Cost of phase 1: 2016 to 2020	Cost of phase 2: 2021 to 2025	Cost of phase 3: 2026 to 2031	Total plan period cost : 2016 to 2031	Post plan period cost
Critical					
Drainage and flood mitigations	£3,053,292	£3,053,292	£3,053,292	£9,159,875	£3,053,292
Land preparation / profiling	£10,700,752	£0	£0	£10,700,752	£0
Strategic site landscaping	£250,000	£0	£250,000	£500,000	£0
Strategic site noise mitigation	£462,500	£462,500	£0	£925,000	£0
Transport - pedestrian routes / public realm	£0	£1,000,000	£0	£1,000,000	£0
Transport - pre adoption costs and fees	£9,858,494	£728,494	£728,494	£11,315,482	£728,494
Transport highways	£7,036,651	£4,716,667	£4,666,667	£16,419,984	£2,000,000
Utilities, connections and diversions	£1,250,000	£1,250,000	£1,250,000	£3,750,000	£1,250,000
Critical Total	**£32,611,688**	**£11,210,952**	**£9,948,452**	**£53,771,093**	**£7,031,786**
Essential					
Community space	£0	£488,220	£1,289,280	£1,777,500	£1,481,250
GP facilities	£0	£308,956	£815,882	£1,124,838	£937,365
Primary school new build	£0	£6,641,000	£0	£6,641,000	£4,397,970
Primary school SEND	£0	£34,993	£92,408	£127,401	£106,168
Secondary school extension	£0	£0	£0	£0	£0
Secondary school SEND	£0	£109,670	£289,613	£399,282	£332,735
Transport highways	£3,957,530	£10,315,000	£0	£14,272,530	£0
Transport public transport & travel demand	£166,667	£166,667	£166,667	£500,000	£500,000
Cemeteries	£0	£54,013	£142,637	£196,650	£163,875
Civic amenity and waste management	£0	£32,960	£87,040	£120,000	£100,000
Open space, sports, allotments, parks, natural and semi natural	£0	£1,486,908	£3,926,592	£5,413,500	£4,511,250
Essential Total	**£4,124,197**	**£19,638,386**	**£6,810,119**	**£30,572,702**	**£12,530,613**
Desirable					
library expansion	£0	£11,330	£29,920	£41,250	£34,375
Desirable Total	**£0**	**£11,330**	**£29,920**	**£41,250**	**£34,375**
Grand Total	**£36,735,885**	**£30,860,668**	**£16,788,491**	**£84,385,044**	**£19,596,774**

21.7.2 Based on the total plan and post plan period growth of 2,750 dwellings, and an overall scheme infrastructure costs of approximately £104m, the total infrastructure cost is estimated at approximately £38,000 per dwelling. The plan period infrastructure cost based on 1,500 dwellings and total plan period infrastructure costs of approximately £84m results in an estimated infrastructure cost of approximately £56,000 per dwelling.

21.7.3 The East of Lutterworth SDA scheme specific viability assessment undertaken by Aspinall Verdi has found that, after factoring in this scale of infrastructure costs, the development results in a positive residual land value. The scheme promoters have confirmed to HDC that this residual land value is acceptable; thus confirming that the entire infrastructure requirements stemming from this scheme will be met by the development. There is a contingency allowance included in the viability assessment that could support unforeseen costs such as the need for additional secondary school provision if this is required. Thus, based on known information and infrastructure requirements at this Plan level assessment, there is no identified infrastructure funding gap for the East of Lutterworth SDA.

21.7.4 Table 21.4 above shows that approximately £61m of the total estimated costs for East of Lutterworth SDA for plan and post plan period are classed as 'critical' (i.e. considered as crucial to the delivery of the scheme). This also shows that nearly £33m of critical

infrastructure costs are required during phase 1. However, the earliest delivery of 412 dwellings are not expected to be developed until phase 2. It is understood that part of the reason for the early release of the distribution employment site linked to the SDA is because it is expected to generate an income of £8m which will support the delivery of the critical infrastructure in the first phase.

21.7.5 To summarise, based on known information and infrastructure requirements at this Plan level assessment, there is no identified infrastructure funding gap for the East of Lutterworth SDA. However, further clarification of how the cash flow will be managed, and forward funding secured to support the delivery of the early phases of critical infrastructure requirements, should be sought from the scheme promoters.

21.8 Scraptoft North SDA infrastructure funding gap

21.8.1 Tables 21.5 overleaf provide a detailed breakdown of all the identified costs factored into the IDP for the Scraptoft North SDA. The information is presented by five-year development timeframes and infrastructure priority categories.

21.8.2 Based on the total plan period growth of 1,200 dwellings and an overall scheme infrastructure costs of approximately £29m, the total infrastructure cost is estimated at approximately £24,000 per dwelling.

21.8.3 The Scraptoft North SDA scheme specific viability assessment undertaken by Aspinall Verdi has found that, after factoring in this scale of infrastructure costs, the development results in a positive residual land value. The scheme promoters have not yet confirmed to HDC whether the viability findings are acceptable and further iterations and discussions are currently taking place between HDC and the scheme promoters about this.

21.8.4 However, for the purpose of the IDP, it has been agreed with HDC to assume that the viability assessment has confirmed that the entire infrastructure requirements stemming from this scheme can be met by the development. There is a contingency allowance included in the viability assessment that could support unforeseen costs.

21.8.5 Table 21.5 overleaf shows the total estimated costs for Scraptoft North are approximately £29m for all three infrastructure categories over the three plan phases. An estimated £3m is identified to support the critical infrastructure costs and an estimated total of £6m developer funding is required during phase 1. However, the earliest delivery of the 526 dwellings are not expected to be developed until phase 2.

21.8.6 To summarise, based on known information and infrastructure requirements at this Plan level assessment, there is no identified infrastructure funding gap stemming from the Scraptoft North SDA. However, further clarification of how the cash flow will be managed, and forward funding secured to support the delivery of the early phases of critical infrastructure requirements, should be sought from the scheme promoters.

Table 21.5 Scraptoft North SDA estimated plan period costs

Scraptoft North SDA	Cost of phase 1: 2016 to 2020	Cost of phase 2: 2021 to 2025	Cost of phase 3: 2026 to 2031	Total plan period cost : 2016 to 2031
Critical				
Drainage and flood mitigations	£791,667	£791,667	£66,667	£1,650,000
Land preparation / profiling	£166,667	£166,667	£166,667	£500,000
Strategic site landscaping	£333,333	£333,333	£333,333	£1,000,000
Transport - pedestrian routes / public realm	£0	£200,000	£0	£200,000
Transport - pre adoption costs and fees	£400,000	£400,000	£400,000	£1,200,000
Transport highways	£437,500	£437,500	£0	£875,000
Utilities, connections and diversions	£833,333	£833,333	£833,333	£2,500,000
Critical Total	**£2,962,500**	**£3,162,500**	**£1,800,000**	**£7,925,000**
Essential				
Community space	£0	£623,310	£798,690	£1,422,000
Drainage and flood mitigations	£15,000	£0	£0	£15,000
GP facilities	£0	£394,443	£505,427	£899,870
Primary school new build	£0	£4,035,000	£943,722	£4,978,722
Primary school SEND	£0	£44,675	£57,246	£101,921
Secondary school extension	£0	£1,906,014	£2,442,306	£4,348,320
Secondary school SEND	£0	£140,015	£179,411	£319,426
Strategic site landscaping	£0	£250,000	£0	£250,000
Transport cycleways	£100,000	£0	£0	£100,000
Transport highways	£2,766,667	£166,667	£166,667	£3,100,000
Transport public transport & travel demand	£166,667	£166,667	£166,667	£500,000
Cemeteries	£0	£68,959	£88,361	£157,320
Civic amenity and waste management	£0	£42,080	£53,920	£96,000
Open space, sports, allotments, parks, natural and semi natural space	£0	£3,332,736	£2,432,466	£4,330,800
Essential Total	**£3,048,333**	**£11,170,565**	**£7,834,883**	**£20,619,379**
Desirable				
library expansion	£0	£14,465	£18,535	£33,000
Desirable Total	**£0**	**£14,465**	**£18,535**	**£33,000**
Grand Total	**£6,010,833**	**£14,347,530**	**£9,653,418**	**£28,577,379**

21.9 Market Harborough infrastructure funding gap

21.9.1 Table 21.6 overleaf provides a detailed breakdown of all the identified costs factored into the IDP for all the planned growth proposed in Market Harborough. The information is presented by five-year development timeframes and infrastructure priority categories.

21.9.2 Based on the total plan period growth of 1,126 dwellings and an overall estimate infrastructure costs of approximately £28m, the total infrastructure cost is estimated at approximately £24,600 per dwelling at this Plan level.

21.9.3 The emerging findings from the interim Harborough District Viability Study (June 2017) assessment for the Market Harborough 100-unit typology undertaken by Aspinall Verdi found there is an overage of between £20,000 to £28,000 to contribute towards developer contributions.

21.9.4 The entire IDP requirement could be met from within the viability overage. However, based on discussion with Leicestershire County Council, (who have jointly undertaken the transport study for Market Harborough to inform the Harborough Local Plan and are also responsible for the operation of the Market Harborough library), it was agreed that most of the transport projects identified as 'desirable' in the table 21.6 overleaf may not be compatible with the CIL Regs 122 test for securing S106 developer contributions. It is also considered that the need for contributions towards a library facility is likely to be marginal as the Market Harborough library has recently undergone major refurbishments.

21.9.5 Therefore, after taking account of the developer funding mechanisms currently available in the District, the 'desirable infrastructure' element can be excluded from the assessment of the developer contributions analysis, as it is unlikely to meet the CIL regulation requirements.

Table 21.6 Market Harborough plan period estimate infrastructure costs

Market Harborough Sub Regional Centre	Cost of phase 1: 2016 to 2020	Cost of phase 2: 2021 to 2025	Cost of phase 3: 2026 to 2031	Total plan period cost : 2016 to 2031
Essential				
Community space	£52,886	£402,616	£504,976	£960,478
GP facilities	£46,493	£353,949	£443,936	£844,378
Primary school extension	£180,033	£1,370,575	£1,719,026	£3,269,634
Primary school SEND	£5,266	£40,089	£50,281	£95,636
Secondary school extension	£224,663	£1,710,339	£2,145,171	£4,080,174
Secondary school SEND	£16,504	£125,641	£157,583	£299,728
Transport cycleways	£1,036,667	£1,036,667	£1,036,667	£3,110,000
Transport highways	£1,840,000	£1,840,000	£1,840,000	£5,520,000
Transport public transport & travel demand	£400,000	£400,000	£400,000	£1,200,000
Cemeteries	£8,128	£61,879	£77,611	£147,619
Civic amenity and waste management	£4,960	£37,760	£47,360	£90,080
Open space, sports, allotments, parks, natural and semi natural space	£223,758	£2,990,592	£2,136,528	£4,063,734
Essential Total	£4,039,358	£10,370,107	£10,559,140	£23,681,460
Desirable				
library expansion	£1,705	£12,980	£16,280	£30,965
Tranport traffic management	£83,333	£83,333	£83,333	£250,000
Transport - pedestrian routes / public realm	£250,000	£250,000	£250,000	£750,000
Transport cycleways	£30,000	£30,000	£30,000	£90,000
Transport highways	£666,667	£666,667	£666,667	£2,000,000
Transport public transport & travel demand	£296,667	£296,667	£296,667	£890,000
Desirable Total	£1,328,372	£1,339,647	£1,342,947	£4,010,965
Grand Total	**£5,367,730**	**£11,709,753**	**£11,902,086**	**£27,692,425**
Total number of dwellings proposed (plan period) for Market Harborough is 1,126				
Comparing Viability Study* and IDP findings	Per unit estimate S106	Total contribution	Notes	
Estimated developer contribution before allowing for a buffer in the Viability Study is £28k	£28,000	£31,528,000	Possible to meet total IDP costs within the overall Viabilty Study overage - but no allowance for buffer	
Estimated developer contribution after allowing for a buffer in the Viability Study is £20k	£20,000	£22,520,000	More than 75% of the total IDP costs can be met after allowing for a buffer.	
To meet total IDP costs would require a contribution of approx. £24.6k	£24,594	£27,692,425	To meet total IDP costs (£24.6), target developer contribution is below the maximum overage (£28K)identified in the VS, but greater than estimated contribution with buffer (£20k).	
To meet only essential IDP costs would require a contribution of approx. £21k	£21,031	£23,681,460	To meet essential IDP costs, target developer contribution at plan level would be approximately	
Summary of comparisons	£21,000 per unit to support the essential IDP infrastructure costs is just above the buffer figure of £20,000 and within the maximum overage identified in the Viability Study of £28,000. In reality, the actual contribution will be somewhere in between depending on site specific assessments.			

*Based on the Viability Study 100 units Market Harborough typology assessment as at June 2017

21.9.6 Market Harborough has seen a strong housing market and steady delivery. Due to the continuing development taking place in Market Harborough, most infrastructure service providers have stated that infrastructure is at capacity. Any new development will most likely be required to contribute towards a range of infrastructure upgrades.

21.9.7 The main infrastructure costs making up the Market Harborough 'essential infrastructure' category as shown in table 21.6 consist of transport (approximately £10m), education (approximately £8m) and open space and sports facilities (approximately £4m).

21.9.8 Based on the IDP assessment, the 'essential infrastructure' costs totalling approximately £24m could be met based on a developer contribution of £21,000 per dwelling. This is within the range of £20,000 to £28,000 per dwelling identified in the findings of the interim Viability Study (June 2017), and so is considered as deliverable for this assessment.

21.9.9 To summarise, based on known information and infrastructure requirements at this Plan level assessment, there is as estimated infrastructure funding gap of approximately £4m. The infrastructure items making up this gap are classed as 'desirable' and will not prevent the local plan growth from proceeding. This gap will be met through various funding bids led by Leicestershire County Council as and when opportunities become available.

21.10 Rest of District growth infrastructure funding gap

21.10.1 Tables 21.7 overleaf provides a breakdown of all the identified costs factored into the IDP for all the planned growth proposed in the rest of the District (excluding Market Harborough and the SDAs). The information is presented by five-year development timeframes and infrastructure priority categories.

Table 21.7 Rest of District plan period estimate infrastructure costs

Rest of District - Rural Centres, Selected Rural Villages and plan windfall	Cost phase 1: 2016 to 2020	Cost phase 2: 2021 to 2025	Cost phase 3: 2026 to 2031	Plan period total cost (2016 - 2031)
Essential				
GP facilities	£14,998	£454,435	£279,710	£749,142
Cemeteries	£2,622	£87,444	£48,900	£138,966
Civic amenity and waste management	£900	£31,765	£18,973	£51,638
Community space	£17,060	£568,951	£318,169	£904,180
Secondary school extension	£72,472	£1,916,884	£1,351,603	£3,340,959
Secondary school SEND	£5,324	£177,548	£99,288	£282,160
Primary school SEND	£1,699	£56,651	£31,680	£90,030
Primary school extension	£29,038	£1,335,246	£943,722	£2,308,005
Open space, sports, allotments, parks, natural and semi natural space	£126,720	£4,089,762	£2,192,891	£6,409,373
Essential Total	**£270,832**	**£8,718,685**	**£5,284,935**	**£14,274,452**
Desirable				
Drainage and flood mitigations	£13,333	£13,333	£13,333	£40,000
library expansion	£550	£18,343	£10,258	£29,150
Desirable Total	**£13,883**	**£31,676**	**£23,591**	**£69,150**
Grand Total	**£284,715**	**£8,750,361**	**£5,308,526**	**£14,343,602**
Total number of dwellings proposed (plan period) for Rest of the District is 1,060				

Comparing Viability Study* with IDP findings	Per unit estimate S106	Total contributions	Notes
Estimated developer contribution before allowing for a buffer in the Viability Study	£23,000	£24,380,000	Possible to meet total IDP costs within the overall Viabilty Study overage - but no allowance for buffer
Estimated developer contribution after allowing for a buffer in the Viability Study	£15,000	£15,900,000	Possible to meet total IDP costs within the overall Viabilty Study after allowing for buffer.
To meet total IDP costs, would require a contribution of approx.	£13,532	£14,343,602	Total IDP costs est. is below the overage (£15K) identified in the VS after allowing for a buffer.
To meet only essential IDP costs would require a contribution of approx. £21k	£13,466	£14,274,452	To meet essential IDP costs, target developer contribution at plan level would be approximately £13.5K per unit.
Summary of comparisons	The IDP total estimated infrastructure cost per unit is less than that identified in the Viability Study after allowing for a buffer. Thus the total identified IDP costs can be met and there is some overage for site specific mitigations.		

*Based on the Viability Study 30 units Rest of District typology assessment as at June 2017

21.10.2 Based on the total plan period growth of 1,060 dwellings and an overall estimated infrastructure cost of approximately £14m, the total infrastructure cost is estimated at approximately £13,500 per dwelling at this Plan level. The entire IDP for the rest of District[39] infrastructure assessment of £13,500 per dwelling can be met from the viability overage, as the requirement is below the £15,000 per dwelling contribution identified in the Viability Study.

21.10.3 It should be noted that table 21.7 above does not include any transport infrastructure requirements. This is because no schemes have been identified by the stakeholders or from the District wide assessments reviewed. However, it is possible that at a site specific level some transport improvements / infrastructure contributions could be identified and there is scope to include these within the viability overage.

21.10.4 To summarise, based on known information and infrastructure requirements at this Plan level assessment, there is no infrastructure funding gap for the Rest of District assessment area.

[39]Rest of District refers to all other areas of the District, but excludes Market Harborough and the SDAs which are assessed separately.

21.11 Summary of total estimated infrastructure funding gap

21.11.1 Table 21.8 below shows the total estimated infrastructure costs of just under £155m (for plan period), an estimated developer funding of just under £151m and a funding gap of just over £4m.

21.11.2 Table 21.9 below provides the same information as 21.8, but takes account of the post plan growth proposed at the East of Lutterworth SDA. This shows the total estimated infrastructure costs of just under £175m (for plan and post plan period), an estimated developer funding of just under £171m and a funding gap of just over £4m.

21.11.3 All the funding included in this assessment is based on developer contributions to be captured through planned growth, as site opening infrastructure, S106, S278 or S38 contribution mechanisms.

21.11.4 The identified funding gap relates primarily to transport infrastructure requirements identified for Market Harborough, which are classified as 'desirable' by Leicestershire County Council (LCC) and so will not prevent the delivery of planned growth taking place. The costs making up this funding gap relate to projects which LCC officers consider cannot be directly related to any specific planned growth and so cannot be levied as a S106 planning obligation. LCC will seek to fund these items as and when funding opportunities arise from various national funding programmes.

Table 21.8 Summary of costs, funding and funding gap – plan period growth

Location	Total planned growth (plan period)	Total estimated cost	Estimated developer contributions	Infrastructure funding gap
Lutterworth East SDA	1,50 0dwellings	£84,385,044	£84,385,044	£0
Scraptoft North SDA	1,200 dwellings	£28,577,379	£28,577,379	£0
Market Harborough	1126 dwellings	£27,692,425	£23,646,000	£4,046,425
Rest of District	1060 dwellings	£14,343,602	£14,343,602	£0
Totals	**6136 dwellings**	**£154,998,451**	**£150,952,026**	**£4,046,425**

Table 21.9 Summary of costs, funding and funding gap – plan and post plan growth

Location	Total planned growth (including post plan)	Total estimated cost	Estimated developer contributions	Infrastructure funding gap
Lutterworth East SDA	2,750 dwellings	£103,981,818	£103,981,818	£0
Scraptoft North SDA	1,200 dwellings	£28,577,379	£28,577,379	£0
Market Harborough	1126 dwellings	£27,692,425	£23,646,000	£4,046,425
Rest of District	1060 dwellings	£14,343,602	£14,343,602	£0
Totals	**6136 dwellings**	**£174,595,225**	**£170,548,799**	**£4,046,425**

PART 4: STUDY RECOMMENDATIONS

This section summarizes the study findings and sets out the IDP recommendations

22 STUDY CONCLUSIONS AND RECOMMENDATIONS

22.1 Introduction

22.1.1 This final section of the report presents the IDP findings from the investigation so far on the deliverability of the planned development, and makes a number of recommendations.

22.1.2 The approach adopted in preparing the IDP is in accordance with the requirements of the National Planning Policy Framework. The IDP has been prepared in parallel with the Harborough District Viability Study[40]. The findings of the IDP have been informed by the emerging findings of the Viability Study (June 2017), which in turn has been informed by the IDP Study, thus an iterative process has been adopted.

22.1.3 The IDP considers the deliverability and developability of two strategic development areas (SDAs) known as Scraptoft North SDA and East of Lutterworth SDA, as well as the continuing development within Market Harborough and some limited growth in various rural areas (referred to in the IDP assessment as the rest of the District).

22.2 The Infrastructure Delivery Plan

22.2.1 Table 22.1 overleaf provides a summary of the total identified plan period infrastructure costs stemming from this IDP assessment. This shows a total estimated infrastructure cost of approximately £155m for the plan period. Further details of cost breakdown are provided in Part 3.

[40] Harborough District Plan Viability Study by Aspinall Verdi (2017)

Table 22.1 Summary of plan period infrastructure cost by phase and infrastructure category

Total plan and post plan costs, phasing and priority	Cost phase 1: 2016 to 2020	Cost phase 2: 2021 to 2025	Cost phase 3: 2026 to 2031	Plan period total cost (2016 - 2031)	Post plan period cost
Critical					
Drainage and flood mitigations	£3,844,958	£3,844,958	£3,119,958	£10,809,875	£3,053,292
Land preparation / profiling	£10,867,419	£166,667	£166,667	£11,200,752	£0
Strategic site landscaping	£583,333	£333,333	£583,333	£1,500,000	£0
Strategic site noise mitigation	£462,500	£462,500	£0	£925,000	£0
Transport - pedestrian routes / public realm	£0	£1,200,000	£0	£1,200,000	£0
Transport - pre adoption costs and fees	£10,258,494	£1,128,494	£1,128,494	£12,515,482	£728,494
Transport highways	£7,474,151	£5,154,167	£4,666,667	£17,294,984	£2,000,000
Utilities, connections and diversions	£2,083,333	£2,083,333	£2,083,333	£6,250,000	£1,250,000
Critical Total	**£35,574,188**	**£14,373,452**	**£11,748,452**	**£61,696,093**	**£7,031,786**
Essential					
Community space	£69,946	£2,083,097	£2,911,115	£5,064,158	£1,481,250
Drainage and flood mitigations	£15,000	£0	£0	£15,000	£0
GP facilities	£61,491	£1,511,782	£2,044,955	£3,618,229	£937,365
Primary school new build	£0	£10,676,000	£943,722	£11,619,722	£4,397,970
Primary school extension	£209,071	£2,705,820	£2,662,748	£5,577,639	£0
Primary school SEND	£6,965	£176,408	£231,616	£414,989	£106,168
Secondary school extension	£297,135	£5,533,237	£5,939,080	£11,769,453	£0
Secondary school SEND	£21,827	£552,873	£725,895	£1,300,596	£332,735
Strategic site landscaping	£0	£250,000	£0	£250,000	£0
Transport cycleways	£1,136,667	£1,036,667	£1,036,667	£3,210,000	£0
Transport highways	£8,564,197	£12,321,667	£2,006,667	£22,892,530	£0
Transport public transport & travel demand	£733,333	£733,333	£733,333	£2,200,000	£500,000
Cemeteries	£10,750	£272,295	£357,510	£640,555	£163,875
Civic amenity and waste management	£5,860	£144,565	£207,293	£357,718	£100,000
Open space, sports, allotments, parks, natural and semi natural space	£350,478	£11,899,998	£10,688,477	£20,217,407	£4,511,250
Essential Total	**£11,482,720**	**£49,897,743**	**£30,489,077**	**£89,147,994**	**£12,530,613**
Desirable					
Drainage and flood mitigations	£13,333	£13,333	£13,333	£40,000	£0
library expansion	£2,255	£57,118	£74,993	£134,365	£34,375
Tranport traffic management	£83,333	£83,333	£83,333	£250,000	£0
Transport - pedestrian routes / public realm	£250,000	£250,000	£250,000	£750,000	£0
Transport cycleways	£30,000	£30,000	£30,000	£90,000	£0
Transport highways	£666,667	£666,667	£666,667	£2,000,000	£0
Transport public transport & travel demand	£296,667	£296,667	£296,667	£890,000	£0
Desirable Total	**£1,342,255**	**£1,397,118**	**£1,414,993**	**£4,154,365**	**£34,375**
Grand Total	**£48,399,163**	**£65,668,312**	**£43,652,522**	**£154,998,451**	**£19,596,774**

22.2.2 It should be noted that the information contained in table 22.1 above is a snapshot at a point in time. The Infrastructure Delivery Plan is seeking to assess infrastructure requirements, costs and funding that are constantly changing. Thus infrastructure planning is not static, and the IDP assessment presented here is based on information available at a point in time and will be continuously changing.

22.2.3 The assessment relates to infrastructure requirements for the purposes of a local plan and at a level of detail appropriate for that strategic level. As plans are developed further, then specific development-based infrastructure assessments will be carried out that will identify more accurately the infrastructure needs and costs based on greater detail and understanding

of requirements and capacity at that point in time. It is therefore likely that, as more detail emerges, further refined assessments will supersede the assessments set out in this IDP.

22.2.4 Infrastructure providers reserve the right to update the information provided. As might be expected, there are some gaps in their knowledge and understanding of what is needed and how it might be funded. The service providers are at different stages in their planning processes. Most service providers do not plan for infrastructure beyond three to five years ahead, and are not able to forecast clearly their precise requirements in (say) ten years' time. This means that long term infrastructure requirements can only be estimates based on current forecasts and will need to be updated regularly, and treated with a degree of flexibility to reflect future changes.

22.2.5 This study is for a long term plan and service providers will be expected to identify mainstream funding sources to contribute towards the cost of infrastructure requirements. Service providers cannot assume that, because an infrastructure item is included in this study, it will necessarily be entirely funded via developer contributions as there maybe trade-offs with a wide range of requirements that are necessary. It should also be noted that the assumptions made in this assessment do not prejudice any site-specific assessments when assessing S106 contributions.

22.2.6 All of this means that long term infrastructure assessments as a result of growth are difficult to predict and are necessarily subject to considerable change. As such, it will be important for HDC to continue to maintain an ongoing dialogue with service providers, in order to proactively manage the delivery of planned growth and update the IDP on a regular basis.

22.3 A deliverable and developable plan

22.3.1 The NPPF distinguishes between deliverable schemes for the first five years and developable schemes for the rest of the plan. Harborough District Council will need to demonstrate a 'deliverable' five-year housing supply and 'developable' longer-term supply. To do this it is necessary to have the infrastructure in place to support short-term growth and the means of demonstrating reasonable confidence in the provision of the infrastructure required for the medium to longer-term growth.

22.3.2 This study has not assessed the infrastructure requirements of consented schemes that will make up part of the five year supply as these are assumed to have the appropriate accompanying infrastructure. The cost and funding estimates included in the IDP related to the unconsented growth that will be part of the Local Plan growth (and also some post plan growth in the case of the East of Lutterworth SDA).

22.3.3 The infrastructure requirements associated with the development planned for inclusion in the Harborough Local Plan to meet the housing requirement in particular have been investigated. This work has been done independently as far as possible, but inevitably with considerable reliance on the views of the promoters of the main developments as they have done most of the impact assessments to inform the infrastructure requirements. Cost and funding estimates for this infrastructure have been prepared on the same basis, to achieve a level of confidence appropriate to the promotion of the Harborough Local Plan.

22.3.4 The study has found that there are currently no identifiable issues with the provision of infrastructure that would prevent the delivery of the two SDAs, and the aggregation of the various development sites proposed for Market Harborough and the rest of the District.

22.3.5 There are however some matters that are being further investigated, (e.g. waste water treatment discharge permits, transport capacity of Frank Whittle roundabout, public transport, and cross boundary infrastructure requirements) for the East of Lutterworth SDA and (off site transport infrastructure and provision of land for a cemetery) for the Scraptoft North SDA. The land ownership and the relocation of the Scraptoft Golf Course introduces a slight complication to the Scraptoft North SDA scheme, but we understand there are plans in hand to manage this. Similarly, in the case of East of Lutterworth SDA, there is a need to acquire

some land to support the delivery of the M1 road crossing, but again, we understand plans are in place to accommodate this. Whilst not presently believed to be insurmountable these matters will need considerable engagement by all of the relevant parties to resolve and forward planning.

22.3.6 With the identified infrastructure requirements and estimated costs, and by reference to the interim findings of the viability assessment separately undertaken for the Council by Aspinall Verdi in June 2017, the proposed SDAs appear capable of being viable and hence meeting this part of the deliverability requirement set out in the NPPF and associated guidance.

22.3.7 Note, further viability iterations will be set out in the final Harborough District Viability Study by Aspinall Verdi (which is currently being finalised and the findings will be reported in the final Viability Study). For the purpose of the IDP, it has been agreed with the HDC that the two SDA's are able to meet the identified infrastructure costs.

22.3.8 In the case of both the SDA's although the overall residual value is positive, further ongoing work should seek to fully understand how infrastructure delivery in the early years will be funded.

22.3.9 Table 22.2 below provides a summary of the estimated infrastructure funding gap after taking account of the estimated developer contributions based on the emerging Harborough Viability Study (June 2017) findings undertaken by Aspinall Verdi. At the Plan and Post plan level assessment, the findings set out in table 22.2. shows that the SDAs are able to meet all their estimated infrastructure costs, as is the planned growth in the rest of the District.

Table 22.2 Estimated infrastructure funding gap

Location	Total planned growth (including post plan)	Total estimated cost	Estimated developer contributions	Infrastructure funding gap
Lutterworth East SDA	2,750 dwellings	£103,981,818	£103,981,818	£0
Scraptoft North SDA	1,200 dwellings	£28,577,379	£28,577,379	£0
Market Harborough	1126 dwellings	£27,692,425	£23,646,000	£4,046,425
Rest of District	1060 dwellings	£14,343,602	£14,343,602	£0
Totals	**6136 dwellings**	**£174,595,225**	**£170,548,799**	**£4,046,425**

22.3.10 The identified funding gap of approximately £4m as shown in table 22.2 above, relates primarily to transport infrastructure requirements identified for Market Harborough. In discussion with officers from Leicestershire County Council (LCC), these costs have been classified as 'desirable' and are not likely to prevent the delivery of planned growth from proceeding. The costs making up this funding gap relate to projects which cannot be directly related to any specific planned growth and cannot be levied as a S106 planning obligation. This infrastructure will therefore be dependent on funding and grant bids from mainstream public sector sources for the time being.

22.3.11 Various stakeholders have stated that infrastructure capacity in Market Harborough is currently stretched and growth will add to existing pressures unless further investment in takes place to alleviate the stress. Some investment has recently been undertaken in Market Harborough to increase infrastructure capacity, for instance Severn Trent have invested £2m in upgrading the surface water storage tank beneath Commons car park in the town centre. The Leicester and Leicestershire Economic Partnership are investing £3m towards a £42m scheme by Network Rail to help improve the railway journey times, capacity and quality of the station and platforms at Market Harborough railway station.

22.3.12 However, whereas in the past there was existing infrastructure capacity, going forward, developers should be prepared to fund higher levels of contributions to reflect the infrastructure requirements. This includes investment in various transport schemes, utilities infrastructure, (especially the Market Harborough Water Recycling Centre), waste recycling facilities, education, community facilities, open space and sports facilities, cemetery and burial provision, and health infrastructure.

22.4 Utility infrastructure findings

22.4.1 Based on the broad growth assessment of utilities infrastructure, there are currently no known technical or licensing barriers to growth that would prevent the delivery of the planned growth taking place. However, a number of potential early phasing challenges have been flagged, particularly by Severn Trent acting as the wastewater (sewerage) and potable water service provider.

22.4.2 With regard to potable water (drinking water) much of Harborough District falls within the Strategic Grid water resource zone, which will lose up to 80M/l/d of its deployable water supply. Significant future investment will be needed in the zone because of the need to reduce environmentally unsustainable abstractions and to meet the longer-term challenge of future climate change impacts. Currently, with no mitigation, this would leave insufficient water supply in the Strategic Grid zone by 2020. Severn Trent Water's strategy to deal with this issue is to restore the supply/demand balance by reducing the overall demand for water and to make the best use of existing water resources through a more flexible and sustainable supply system[41], ambitious leakage reduction plans and changes to expected commercial demand. STW predict that their strategy will provide around 90% confidence in meeting the demand requirements of the Strategic Grid Zone predicted over the next 25 years.

22.4.3 STW have commented that overall they do not envisage there to be any issues at a strategic level for the supply of potable water for the proposed developments due to their ongoing mitigation work outlined in their WRMP, but they may need some reinforcement work to be undertaken on their distribution network. As part of STW's preparation work for AMP7 2020-25 they will be able to assess the potential investment needs in these areas.

22.4.4 As developments come through the planning system STW modelling teams will undertake detailed modelling. However, as infrastructure improvements and local reinforcement can usually be undertaken within an 18 month to 2-year window, STW does not expect potable water capacity to be a constraint to development so long as all development proposals are clearly outlined to STW, with a continuing discourse in place. This will allow their incorporation into ongoing infrastructure planning and any amendments to be provided for as planning moves forward.

22.4.5 As there may be a need for modifications of the discharge permit at the Lutterworth Water Recycle Centre (WRC) to serve the East of Lutterworth SDA, further investigation and modelling should be undertaken by Severn Trent Water to confirm that the relevant discharge permits to support the expansion of the WRC will be forthcoming from the Environment Agency along with identifying any additional modification works needed to the WRC. It is therefore important that early and ongoing liaison between Harborough DC, the SDA promoters and Severn Trent / Anglian Water continues to ensure that all strategic reinforcement works are incorporated into the water companies' infrastructure development plans.

22.5 Study recommendations

22.5.1 Based on the plan level estimated infrastructure requirements, and estimated costs, and by reference to the emerging findings of the viability assessment separately undertaken for HDC by Aspinall Verdi, the study has found that there are currently no identifiable issues with the provision of infrastructure that would prevent the delivery of the two SDAs, the various development sites proposed for Market Harborough and the rest of the District.

[41] STW plan make new strategic links to their neighbouring water supply companies to improve supply resilience; and to also make more sustainable use of existing resources such as implementing more efficient operating rules at water abstraction points and reducing leakage in their network.

Ongoing work to finalise the Viability Study and other ongoing infrastructure work

22.5.2 As part of an iterative process, the emerging findings from the Viability Study (June 2017) have informed the IDP assessment. The findings from the IDP assessment will in turn inform the final Viability Study. HDC should ensure that account is taken of the infrastructure requirements to inform the final refinements to Viability Study. This will inform the final viability and deliverability considerations.

22.5.3 The Council should seek to fully understand the cash flow assessment for each of the SDAs and be assured that the delivery of the upfront infrastructure costs in the early phases of the SDA delivery can be funded.

22.5.4 Similarly, a number of infrastructure delivery queries are the subject of on-going assessments. This is to be expected, due to the scale of the SDAs, not all information will be available from the outset. However, HDC will need to satisfy itself, that the areas on-going investigation are not going to pose insurmountable obstacles that would delay the delivery of the planned growth and the wider impacts of the schemes are fully understood and can be mitigated.

Developer contributions to support delivery of planned growth

22.5.5 The assessment of the infrastructure requirements has taken account of the latest legislation relating to developer contributions. However, the Council may need to review the findings of this IDP in respect to developer contributions to take account of any changes to regulations relating to developer funding following the Governments response to the CIL Review report published in February 2017.

22.5.6 In a similar vein it will be noted that the infrastructure identified and costed (on the basis of currently known best information) is of differing significance, some identified as ‘essential’ to the implementation of the development it relates to and to the implementation of the Council’s emerging strategy for the District, and some described as ‘desirable’, though a precise categorisation would be impossible at this level.

22.5.7 This report seeks to order the infrastructure requirements in an approximation of their importance, though the decision on these matters will rest with HDC and its partners at the implementation stage. The Council should however take steps through the Local Plan policies and other measures perhaps, to avoid developers citing a ‘cut off’ point for funding infrastructure. Instead, they should make it clear that the extent of contributions to support the identified infrastructure requirements will be determined by the viability of the development schemes. The Council’s Developer Contributions SPD could be strengthen to reflect the range of likely infrastructure requirements considered as ‘essential to the delivery of planned growth’. Also, as the Council is not currently pursuing a CIL, there is scope to possibly review the scheme size threshold levels currently in place for seeking developer contributions. Going forward, whilst the CIL Regs 122 pooling restriction applies, the Council will need to exercise care in the way S106 agreements are worded (project specific) to avoid exceeding the pooling restriction of five contributions per infrastructure project.

The IDP should be kept as a live toolkit and accompanied with a delivery process

22.5.8 This study of infrastructure is to support a strategic process. The IDP should be treated as a sketch plan rather than a detailed route map to delivery. As development plans are advanced, then more specific assessments will need to be carried out to provide more precision on the infrastructure needs and costs having regard to circumstances at the time.

22.5.9 The IDP should be refined and updated, possibly on an annual basis, and treated as a ‘live toolkit’. It has the potential as a tool to add value beyond the preparation of the Local Plan in supporting the delivery of growth and securing prioritised infrastructure.

22.5.10 It is recommended that a formal 'Infrastructure Delivery Process' should be established to guide the delivery of infrastructure and planned growth. The Infrastructure Delivery Process should be practically orientated and could focus on the following:

a. Identify key problems or challenges that need to be resolved, determine priorities, identify risks and plan ahead to support the delivery of the first five years of growth.

b. Use the assessment developed as part of this study to keep up to date the utilities critical path analysis and to refine issues to inform the infrastructure time sequence. This would allow the focusing of resources on short-term issues and ensure there is a process of active planning for medium term issues.

c. Establish (or use an existing) Member level decision-making process to inform priorities for managing the infrastructure delivery and allocations of limited resources. This should also consider links with wider sub- regional infrastructure delivery mechanisms in order to consider how to align priorities for investment.

d. Establish an officer level Infrastructure Delivery Group consisting of service providers, especially those representing transport, education, health and social infrastructure to help inform the critical path planning and identifying priorities for investment and capacity issues and explore alternative means of funding / delivering infrastructure. This could be at a local, sub regional level.

e. Identify a specific officer with responsibility for infrastructure planning and project managing delivery.

It is recommended that a utilities forum should be established

22.5.11 It is recommended that a Utilities Forum should be established, meeting once or twice a year, to exchange information on planned growth and impact on existing capacity, developing a possible approach to spreading costs across the development sites, and informing the Asset Management Plans of the utilities providers. The initial response from utilities providers to this suggestion has been very positive. The coordination of this type of strategic infrastructure enabling activity could be led either by the District Council or the sub- regional infrastructure group or other similar strategic body with a responsibility for promoting the timely delivery of planned growth and minimising the cost burden on development.

22.5.12 A watching brief should be kept on the review of the asset management plans of the utilities providers in order to inform these when they are up for review. At present Severn Trent is operating on AMP 6 (1st April 2015 to 31st March 2020). Anglian Water is working on AMP6 for the same dates. Work on preparing the Water Resource Management Plan (WRMP) for AMP7 will commence later in 2017.

Appendix A Stakeholder consultations

A.1.1 We are grateful for the input provided by the following consultees in informing this IDP:

Consultee	Organisation	Infrastructure	Date
Andy Yeomanson	Leicestershire County Council	Transport	13th September 2016
Janna Walker	Leicestershire County Council	Transport	13th September 2016
Sue Owen	Leicestershire County Council	Education	25th October 2016
Paul Limb and Sue Owen	Leicestershire County Council	Education	25th October 2016
Jo Fisher	Leicestershire County Council	Education	28th October 2016
Caroline Goulding	East Leicestershire & Rutland. CCG	Health	25th October 2016
Khatija Hajat	East Leicestershire & Rutland. CCG	Health	25th October 2016
Helen Chadwick	HDC	Flood, drainage and water cycle	3rd November 2016
Chris Bramley	Leicestershire Lead Flood Authority	Flood and drainage	3rd November 2016
Nick Wakefield	Environment Agency	Flood and drainage	3rd November 2016
Becky Stewart	Environment Agency	Flood and drainage	3rd November 2016
Rhiannon Swindale	Environment Agency	Flood and drainage	3rd November 2016
Rob Price	Environment Agency	Flood and drainage	20th December 2016
Dawn Williams	Severn Trent Water	Potable Water	October/November 2016
Paul Hurcombe	Severn Trent Water	Wastewater	October/November 2016
Mark Craig	Severn Trent Water	Wastewater	October/November 2016
Stewart Patience	Anglian Water Services	Potable and Wastewater	October/November 2016
Nicholas Dexter	Western Power Distribution	Electricity	October/November 2016
Chris Baber	Western Power Distribution	Electricity	October/November 2016
Richard Gault	Western Power Distribution	Electricity	October/November 2016
Phil Bales	Western Power	Electricity	October/November

	Distribution		2016
Nick Dexter	National Grid	Gas	October/November 2016
Ross Blake	National Grid	Gas	October/November 2016
Samantha Russell	Virgin Media	Telecommunications	October/November 2016
Daniel Murray	Virgin Media	Telecommunications	October/November 2016
Liam Thomson	Virgin Media	Telecommunications	October/November 2016
Craig Chapman	BT Openreach	Telecommunications	October/November 2016
Martin Corbett	BT Openreach	Telecommunications	October/November 2016
Suzanne Fry	HERBS	Telecommunications	October/November 2016
Laura Saunders	Leicestershire Police	Police	Nov/ Dec 2016
Nigel Thomas	Leicestershire County Council	Libraries	Nov 2016
Matt Cane – e-mailed and rang but not managed to get through	Leicestershire Fire and Rescue Service	Emergency Services - fire	Oct / Nov 2016
Mark Perris	HDC – waste officer	Waste & Recycling	Nov 2016
John Wright, Phil Larter and Nigel Shilton, Mark Perris	LCC – Minerals and Waste team	Waste & Recycling	Nov / Dec 2016
Anthea Anderson	Leicester City Council	Transport Strategy	Jan / May 2017
Andy Rose	Leicester and Leicestershire Economic Partnership	General infrastructure funding	May 2017
Lee Byrne	HDC	General infrastructure funding	May 2017

Appendix B Summary of all IDP infrastructure projects

Appendix B sets out a summary of all the infrastructure projects that have informed this IDP assessment. The tables set out the estimated infrastructure costs, likely funding mechanism, anticipated lead delivery agency who will be responsible for the actual delivery of the infrastructure or at least as the lead authorisation body.

Ref	Infrastructure main category	Infrastructure sub category / project name	Priority	Location	Plan period total cost (2016 - 2031)	Post plan period cost	Anticipated lead delivery agency	Known funding	Anticipated developer funding mechanism	Assumed funding private sector - plan period	Assumed funding private sector - post plan period
304	Waste management	Civic amenity and waste management	Essential	Windfall	£14,062.50	£0	LCC Waste Management Service	£0	S106	£14,063	0
305	Waste management	Civic amenity and waste management	Essential	East of Lutterworth SDA	£120,000	£100,000	LCC Waste Management Service	£0	S106	£120,000	£100,000
306	Waste management	Civic amenity and waste management	Essential	Scraptoft North SDA	£96,000	£0	LCC Waste Management Service	£0	S106	£96,000	0
307	Waste management	Civic amenity and waste management	Essential	Market Harborough	£90,080	£0	LCC Waste Management Service	£0	S106	£90,080	0
311	Waste management	Civic amenity and waste management	Essential	Billesdon	£540	£0	LCC Waste Management Service	£0	S106	£540	0
312	Waste management	Civic amenity and waste management	Essential	Fleckney	£13,275	£0	LCC Waste Management Service	£0	S106	£13,275	0
313	Waste management	Civic amenity and waste management	Essential	Great Glen	£1,575	£0	LCC Waste Management Service	£0	S106	£1,575	0
314	Waste management	Civic amenity and waste management	Essential	Houghton on the Hill	£2,835	£0	LCC Waste Management Service	£0	S106	£2,835	0
318	Waste management	Civic amenity and waste management	Essential	Bitteswell	£1,350	£0	LCC Waste Management Service	£0	S106	£1,350	0
319	Waste management	Civic amenity and waste management	Essential	Church & East Langton	£1,350	£0	LCC Waste Management Service	£0	S106	£1,350	0
320	Waste management	Civic amenity and waste management	Essential	The Claybrookes	£2,250	£0	LCC Waste Management Service	£0	S106	£2,250	0
321	Waste management	Civic amenity and waste management	Essential	Dunton Bassett	£1,800	£0	LCC Waste Management Service	£0	S106	£1,800	0
322	Waste management	Civic amenity and waste management	Essential	Foxton	£450	£0	LCC Waste Management Service	£0	S106	£450	0
323	Waste management	Civic amenity and waste management	Essential	Gilmorton	£1,215	£0	LCC Waste Management Service	£0	S106	£1,215	0
325	Waste management	Civic amenity and waste management	Essential	Great Easton (with Bringhurst)	£1,395	£0	LCC Waste Management Service	£0	S106	£1,395	0
326	Waste management	Civic amenity and waste management	Essential	Hallaton	£1,575	£0	LCC Waste Management Service	£0	S106	£1,575	0
327	Waste management	Civic amenity and waste management	Essential	Lubenham	£1,575	£0	LCC Waste Management Service	£0	S106	£1,575	0
328	Waste management	Civic amenity and waste management	Essential	Medbourne	£1,395	£0	LCC Waste Management Service	£0	S106	£1,395	0
330	Waste management	Civic amenity and waste management	Essential	South Kilworth	£945	£0	LCC Waste Management Service	£0	S106	£945	0
331	Waste management	Civic amenity and waste management	Essential	Swinford	£1,800	£0	LCC Waste Management Service	£0	S106	£1,800	0
332	Waste management	Civic amenity and waste management	Essential	Tilton	£1,575	£0	LCC Waste Management Service	£0	S106	£1,575	0
333	Waste management	Civic amenity and waste management	Essential	Tugby	£675	£0	LCC Waste Management Service	£0	S106	£675	0
364	Flood management	Drainage and flood mitigations	Desirable	Fleckney	£40,000	£0	Other service provider	£0	Service provider / funding bid	£0	£0
365	Flood management	Drainage and flood mitigations	Essential	Scraptoft North SDA	£15,000	£0	Other service provider	£0	S106	£15,000	0

Ref	Infrastructure main category	Infrastructure sub category / project name	Priority	Location	Project name	Plan period total cost (2016 - 2031)	Post plan period cost	Anticipated lead delivery agency	Known funding	Anticipated developer funding mechanism	Assumed funding private sector - plan period	Assumed funding private sector - post plan period
181	Transport	Transport highways	Essential	Market Harborough	Northampton Road/ Springfield St / Welland Park Rd Market Harborough	£820,000	£0	Local Highway Authority	£0	S106	£820,000	0
182	Transport	Transport highways	Essential	Market Harborough	St Mary's Road / Kettering Road / Clarence Street Market Harborough	£280,000	£0	Local Highway Authority	£0	S106	£280,000	0
183	Transport	Transport highways	Essential	Market Harborough	Gores Lane / Rockingham Rd Market Harborough	£450,000	£0	Local Highway Authority	£0	S106	£450,000	0
184	Transport	Transport highways	Essential	Market Harborough	A6 / B6047 - Market Harborough	£650,000	£0	Local Highway Authority	£0	S106	£650,000	0
185	Transport	Transport highways	Essential	Market Harborough	The Square / St Mary's Rd/ Coventry Rd - Market Harborough	£700,000	£0	Local Highway Authority	£0	S106	£700,000	0
186	Transport	Transport highways	Essential	Market Harborough	Welland Park Rd / Northampton Rd /Springfields St - Market Harborough	£820,000	£0	Local Highway Authority	£0	S106	£820,000	0
187	Transport	Transport highways	Essential	Market Harborough	A6/Rockingham Road / Dingley Road - Market Harborough	£1,100,000	£0	Local Highway Authority	£0	S106	£1,100,000	0
188	Transport	Transport cycleways	Essential	Market Harborough	New routes, links, crossings etc - Market Harborough	£3,110,000	£0	Local Highway Authority	£0	S106	£3,110,000	0
189	Transport	Transport cycleways	Desirable	Market Harborough	Cycle Parking - Market Harborough	£30,000	£0	Local Highway Authority	£0	Other - funding grant	£0	0
190	Transport	Transport cycleways	Desirable	Market Harborough	Market Harborough route signing	£60,000	£0	Local Highway Authority	£0	Other - funding grant	£0	0
191	Transport	Transport public transport & travel demand	Desirable	Market Harborough	Bus Shelters - Market Harborough	£32,000	£0	Local Highway Authority	£0	Other - funding grant	£0	0
192	Transport	Transport public transport & travel demand	Desirable	Market Harborough	Raised bus stop kerbs - Market Harborough	£38,000	£0	Local Highway Authority	£0	Other - funding grant	£0	0
193	Transport	Transport public transport & travel demand	Desirable	Market Harborough	Miscellaneous transport - Market Harborough	£20,000	£0	Local Highway Authority	£0	Other - funding grant	£0	0
194	Transport	Transport public transport & travel demand	Essential	Market Harborough	Information and behaviour change - Market Harborough	£1,200,000	£0	Local Highway Authority	£0	S106	£1,200,000	0
195	Transport	Transport public transport & travel demand	Desirable	Market Harborough	Co-ordination and management Market Harborough	£800,000	£0	Local Highway Authority	£0	Other - funding grant	£0	0
196	Transport	Transport highways	Essential	Market Harborough	Works required to facilitate the upgrade of Welland Park Road to A4304 and respective downgrade of Covenry Road - Market Harborough	£700,000	£0	Local Highway Authority	£0	S106	£700,000	0
197	Transport	Transport highways	Desirable	Market Harborough	Increasing underpass height on Rockingham Road rail bridge Market Harborough	£2,000,000	£0	Local Highway Authority	£0	Other - funding grant	£0	0
198	Transport	Transport highways	Desirable	Market Harborough	South East Relief Road between the A508 and the A6 Market Harborough	£0	£0	Local Highway Authority	£0	Other - funding grant	£0	0
199	Transport	Tranport traffic management	Desirable	Market Harborough	HGV weight restrictions and update sat-nav contacts Market Harborough	£75,000	£0	Local Highway Authority	£0	Other - funding grant	£0	0
200	Transport	Tranport traffic management	Desirable	Market Harborough	Traffic directional signing Market Harborough	£100,000	£0	Local Highway Authority	£0	Other - funding grant	£0	0
201	Transport	Tranport traffic management	Desirable	Market Harborough	Parking controls, including consideration of residents parking Market Harborough	£75,000	£0	Local Highway Authority	£0	Other - funding grant	£0	0
202	Transport	Transport - pedestrian routes / public realm	Desirable	Market Harborough	Traffic calming (in support of walking / cycling network) Market Harborough	£300,000	£0	Local Highway Authority	£0	Other - funding grant	£0	0
203	Transport	Transport - pedestrian routes / public realm	Desirable	Market Harborough	Refurbishment of paved areas and street furniture Market Harborough	£450,000	£0	Local Highway Authority	£0	Other - funding grant	£0	0

Ref	Infrastructure main category	Infrastructure sub category / project name	Priority	Location	Plan period total cost (2016 - 2031)	Post plan period cost	Anticipated lead delivery agency	Known funding	Anticipated developer funding mechanism	Assumed funding private sector - plan period	Assumed funding private sector - post plan period
334	Community facilities	Cemeteries	Essential	Windfall	£29,498	£0	HDC/Parish Council	£0	S106	£29,497.50	£0
335	Community facilities	Cemeteries	Essential	East of Lutterworth SDA	£196,650	£163,875	HDC/Parish Council	£0	S106	£196,650.00	£163,875
336	Community facilities	Cemeteries	Essential	Scraptoft North SDA	£157,320	£0	HDC/Parish Council	£0	S106	£157,320.00	£0
337	Community facilities	Cemeteries	Essential	Market Harborough	£147,619	£0	HDC/Parish Council	£0	S106	£147,618.60	£0
341	Community facilities	Cemeteries	Essential	Billesdon	£1,573	£0	HDC/Parish Council	£0	S106	£1,573.20	£0
342	Community facilities	Cemeteries	Essential	Fleckney	£38,675	£0	HDC/Parish Council	£0	S106	£38,674.50	£0
343	Community facilities	Cemeteries	Essential	Great Glen	£4,589	£0	HDC/Parish Council	£0	S106	£4,588.50	£0
344	Community facilities	Cemeteries	Essential	Houghton on the Hill	£8,259	£0	HDC/Parish Council	£0	S106	£8,259.30	£0
348	Community facilities	Cemeteries	Essential	Bitteswell	£3,933	£0	HDC/Parish Council	£0	S106	£3,933.00	£0
349	Community facilities	Cemeteries	Essential	Church & East Langton	£3,933	£0	HDC/Parish Council	£0	S106	£3,933.00	£0
350	Community facilities	Cemeteries	Essential	The Claybrookes	£6,555	£0	HDC/Parish Council	£0	S106	£6,555.00	£0
351	Community facilities	Cemeteries	Essential	Dunton Bassett	£5,244	£0	HDC/Parish Council	£0	S106	£5,244.00	£0
352	Community facilities	Cemeteries	Essential	Foxton	£1,311	£0	HDC/Parish Council	£0	S106	£1,311.00	£0
353	Community facilities	Cemeteries	Essential	Gilmorton	£3,540	£0	HDC/Parish Council	£0	S106	£3,539.70	£0
355	Community facilities	Cemeteries	Essential	Great Easton (with Bringhurst)	£4,064	£0	HDC/Parish Council	£0	S106	£4,064.10	£0
356	Community facilities	Cemeteries	Essential	Hallaton	£4,589	£0	HDC/Parish Council	£0	S106	£4,588.50	£0
357	Community facilities	Cemeteries	Essential	Lubenham	£4,589	£0	HDC/Parish Council	£0	S106	£4,588.50	£0
358	Community facilities	Cemeteries	Essential	Medbourne	£4,064	£0	HDC/Parish Council	£0	S106	£4,064.10	£0
360	Community facilities	Cemeteries	Essential	South Kilworth	£2,753	£0	HDC/Parish Council	£0	S106	£2,753.10	£0
361	Community facilities	Cemeteries	Essential	Swinford	£5,244	£0	HDC/Parish Council	£0	S106	£5,244.00	£0
362	Community facilities	Cemeteries	Essential	Tilton	£4,589	£0	HDC/Parish Council	£0	S106	£4,588.50	£0
363	Community facilities	Cemeteries	Essential	Tugby	£1,967	£0	HDC/Parish Council	£0	S106	£1,966.50	£0

Ref	Infrastructure main category	Infrastructure sub category / project name	Priority	Location	Project name	Plan period total cost (2016 - 2031)	Post plan period cost	Anticipated lead delivery agency	Known funding	Anticipated developer funding mechanism	Assumed funding private sector - plan period	Assumed funding private sector - post plan period
204	Strategic site preparat	Transport highways	Critical	East of Lutterworth SDA	Primary Roads	£8,750,000	£0	Developer	£0	Developer site openning	£8,750,000	£0
205	Strategic site preparat	Transport highways	Critical	East of Lutterworth SDA	Secondary Roads	£3,000,000	£2,000,000	Developer	£0	Developer site openning	£3,000,000	£2,000,000
206	Strategic site preparat	Transport highways	Critical	East of Lutterworth SDA	A4304 Lutterworth Road/Main Access	£3,119,984	£0	Developer / lead highway au	£0	S278 / S38	£3,119,984	£0
207	Strategic site preparat	Transport highways	Critical	East of Lutterworth SDA	Spine Road/Gilmorton Road	£800,000	£0	Developer / lead highway au	£0	S278 / S38	£800,000	£0
208	Strategic site preparat	Transport highways	Critical	East of Lutterworth SDA	A426 Leicester/ Northern Access	£750,000	£0	Developer / lead highway au	£0	S278 / S38	£750,000	£0
209	Transport	Transport highways	Essential	East of Lutterworth SDA	M1 Junction 20 (signalisation)	£1,331,179	£0	Developer / lead highway au	£0	S278 / S38	£1,331,179	£0
210	Transport	Transport highways	Essential	East of Lutterworth SDA	A426 Leicester/Gilmorton Road	£315,000	£0	Developer / lead highway au	£0	S278 / S38	£315,000	£0
211	Transport	Transport highways	Essential	East of Lutterworth SDA	A4303 Lutterworth Road/A426 Rugby Road (Frank Whittle Roundabout)	£1,848,270	£0	Developer / lead highway au	£0	S278 / S38	£1,848,270	£0
212	Transport	Transport highways	Essential	East of Lutterworth SDA	A426 Leicester/Bill Crane Way	£430,000	£0	Developer / lead highway au	£0	S278 / S38	£430,000	£0
213	Transport	Transport highways	Essential	East of Lutterworth SDA	A426 Rugby Road/Travelodge Access	£348,081	£0	Developer / lead highway au	£0	S278 / S38	£348,081	£0
214	Transport	Transport highways	Essential	East of Lutterworth SDA	New M1 road bridge improvements	£10,000,000	£0	Developer / lead highway au	£0	S278 / S38	£10,000,000	£0
215	Transport	Transport public transport & travel demand	Essential	East of Lutterworth SDA	Public transport and travel demand measures	£500,000	£500,000	Developer / lead highway au	£0	S106	£500,000	£500,000
216	Strategic site preparat	Drainage and flood mitigations	Critical	East of Lutterworth SDA	Foul water pumping station, foul and surface water onsite drainage, balancing ponds	£6,263,000	£2,087,667	Developer	£0	Developer site openning	£6,263,000	£2,087,667
217	Strategic site preparat	Utilities, connections and diversions	Critical	East of Lutterworth SDA	Utilities and diversions	£3,750,000	£1,250,000	Developer	£0	Developer site openning	£3,750,000	£1,250,000
218	Strategic site preparat	Strategic site landscaping	Critical	East of Lutterworth SDA	Strategic landscaping	£250,000	£0	Developer	£0	Developer site openning	£250,000	£0
219	Strategic site preparat	Drainage and flood mitigations	Critical	East of Lutterworth SDA	Bridge structures crossing River Swift and tributaries	£2,896,875	£965,625	Developer	£0	Developer site openning	£2,896,875	£965,625
220	Strategic site preparat	Strategic site noise mitigation	Critical	East of Lutterworth SDA	Noise mitigation	£925,000	£0	Developer	£0	Developer site openning	£925,000	£0
221	Strategic site preparat	Transport - pre adoption costs and fees	Critical	East of Lutterworth SDA	Access land	£9,130,000	£0	Developer / lead highway au	£0	S278 / S38	£9,130,000	£0
222	Strategic site preparat	Transport - pedestrian routes / public realm	Critical	East of Lutterworth SDA	M1 footbridge crossing	£1,000,000	£0	Developer / lead highway au	£0	S278 / S38	£1,000,000	£0
223	Strategic site preparat	Strategic site landscaping	Critical	East of Lutterworth SDA	Open space manangement company start - up cost	£250,000	£0	Developer	£0	Developer site openning	£250,000	£0
224	Strategic site preparat	Transport - pre adoption costs and fees	Critical	East of Lutterworth SDA	Pre-adoption costs and fees	£2,185,482	£728,494	Developer	£0	S278 / S38	£2,185,482	£728,494
225	Strategic site preparat	Land preparation / profiling	Critical	East of Lutterworth SDA	Land preparation / profiling - earthworks	£10,700,752	£0	Developer		Developer site openning	£10,700,752	£0

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226	Transport	Transport highways	Essential	Scraptoft North SDA	£1,000,000	£0	Developer / lead highway authority	£0	S278 / S38	£1,000,000	£0
227	Transport	Transport highways	Essential	Scraptoft North SDA	£250,000	£0	Developer / lead highway authority	£0	S278 / S38	£250,000	£0
228	Transport	Transport highways	Essential	Scraptoft North SDA	£750,000	£0	Developer / lead highway authority	£0	S278 / S38	£750,000	£0
229	Transport	Transport highways	Essential	Scraptoft North SDA	£250,000	£0	Developer / lead highway authority	£0	S278 / S38	£250,000	£0
230	Transport	Transport highways	Essential	Scraptoft North SDA	£350,000	£0	Developer / lead highway authority	£0	S278 / S38	£350,000	£0
231	Transport	Transport cycleways	Essential	Scraptoft North SDA	£100,000	£0	Developer / lead highway authority	£0	S278 / S38	£100,000	£0
232	Transport	Transport highways	Essential	Scraptoft North SDA	£500,000	£0	Developer / lead highway authority	£0	S278 / S38	£500,000	£0
233	Strategic site preparation	Transport highways	Critical	Scraptoft North SDA	£875,000	£0	Developer	£0	Developer site openning	£875,000	£0
234	Strategic site preparation	Drainage and flood mitigations	Critical	Scraptoft North SDA	£200,000	£0	Developer	£0	Developer site openning	£200,000	£0
235	Strategic site preparation	Transport - pedestrian routes / public realm	Critical	Scraptoft North SDA	£200,000	£0	Developer / lead highway authority	£0	Developer site openning	£200,000	£0
236	Strategic site preparation	Transport - pre adoption costs and fees	Critical	Scraptoft North SDA	£1,200,000	£0	Developer / lead highway authority	£0	S278 / S38	£1,200,000	£0
237	Strategic site preparation	Drainage and flood mitigations	Critical	Scraptoft North SDA	£1,450,000	£0	Developer	£0	Developer site openning	£1,450,000	£0
238	Strategic site preparation	Utilities, connections and diversions	Critical	Scraptoft North SDA	£2,500,000	£0	Developer	£0	Developer site openning	£2,500,000	£0
239	Strategic site preparation	Strategic site landscaping	Critical	Scraptoft North SDA	£1,000,000	£0	Developer	£0	Developer site openning	£1,000,000	£0
240	Strategic site preparation	Land preparation / profiling	Critical	Scraptoft North SDA	£500,000	£0	Developer	£0	Developer site openning	£500,000	£0
241	Strategic site preparation	Strategic site landscaping	Essential	Scraptoft North SDA	£250,000	£0	Developer	£0	Developer site openning	£250,000	£0
242	Transport	Transport public transport & travel demand	Essential	Scraptoft North SDA	£200,000	£0	Developer / lead highway authority	£0	S106	£200,000	£0
243	Transport	Transport public transport & travel demand	Essential	Scraptoft North SDA	£300,000	£0	Developer / lead highway authority	£0	S106	£300,000	£0
365	Flood management	Drainage and flood mitigations	Essential	Scraptoft North SDA	£15,000	£0	Other service provider	£0	S106	£15,000	0

Ref	Infrastructure main category	Infrastructure sub category / project name	Priority	Location	Plan period total cost (2016 - 2031)	Post plan period cost	Anticipated lead delivery agency	Known funding	Anticipated developer funding mechanism	Assumed funding private sector - plan period	Assumed funding private sector - post plan period
244	Education	Primary school SEND	Essential	Windfall	£19,110	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
245	Education	Primary school SEND	Essential	East of Lutterworth SDA	£127,401	£106,168	LCC Education Service	£0	S106	£127,401	£106,168
246	Education	Primary school SEND	Essential	Scraptoft North SDA	£101,921	£0	LCC Education Service	£0	S106	£101,921	£0
247	Education	Primary school SEND	Essential	Market Harborough	£95,636	£0	LCC Education Service	£0	S106	£95,636	0
248	Education	Primary school SEND	Essential	Scraptoft, Thurnby and Bushby	£0	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
249	Education	Primary school SEND	Essential	Lutterworth	£0	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
250	Education	Primary school SEND	Essential	Broughton Astley	£0	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
251	Education	Primary school SEND	Essential	Billesdon	£1,019	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
252	Education	Primary school SEND	Essential	Fleckney	£25,056	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
253	Education	Primary school SEND	Essential	Great Glen	£2,973	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
254	Education	Primary school SEND	Essential	Houghton on the Hill	£5,351	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
255	Education	Primary school SEND	Essential	Husbands Bosworth	£0	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
256	Education	Primary school SEND	Essential	The Kibworths	£0	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
257	Education	Primary school SEND	Essential	Ullesthorpe	£0	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
258	Education	Primary school SEND	Essential	Bitteswell	£2,548	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
259	Education	Primary school SEND	Essential	Church & East Langton	£2,548	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
260	Education	Primary school SEND	Essential	The Claybrookes	£4,247	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
261	Education	Primary school SEND	Essential	Dunton Bassett	£3,397	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
262	Education	Primary school SEND	Essential	Foxton	£849	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
263	Education	Primary school SEND	Essential	Gilmorton	£2,293	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
264	Education	Primary school SEND	Essential	Great Bowden	£0	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
265	Education	Primary school SEND	Essential	Great Easton (with Bringhurst)	£2,633	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
266	Education	Primary school SEND	Essential	Hallaton	£2,973	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
267	Education	Primary school SEND	Essential	Lubenham	£2,973	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
268	Education	Primary school SEND	Essential	Medbourne	£2,633	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
269	Education	Primary school SEND	Essential	North Kilworth	£0	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
270	Education	Primary school SEND	Essential	South Kilworth	£1,784	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
271	Education	Primary school SEND	Essential	Swinford	£3,397	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
272	Education	Primary school SEND	Essential	Tilton	£2,973	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
273	Education	Primary school SEND	Essential	Tugby	£1,274	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
274	Education	Secondary school SEND	Essential	Windfall	£59,892	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
275	Education	Secondary school SEND	Essential	East of Lutterworth SDA	£399,282	£332,735	LCC Education Service	£0	S106	£399,282	£332,735
276	Education	Secondary school SEND	Essential	Scraptoft North SDA	£319,426	£0	LCC Education Service	£0	S106	£319,426	0
277	Education	Secondary school SEND	Essential	Market Harborough	£299,728	£0	LCC Education Service	£0	S106	£299,728	0
278	Education	Secondary school SEND	Essential	Scraptoft, Thurnby and Bushby	£0	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
279	Education	Secondary school SEND	Essential	Lutterworth	£0	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
280	Education	Secondary school SEND	Essential	Broughton Astley	£0	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
281	Education	Secondary school SEND	Essential	Billesdon	£3,194	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
282	Education	Secondary school SEND	Essential	Fleckney	£78,526	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
283	Education	Secondary school SEND	Essential	Great Glen	£9,317	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
284	Education	Secondary school SEND	Essential	Houghton on the Hill	£16,770	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
285	Education	Secondary school SEND	Essential	Husbands Bosworth	£0	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
286	Education	Secondary school SEND	Essential	The Kibworths	£0	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
287	Education	Secondary school SEND	Essential	Ullesthorpe	£0	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
288	Education	Secondary school SEND	Essential	Bitteswell	£7,986	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
289	Education	Secondary school SEND	Essential	Church & East Langton	£7,986	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
290	Education	Secondary school SEND	Essential	The Claybrookes	£13,309	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
291	Education	Secondary school SEND	Essential	Dunton Bassett	£10,648	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
292	Education	Secondary school SEND	Essential	Foxton	£2,662	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
293	Education	Secondary school SEND	Essential	Gilmorton	£7,187	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
294	Education	Secondary school SEND	Essential	Great Bowden	£0	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
295	Education	Secondary school SEND	Essential	Great Easton (with Bringhurst)	£8,252	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
296	Education	Secondary school SEND	Essential	Hallaton	£9,317	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
297	Education	Secondary school SEND	Essential	Lubenham	£9,317	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
298	Education	Secondary school SEND	Essential	Medbourne	£8,252	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
299	Education	Secondary school SEND	Essential	North Kilworth	£0	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
300	Education	Secondary school SEND	Essential	South Kilworth	£5,590	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
301	Education	Secondary school SEND	Essential	Swinford	£10,648	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
302	Education	Secondary school SEND	Essential	Tilton	£9,317	£0	LCC Education Service	£0	Service provider / funding bid	£0	0
303	Education	Secondary school SEND	Essential	Tugby	£3,993	£0	LCC Education Service	£0	Service provider / funding bid	£0	0

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1	Education	Primary school extension	Essential	Windfall	£653,346	£0	LCC / Academy	£0	S106	£653,346	£0.0
2	Education	Primary school new build	Essential	East of Lutterworth SDA	£6,641,000	£4,397,970	Developer/Free School oper	£0	S106	£6,641,000	£4,397,970
3	Education	Primary school new build	Essential	Scraptoft North SDA	£4,978,722	£0	Developer/Free School oper	£0	S106	£4,978,722	£0
4	Education	Primary school extension	Essential	Market Harborough	£3,269,634	£0	LCC / Academy	£0	S106	£3,269,634	0
8	Education	Primary school extension	Essential	Billesdon	£34,845	£0	LCC / Academy	£0	S106	£34,845	0
9	Education	Primary school extension	Essential	Fleckney	£856,609	£0	LCC / Academy	£0	S106	£856,609	0
10	Education	Primary school extension	Essential	Great Glen	£0	£0	LCC / Academy	£0	S106	£0	0
11	Education	Primary school extension	Essential	Houghton on the Hill	£0	£0	LCC / Academy	£0	S106	£0	0
15	Education	Primary school extension	Essential	Bitteswell	£87,113	£0	LCC / Academy	£0	S106	£87,113	0
16	Education	Primary school extension	Essential	Church & East Langton	£0	£0	LCC / Academy	£0	S106	£0	0
17	Education	Primary school extension	Essential	The Claybrookes	£96,792	£0	LCC / Academy	£0	S106	£96,792	0
18	Education	Primary school extension	Essential	Dunton Bassett	£36,297	£0	LCC / Academy	£0	S106	£36,297	0
19	Education	Primary school extension	Essential	Foxton	£0	£0	LCC / Academy	£0	S106	£0	0
20	Education	Primary school extension	Essential	Gilmorton	£78,402	£0	LCC / Academy	£0	S106	£78,402	0
22	Education	Primary school extension	Essential	Great Easton (with Bringhurst)	£0	£0	LCC / Academy	£0	S106	£0	0
23	Education	Primary school extension	Essential	Hallaton	£101,632	£0	LCC / Academy	£0	S106	£101,632	0
24	Education	Primary school extension	Essential	Lubenham	£101,632	£0	LCC / Academy	£0	S106	£101,632	0
25	Education	Primary school extension	Essential	Medbourne	£0	£0	LCC / Academy	£0	S106	£0	0
27	Education	Primary school extension	Essential	South Kilworth	£0	£0	LCC / Academy	£0	S106	£0	0
28	Education	Primary school extension	Essential	Swinford	£120,990	£0	LCC / Academy	£0	S106	£120,990	0
29	Education	Primary school extension	Essential	Tilton	£96,792	£0	LCC / Academy	£0	S106	£96,792	0
30	Education	Primary school extension	Essential	Tugby	£43,556	£0	LCC / Academy	£0	S106	£43,556	0
31	Education	Secondary school extension	Essential	Windfall	£815,310	£0	LCC / Academy	£0	S106	£815,310	£0
32	Education	Secondary school extension	Essential	East of Lutterworth SDA	£0	£0	LCC / Academy	£0	S106	£0	£0
33	Education	Secondary school extension	Essential	Scraptoft North SDA	£4,348,320	£0	LCC / Academy	£0	S106	£4,348,320	£0
34	Education	Secondary school extension	Essential	Market Harborough	£4,080,174	£0	LCC / Academy	£0	S106	£4,080,174	£0
38	Education	Secondary school extension	Essential	Billesdon	£43,483	£0	LCC / Academy	£0	S106	£43,483	£0
39	Education	Secondary school extension	Essential	Fleckney	£1,068,962	£0	LCC / Academy	£0	S106	£1,068,962	£0
40	Education	Secondary school extension	Essential	Great Glen	£126,826	£0	LCC / Academy	£0	S106	£126,826	£0
41	Education	Secondary school extension	Essential	Houghton on the Hill	£228,287	£0	LCC / Academy	£0	S106	£228,287	£0
45	Education	Secondary school extension	Essential	Bitteswell	£108,708	£0	LCC / Academy	£0	S106	£108,708	£0
46	Education	Secondary school extension	Essential	Church & East Langton	£108,708	£0	LCC / Academy	£0	S106	£108,708	£0
47	Education	Secondary school extension	Essential	The Claybrookes	£0	£0	LCC / Academy	£0	S106	£0	£0
48	Education	Secondary school extension	Essential	Dunton Bassett	£144,944	£0	LCC / Academy	£0	S106	£144,944	£0
49	Education	Secondary school extension	Essential	Foxton	£36,236	£0	LCC / Academy	£0	S106	£36,236	£0
50	Education	Secondary school extension	Essential	Gilmorton	£0	£0	LCC / Academy	£0	S106	£0	£0
52	Education	Secondary school extension	Essential	Great Easton (with Bringhurst)	£112,332	£0	LCC / Academy	£0	S106	£112,332	£0
53	Education	Secondary school extension	Essential	Hallaton	£126,826	£0	LCC / Academy	£0	S106	£126,826	£0
54	Education	Secondary school extension	Essential	Lubenham	£126,826	£0	LCC / Academy	£0	S106	£126,826	£0
55	Education	Secondary school extension	Essential	Medbourne	£112,332	£0	LCC / Academy	£0	S106	£112,332	£0
57	Education	Secondary school extension	Essential	South Kilworth	£0	£0	LCC / Academy	£0	S106	£0	£0
58	Education	Secondary school extension	Essential	Swinford	£0	£0	LCC / Academy	£0	S106	£0	£0
59	Education	Secondary school extension	Essential	Tilton	£126,826	£0	LCC / Academy	£0	S106	£126,826	£0
60	Education	Secondary school extension	Essential	Tugby	£54,354	£0	LCC / Academy	£0	S106	£54,354	£0

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61	Health	GP facilities	Essential	Windfall	£168,726	£0	GP surgergy	£0	S106	£168,726	0
62	Health	GP facilities	Essential	East of Lutterworth SDA	£1,124,838	£937,365	GP surgergy	£0	S106	£1,124,838	£937,365
63	Health	GP facilities	Essential	Scraptoft North SDA	£899,870	£0	GP surgergy	£0	S106	£899,870	£0
64	Health	GP facilities	Essential	Market Harborough	£844,378	£0	GP surgergy	£0	S106	£844,378	0
68	Health	GP facilities	Essential	Billesdon	£8,999	£0	GP surgergy	£0	S106	£8,999	0
69	Health	GP facilities	Essential	Fleckney	£221,218	£0	GP surgergy	£0	S106	£221,218	0
70	Health	GP facilities	Essential	Great Glen	£26,246	£0	GP surgergy	£0	S106	£26,246	0
71	Health	GP facilities	Essential	Houghton on the Hill	£47,243	£0	GP surgergy	£0	S106	£47,243	0
75	Health	GP facilities	Essential	Bitteswell	£22,497	£0	GP surgergy	£0	S106	£22,497	0
76	Health	GP facilities	Essential	Church & East Langton	£22,497	£0	GP surgergy	£0	S106	£22,497	0
77	Health	GP facilities	Essential	The Claybrookes	£37,495	£0	GP surgergy	£0	S106	£37,495	0
78	Health	GP facilities	Essential	Dunton Bassett	£29,996	£0	GP surgergy	£0	S106	£29,996	0
79	Health	GP facilities	Essential	Foxton	£7,499	£0	GP surgergy	£0	S106	£7,499	0
80	Health	GP facilities	Essential	Gilmorton	£20,247	£0	GP surgergy	£0	S106	£20,247	0
82	Health	GP facilities	Essential	Great Easton (with Bringhurst)	£23,247	£0	GP surgergy	£0	S106	£23,247	0
83	Health	GP facilities	Essential	Hallaton	£26,246	£0	GP surgergy	£0	S106	£26,246	0
84	Health	GP facilities	Essential	Lubenham	£26,246	£0	GP surgergy	£0	S106	£26,246	0
85	Health	GP facilities	Essential	Medbourne	£23,247	£0	GP surgergy	£0	S106	£23,247	0
87	Health	GP facilities	Essential	South Kilworth	£0	£0	GP surgergy	£0	S106	£0	0
88	Health	GP facilities	Essential	Swinford	£0	£0	GP surgergy	£0	S106	£0	0
89	Health	GP facilities	Essential	Tilton	£26,246	£0	GP surgergy	£0	S106	£26,246	0
90	Health	GP facilities	Essential	Tugby	£11,248	£0	GP surgergy	£0	S106	£11,248	0
91	Sport and leisure	Open space, sports, allotments, parks, natural and semi natural	Essential	Windfall	£1,118,813	£0	HDC/Parish Council	£0	S106	£1,118,813	£0
92	Sport and leisure	Open space, sports, allotments, parks, natural and semi natural	Essential	East of Lutterworth SDA	£5,413,500	£4,511,250	Developer	£0	S106	£5,413,500	£4,511,250
93	Sport and leisure	Open space, sports, allotments, parks, natural and semi natural	Essential	Scraptoft North SDA	£4,330,800	£0	Developer	£0	S106	£4,330,800	£0
94	Sport and leisure	Open space, sports, allotments, parks, natural and semi natural	Essential	Market Harborough	£4,063,734	£0	HDC/Parish Council	£0	S106	£4,063,734	0
98	Sport and leisure	Open space, sports, allotments, parks, natural and semi natural	Essential	Billesdon	£76,032	£0	HDC/Parish Council	£0	S106	£76,032	0
99	Sport and leisure	Open space, sports, allotments, parks, natural and semi natural	Essential	Fleckney	£1,869,120	£0	HDC/Parish Council	£0	S106	£1,869,120	0
100	Sport and leisure	Open space, sports, allotments, parks, natural and semi natural	Essential	Great Glen	£221,760	£0	HDC/Parish Council	£0	S106	£221,760	0
101	Sport and leisure	Open space, sports, allotments, parks, natural and semi natural	Essential	Houghton on the Hill	£399,168	£0	HDC/Parish Council	£0	S106	£399,168	0
105	Sport and leisure	Open space, sports, allotments, parks, natural and semi natural	Essential	Bitteswell	£190,080	£0	HDC/Parish Council	£0	S106	£190,080	0
106	Sport and leisure	Open space, sports, allotments, parks, natural and semi natural	Essential	Church & East Langton	£190,080	£0	HDC/Parish Council	£0	S106	£190,080	0
107	Sport and leisure	Open space, sports, allotments, parks, natural and semi natural	Essential	The Claybrookes	£316,800	£0	HDC/Parish Council	£0	S106	£316,800	0
108	Sport and leisure	Open space, sports, allotments, parks, natural and semi natural	Essential	Dunton Bassett	£253,440	£0	HDC/Parish Council	£0	S106	£253,440	0
109	Sport and leisure	Open space, sports, allotments, parks, natural and semi natural	Essential	Foxton	£63,360	£0	HDC/Parish Council	£0	S106	£63,360	0
110	Sport and leisure	Open space, sports, allotments, parks, natural and semi natural	Essential	Gilmorton	£171,072	£0	HDC/Parish Council	£0	S106	£171,072	0
112	Sport and leisure	Open space, sports, allotments, parks, natural and semi natural	Essential	Great Easton (with Bringhurst)	£196,416	£0	HDC/Parish Council	£0	S106	£196,416	0
113	Sport and leisure	Open space, sports, allotments, parks, natural and semi natural	Essential	Hallaton	£221,760	£0	HDC/Parish Council	£0	S106	£221,760	0
114	Sport and leisure	Open space, sports, allotments, parks, natural and semi natural	Essential	Lubenham	£221,760	£0	HDC/Parish Council	£0	S106	£221,760	0
115	Sport and leisure	Open space, sports, allotments, parks, natural and semi natural	Essential	Medbourne	£196,416	£0	HDC/Parish Council	£0	S106	£196,416	0
117	Sport and leisure	Open space, sports, allotments, parks, natural and semi natural	Essential	South Kilworth	£133,056	£0	HDC/Parish Council	£0	S106	£133,056	0
118	Sport and leisure	Open space, sports, allotments, parks, natural and semi natural	Essential	Swinford	£253,440	£0	HDC/Parish Council	£0	S106	£253,440	0
119	Sport and leisure	Open space, sports, allotments, parks, natural and semi natural	Essential	Tilton	£221,760	£0	HDC/Parish Council	£0	S106	£221,760	0
120	Sport and leisure	Open space, sports, allotments, parks, natural and semi natural	Essential	Tugby	£95,040	£0	HDC/Parish Council	£0	S106	£95,040	0

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121	Community facilities	Community space	Essential	Windfall	£191,925	£0	Parish Council / community	£0	S106	£191,925	0
122	Community facilities	Community space	Essential	East of Lutterworth SDA	£1,777,500	£1,481,250	Developer	£0	S106	£1,777,500	£1,481,250
123	Community facilities	Community space	Essential	Scraptoft North SDA	£1,422,000	£0	Developer	£0	S106	£1,422,000	£0
124	Community facilities	Community space	Essential	Market Harborough	£960,478	£0	Parish Council / community	£0	S106	£960,478	0
128	Community facilities	Community space	Essential	Billesdon	£10,236	£0	Parish Council / community	£0	S106	£10,236	0
129	Community facilities	Community space	Essential	Fleckney	£251,635	£0	Parish Council / community	£0	S106	£251,635	0
130	Community facilities	Community space	Essential	Great Glen	£29,855	£0	Parish Council / community	£0	S106	£29,855	0
131	Community facilities	Community space	Essential	Houghton on the Hill	£53,739	£0	Parish Council / community	£0	S106	£53,739	0
135	Community facilities	Community space	Essential	Bitteswell	£25,590	£0	Parish Council / community	£0	S106	£25,590	0
136	Community facilities	Community space	Essential	Church & East Langton	£25,590	£0	Parish Council / community	£0	S106	£25,590	0
137	Community facilities	Community space	Essential	The Claybrookes	£42,650	£0	Parish Council / community	£0	S106	£42,650	0
138	Community facilities	Community space	Essential	Dunton Bassett	£34,120	£0	Parish Council / community	£0	S106	£34,120	0
139	Community facilities	Community space	Essential	Foxton	£8,530	£0	Parish Council / community	£0	S106	£8,530	0
140	Community facilities	Community space	Essential	Gilmorton	£23,031	£0	Parish Council / community	£0	S106	£23,031	0
142	Community facilities	Community space	Essential	Great Easton (with Bringhurst)	£26,443	£0	Parish Council / community	£0	S106	£26,443	0
143	Community facilities	Community space	Essential	Hallaton	£29,855	£0	Parish Council / community	£0	S106	£29,855	0
144	Community facilities	Community space	Essential	Lubenham	£29,855	£0	Parish Council / community	£0	S106	£29,855	0
145	Community facilities	Community space	Essential	Medbourne	£26,443	£0	Parish Council / community	£0	S106	£26,443	0
147	Community facilities	Community space	Essential	South Kilworth	£17,913	£0	Parish Council / community	£0	S106	£17,913	0
148	Community facilities	Community space	Essential	Swinford	£34,120	£0	Parish Council / community	£0	S106	£34,120	0
149	Community facilities	Community space	Essential	Tilton	£29,855	£0	Parish Council / community	£0	S106	£29,855	0
150	Community facilities	Community space	Essential	Tugby	£12,795	£0	Parish Council / community	£0	S106	£12,795	0
151	Community facilities	library expansion	Desirable	Windfall	£6,188	£0	Community group / trust	£0	S106	£6,188	0
152	Community facilities	library expansion	Desirable	East of Lutterworth SDA	£41,250	£34,375	LCC Library Service	£0	S106	£41,250	£34,375
153	Community facilities	library expansion	Desirable	Scraptoft North SDA	£33,000	£0	Community group / trust	£0	S106	£33,000	£0
154	Community facilities	library expansion	Desirable	Market Harborough	£30,965	£0	LCC Library Service	£0	S106	£30,965	0
158	Community facilities	library expansion	Desirable	Billesdon	£330	£0	Community group / trust	£0	S106	£330	0
159	Community facilities	library expansion	Desirable	Fleckney	£8,113	£0	Community group / trust	£0	S106	£8,113	0
160	Community facilities	library expansion	Desirable	Great Glen	£963	£0	Community group / trust	£0	S106	£963	0
161	Community facilities	library expansion	Desirable	Houghton on the Hill	£1,733	£0	Community group / trust	£0	S106	£1,733	0
165	Community facilities	library expansion	Desirable	Bitteswell	£825	£0	Community group / trust	£0	S106	£825	0
166	Community facilities	library expansion	Desirable	Church & East Langton	£825	£0	Community group / trust	£0	S106	£825	0
167	Community facilities	library expansion	Desirable	The Claybrookes	£1,375	£0	Community group / trust	£0	S106	£1,375	0
168	Community facilities	library expansion	Desirable	Dunton Bassett	£1,100	£0	Community group / trust	£0	S106	£1,100	0
169	Community facilities	library expansion	Desirable	Foxton	£275	£0	Community group / trust	£0	S106	£275	0
170	Community facilities	library expansion	Desirable	Gilmorton	£743	£0	Community group / trust	£0	S106	£743	0
172	Community facilities	library expansion	Desirable	Great Easton (with Bringhurst)	£853	£0	Community group / trust	£0	S106	£853	0
173	Community facilities	library expansion	Desirable	Hallaton	£963	£0	Community group / trust	£0	S106	£963	0
174	Community facilities	library expansion	Desirable	Lubenham	£963	£0	Community group / trust	£0	S106	£963	0
175	Community facilities	library expansion	Desirable	Medbourne	£853	£0	Community group / trust	£0	S106	£853	0
177	Community facilities	library expansion	Desirable	South Kilworth	£578	£0	Community group / trust	£0	S106	£578	0
178	Community facilities	library expansion	Desirable	Swinford	£1,100	£0	Community group / trust	£0	S106	£1,100	0
179	Community facilities	library expansion	Desirable	Tilton	£963	£0	Community group / trust	£0	S106	£963	0
180	Community facilities	library expansion	Desirable	Tugby	£413	£0	Community group / trust	£0	S106	£413	0