



Infrastructure Delivery Plan for South East King's Lynn Strategic Growth Area

October 2018

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Contents

Introduction	1
1.1 The Infrastructure Delivery Plan	1
1.2 Structure of this Document	2
1.3 Work Stages	2
1.4 Relationship with the Planning Process	2
2 The South East King's Lynn Strategic Growth Area	4
2.1 The Growth Area	4
3 The Policy Position regarding the SEKLSGA	6
3.1 National Planning Policy Framework	6
3.2 Local Policy	6
3.3 Neighbourhood Plan	7
3.4 Current Planning Applications	7
3.5 National Planning Guidance (NPG)	7
3.6 The RICS Guidance Note: Financial Viability in Planning (GN94/2012)	9
3.7 Borough Council of King's Lynn and West Norfolk Affordable Housing Policy	9
3.8 Community Infrastructure Levy (CIL)	10
3.9 Section 106 Costs	10
3.10 Infrastructure Identified for Delivery and Trigger Points	10
4 Work to Date	14
4.1 Background	14
4.2 Strategic Infrastructure Costs	14
4.3 Neighbourhood Plan Requirements	19
4.4 Other Required Infrastructure	20
4.5 Testing Viability	22
4.6 Stakeholder Consultation	22
5 Delivery of the SEKLSGA	23
5.1 Infrastructure Delivery	23
5.2 Indicative IDP Phasing Plan	23
5.3 Testing Viability	23
5.4 Items not Included in the Indicative Viability Assessment	24
6 Securing Development Infrastructure : Next Steps	25
6.1 Introduction	25
6.2 Mechanisms for securing infrastructure	25

Appendices	28
A. Phasing Plan	29
B. Indicative Viability Assessment	30
C. Cost Analysis Spreadsheets	31
C.1 Costs for 3,500 Homes	31
C.2 Costs for 3,988 Homes	31
D. Potential County Council Education Infrastructure Requirements – Proposed Housing Development – South East King's Lynn Strategic Growth Area	32
E. Consultation Responses	33

Introduction

1.1 The Infrastructure Delivery Plan

- 1.1.1 The Borough Council of King's Lynn and West Norfolk (BCKLWN) have appointed Mott MacDonald and Gerald Eve LLP to assist in the preparation and adoption of an Infrastructure Delivery Plan (IDP) for the South East King's Lynn Strategic Growth Area (SEKLSGA) (See Figure 1).
- 1.1.2 The IDP sets out the key strategic infrastructure that is required to support the housing objectives of the SEKLSGA and identifies where and at what time that infrastructure is required, who is responsible for delivering it, the predicted cost of provision and how these costs are expected to be funded. It is a 'living document' that will be periodically reviewed and modified to ensure that it remains up to date and addresses changing circumstances or includes new information that becomes available. Table 1 outlines the general chapter structure of this report
- 1.1.3 The IDP presents:
- Information on the infrastructure required to support the delivery of development identified through the Core Strategy and subsequent Development Plan Documents and Neighbourhood Plans;
 - Evidence for developer contributions by indicating suitable infrastructure schemes to which contributions can be directed to make a development acceptable in planning terms;
 - An assessment of the viability of the notional development of the SEKLSGA in relation to the key infrastructure required and build costs of the infrastructure;
 - The assumed housing delivery phasing strategy found in Appendix B.
- 1.1.4 The IDP essentially acts as a high-level reference and guide, setting out the agreed principles, processes and delivery mechanisms that will be updated as and when planning applications are progressed, and further detail and phasing timings are advanced. It is recognised that documentation contained within the planning applications will contain information which will develop the evidence base for concluding the triggers for infrastructure provision and detailed nature of the infrastructure to be provided.
- 1.1.5 The purpose is to clearly outline those infrastructure elements that are needed to deliver the SEKLSGA that will be provided (or contributed to) by all relevant parties, or where relevant, by an individual party. It is based on the clear rationale, as outlined by the National Planning Policy Framework (NPPF), for planning contributions to be fair, reasonable, and proportional. On that basis, it is highlighted that the IDP is as detailed as it can be prior to the development of detailed designs for the infrastructure, as well as more information relating to the phasing of development within SEKLSGA. Table 1 outlines the general chapter structure of this report.
- 1.1.6 The IDP will be updated on a regular basis; this process includes consulting with the BCKLWN and parish councils, organisations such as public transport providers, emergency services, utility companies, business associations, the development industry, and other providers of services such as the highway authority, education and social services.

1.2 Structure of this Document

Table 1: Chapter Structure and Contents

1.	Introduction
2.	The South East King's Lynn Strategic Growth Area (SEKLSGA)
3.	The Policy Position regarding the SEKLSGA
4.	Work to Date
5.	Delivery of the SEKLSGA
6.	Securing Development Infrastructure
	Appendices

1.3 Work Stages

1.3.1 This report is part of a wider instruction which has been broken down into Stages.

Stage 1a

1.3.2 Reviewed the infrastructure required, clarified the costs of the key infrastructure items, and build costs, developed an assumed housing delivery phasing strategy, and identified any cashflow funding issues that may influence the delivery of the SEKLSGA.

Stage 1b

1.3.3 The Gerald Eve report (Appendix B), providing an assessment of the viability of the notional development of the SEKLSGA using the information provided by Mott MacDonald.

Stage 2a

1.3.4 The provision of a IDP report by Mott MacDonald to which this Gerald Eve report is appended as a supporting document along with a series of other pieces of supporting documentation.

Stage 2b

Consultation with the various parties and stakeholders to agree an appropriate approach to delivery of the SEKLSGA and to document it in this report. It should be noted that this is a working document and will be revised and enlarged as more information and detail becomes available.

1.4 Relationship with the Planning Process

1.4.1 The IDP does not constitute draft heads of terms for a planning agreement. It is intended for use in the formation of draft heads of terms and negotiation of section 106 agreements for each parcel of land brought forward and the various planning applications therein. The IDP is intended to inform the decision-making process and consideration of planning applications. It will assist with the assessment of viability for each site coming forward as well as providing a route map against which individual planning applications can be measured in terms of how they will contribute to the comprehensive and timely development of the SEKLSGA.

1.4.2 The IDP does not include the costs of infrastructure items. Although assumptions on costs were concluded from the Indicative Viability Assessment (Appendix B) undertaken during Stage 1 of this work, these will require further refinement as more detail becomes available. The IDP has been informed by analysis of likely costs and viability appraisal work (Appendix B) . It is

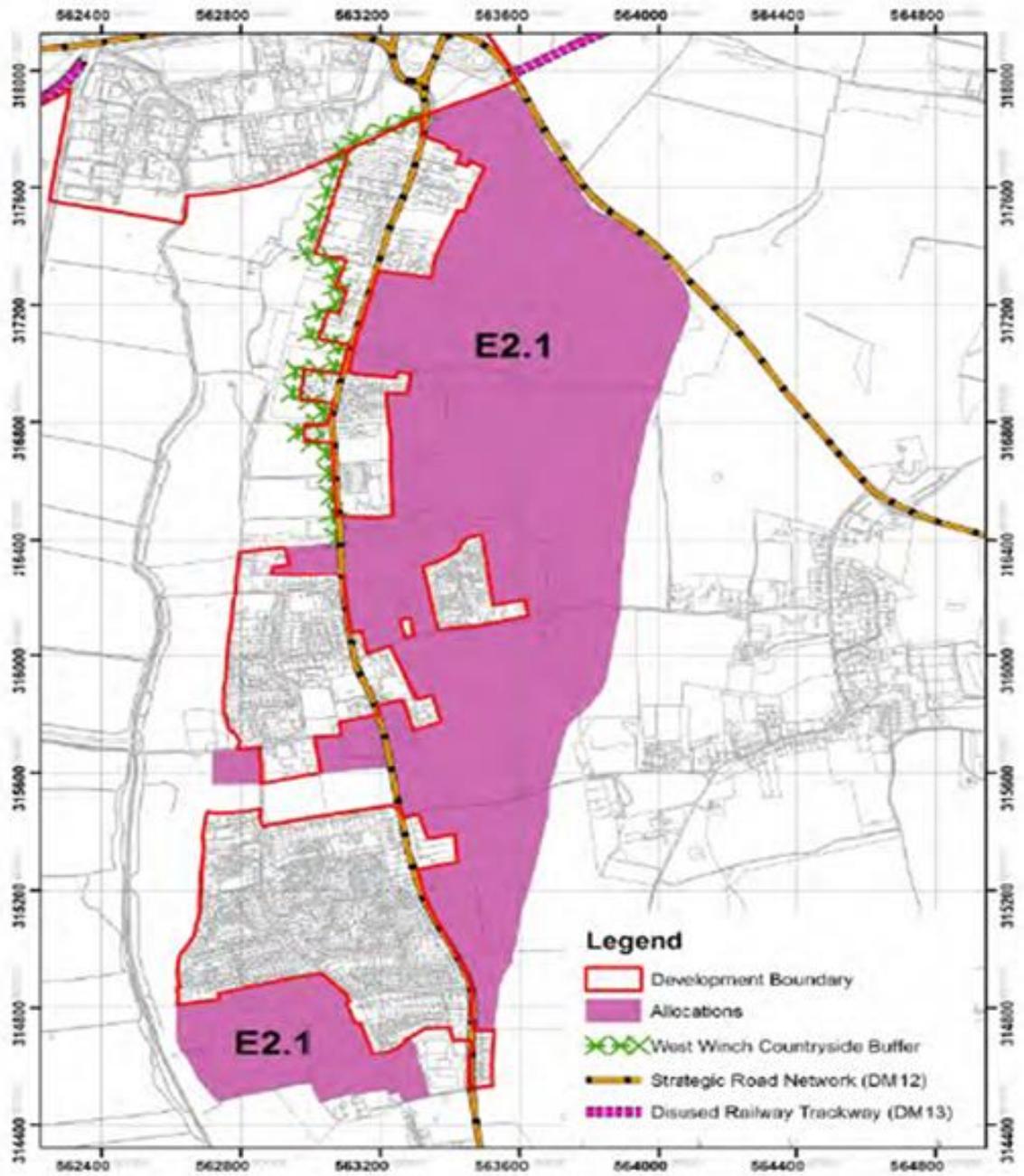
proposed that detailed costs and the contributions sought will be discussed and agreed with BCKLWN through the planning applications.

2 The South East King's Lynn Strategic Growth Area

2.1 The Growth Area

- 2.1.1 The growth area (Figure 1) is located to the south-east of King's Lynn and includes parts of the parishes of West Winch and North Runcton. It is roughly bounded by the A10 to the west, the A47 to the east, and the Setchey to Blackborough End road to the south. It stretches around 3.5 km north-south and around 1.5 km east-west. The area fringes the village of West Winch and the main road (A10) north towards Hardwick roundabout and King's Lynn. It stretches towards, but stops short of, North Runcton Village.
- 2.1.2 Although predominantly agricultural land, the growth area encompasses several existing dwellings and other premises lying between the two villages. In the late 19th Century West Winch was a small, dispersed agricultural village, with the church, public house, school, and smithy on the main London Road (now the A10), while most of the houses were to the west, fronting the common. By the end of the 1940s there was little change, though sporadic development fronting the London Road had taken place, especially to the north of the village nearer to King's Lynn. By the 1980s, substantial ribbon development had taken place along the main road, and the village had been transformed by extensive estate type developments which were then continuing. By this time, King's Lynn had also greatly expanded, bringing the village closer to the town and its influence.
- 2.1.3 The growth area lies on the western end of a low ridge of land between the Nar and Gaywood valleys, and the Common fringes the Fens stretching beyond to the west.

Figure 1: South East King's Lynn Strategic Growth Area



Source: Site Allocations and Development Management Policies Plan (SADMPP) 2016

3 The Policy Position regarding the SEKLSGA

3.1 National Planning Policy Framework

- 3.1.1 The National Planning Policy Framework (NPPF) (2012 revised 2018) sets out the Government's planning policies for England and how these are expected to be applied.
- 3.1.2 Annex 1 para 214 of the NPPF (2018) indicates that for Planning policy making, Authorities are currently able to rely upon the 2012 NPPF, although the NPPF was revised in July 2018 along with viability guidance in the National Planning Guidance (NPG - 2018). This report including the indicative viability assessment at Appendix B, therefore remains consistent with the 2018 NPPF.
- 3.1.3 Para. 153 of the NPPF (2012) states that:
- 3.1.4 *"Each local planning authority should produce a Local Plan for its area. This can be reviewed in whole or in part to respond flexibly to changing circumstances. Any additional development plan documents should only be used where clearly justified. Supplementary planning documents should be used where they can help applicants make successful applications or aid infrastructure delivery and should not be used to add unnecessarily to the financial burdens on development."*
- 3.1.5 The NPPF (2012) places emphasis on using a proportionate evidence base when determining infrastructure requirements during local planning. Para. 162 of the NPPF (2012) states that:
- 3.1.6 *"Local planning authorities should work with other authorities and providers to:*
- *Assess the quality and capacity of infrastructure for transport, water supply, wastewater and its treatment, energy (including heat), telecommunications, utilities waste, health, social care, education, flood risk and coastal change management, and its ability to meet forecast demands; and*
 - *Take account of the need for strategic infrastructure including nationally significant infrastructure within their areas."*
- 3.1.7 The NPPF (2012) establishes the presumption in favour of sustainable development. Specifically, paragraph 19 states that the planning system should do all that it can to promote sustainable economic growth to create jobs and prosperity and meet the challenges of global competition alongside a low carbon future. The NPPF states that significant weight should be placed on the need to support economic growth through the planning system.
- 3.1.8 Part 6 of the NPPF (2012) relates specifically to boosting the national supply of housing in order to meet local housing requirements. Paragraph 50 states that there should be provision of a wide choice of high quality homes, opportunities for home ownership should be widened and inclusive and mixed communities should be created through residential-led development proposals.
- 3.1.9 Section 7 of the NPPF (2012) states that the Government attaches great importance to the design of the built environment and that good design is a key aspect of sustainable development

3.2 Local Policy

- 3.2.1 The adopted Core Strategy designated South East King's Lynn as one of the strategic "urban expansion" areas around King's Lynn. The independent planning inspector who examined the

Core Strategy explicitly stated that, compared to potential alternatives, the expansion areas identified were preferable to the alternatives in meeting the Borough's need for substantial numbers of additional dwellings over the plan period. It is relatively unconstrained by flood risk and infrastructure problems, and relatively easily accessed and serviced.

3.2.2 Policy CS09 of the Core Strategy, "Housing Distribution", provides for an allocation in this general area of at least 1,600 new homes, with supporting infrastructure. It also identifies this as establishing a direction for future growth beyond the plan period (i.e. beyond 2026). Work by the Prince's Foundation for the Built Environment (sponsored by a major landowner and undertaken with the active involvement of local people), together with sites and information put forward, suggests that a total of 3,000 to 3,500 additional dwellings could potentially be accommodated in the fullness of time, as indicated in figure 7 of the Core Strategy.

3.2.3 To achieve the strategic outcomes detailed in Policy E.1 of the Site Allocations and Development Management Policies Plan (SADMPP), Part B of Policy E.1 - paragraph b states that proposals for development will need to;

"Demonstrate through an Infrastructure Delivery Plan, to be agreed by the local planning authority, how the growth area's infrastructure can be delivered in a way which is proportionate to the scale and value of the development on the application site and showing how the various considerations and requirements (including those above) can be satisfactorily integrated and delivered across the site".

3.2.4 The IDP has been prepared to support the level of growth envisaged in the Council's adopted Core Strategy. The Core Strategy identified the Growth Area as a strategic allocation for the development of up to 3,500 houses and refers to the allocation of supporting infrastructure which is to be provided in tandem with housing development.

3.3 Neighbourhood Plan

3.3.1 The North Runcton and West Winch Neighbourhood Plan for the Period 2016-2026 was submitted by the Local Planning Authority (LPA) in November 2016. This document details a vision that aims to guide the development of the parishes until 2026 and beyond.

3.3.2 During the compilation of this document, a series of community consultations were undertaken to identify local needs and aspirations, whilst also allowing residents to comment on draft policies.

3.3.3 It is therefore deemed that this document should be held with high importance when planning infrastructure delivery in the Growth Area and as such has been considered when making the decisions outlined in this document.

3.4 Current Planning Applications

3.4.1 Planning application 13/01615/OM was submitted by Turley Associates on behalf of Hopkins Homes for development of up to 1,110 residential units (class C3); primary school (class D1); local centre (class A1, B1, D1, D2); public open space, landscaping, and highway access onto both the A47 and A10.

3.5 National Planning Guidance (NPG)

3.5.1 Whilst the SADMPP is an additional document to BCKLWN's Development Framework, it is anticipated to deliver a significant proportion of the housing trajectory for the Authority. As a result we have had regard to National Planning Guidance (NPG) (published 6 March 2014 and updated 24 July 2018) which refers to viability and states,

- 3.5.2 *“Plans should set out the contributions expected from development. This should include setting out the levels and types of affordable housing provision required, along with other infrastructure (such as that needed for education, health, transport, flood and water management, green and digital infrastructure).”*
- 3.5.3 *“These policy requirements should be informed by evidence of infrastructure and affordable housing need, and a proportionate assessment of viability that takes into account all relevant policies, and local and national standards, including the cost implications of the Community Infrastructure Levy (CIL) and section 106. Policy requirements should be clear so that they can be accurately accounted for in the price paid for land. To provide this certainty, affordable housing requirements should be expressed as a single figure rather than a range. Different requirements may be set for different types of site or types of development.”*
(Paragraph: 001 Reference ID: 10-001-20180724)
- 3.5.4 *“The role for viability assessment is primarily at the plan making stage. Viability assessment should not compromise sustainable development but should be used to ensure that policies are realistic, and that the total cumulative cost of all relevant policies will not undermine deliverability of the plan.”*
- 3.5.5 *“It is the responsibility of plan makers in collaboration with the local community, developers and other stakeholders, to create realistic, deliverable policies. Drafting of plan policies should be iterative and informed by engagement with developers, landowners, and infrastructure and affordable housing providers.”*
(Paragraph: 002 Reference ID: 10-002-20180724)
- 3.5.6 *“It is important to consider the specific circumstances of strategic sites. Plan makers can undertake site specific viability assessment for sites that are critical to delivering the strategic priorities of the plan. This could include, for example, large sites, sites that provide a significant proportion of planned supply, sites that enable or unlock other development sites or sites within priority regeneration areas. Information from other evidence informing the plan (such as Strategic Housing Land Availability Assessments) can help inform viability assessment for strategic sites.”*
(Paragraph: 005 Reference ID: 10-005-20180724)
- 3.5.7 *“In plan making and decision making viability helps to strike a balance between the aspirations of developers and landowners, in terms of returns against risk, and the aims of the planning system to secure maximum benefits in the public interest through the granting of planning permission.”*
(Paragraph: 010 Reference ID: 10-010-20180724)
- 3.5.8 *“For viability assessment of a specific site or development, market evidence (rather than average figures) from the actual site or from existing developments can be used. Any market evidence used should be adjusted to take into account variations in use, form, scale, location, rents and yields, disregarding outliers. Under no circumstances will the price paid for land be a relevant justification for failing to accord with relevant policies in the plan.”*
Paragraph: 011 Reference ID: 10-011-20180724)
- 3.5.9 This report therefore considers assessment of the SEKLSGA, as a hybrid between area wide assessment and site-specific assessment, due to the nature of unknowns, detail and length of

time involved in delivery. Furthermore, it also has regard to the impact of forecasting and sensitivity testing to consider the potential of the SEKLSGA for viable development.

3.6 The RICS Guidance Note: Financial Viability in Planning (GN94/2012)

3.6.1 In assessing financial viability, this report has considered the RICS Guidance Note on Financial Viability in Planning.

3.6.2 GN94/2012 (first edition) was published in August 2012 and its purpose is to enable all participants in the planning process to have a more objective and transparent basis for understanding and evaluating financial viability in a planning context. It provides practitioners with advice on undertaking and assessing viability appraisals for planning purposes.

3.6.3 GN94/2012 defines the following:

- financial viability for planning purposes;
- separates the key functions of development, being land delivery and viable development (in accordance, and consistent, with the NPPF (2012 revised 2018));
- highlights the residual appraisal methodology;
- defines Site Value for both scheme-specific and area-wide testing in a market rather than hypothetical context;
- what to include in viability assessments; terminology and suggested protocols; and the uses of Financial Viability Assessments ("FVA") in planning.

3.6.4 It provides all those involved in financial viability in planning and related matters with an objective method, framework and set of principles that can be applied for both plan making and development management.

3.6.5 GN94/2012 is grounded in the statutory and regulatory planning regime that currently operates in the UK. It is relevant and consistent with the Localism Act 2011, the NPPF (2012 revised 2018) and the Community Infrastructure Levy Regulations 2010.

3.6.6 Financial viability for planning purposes is defined as follows:

"An objective financial viability test of the ability of a development project to meet its costs including the cost of planning obligations, whilst ensuring an appropriate site value for the landowner and a market risk adjusted return to the developer in delivering that project."

3.7 Borough Council of King's Lynn and West Norfolk Affordable Housing Policy

3.7.1 Policy CS09 of the Council's "Affordable Housing Policy" April 2011 document sets out that:

3.7.2 *"The overall target for affordable housing in the borough during the plan period will be related to the ability to deliver in the market conditions that prevail at the time a planning application is made. At the present time, the percentage which will be sought for affordable housing provision on qualifying sites is:*

- 15% within the built-up area of King's Lynn
- 20% in all other areas.

3.7.3 It should be noted the SEKLSGA falls within the area where 20% affordable housing is required.

3.7.4 In terms of tenure split, Section 6.6 of the Council's "Affordable Housing Policy" April 2011 document also sets out that:

- 3.7.5 *"The tenure split of affordable housing sought as a requirement of S.106 agreements will be 70:30 rent to shared ownership. The need for rented to shared ownership in this proportion has been established through research evidenced in the Strategic Housing Market Assessment."*

3.8 Community Infrastructure Levy (CIL)

- 3.8.1 In terms of Community Infrastructure Levy (CIL), the Council's CIL charging schedule sets out that the South East King's Lynn Strategic Growth Area has a zero £ per m² rating, so that no CIL is chargeable on the proposed development of the SEKLSGA site.

3.9 Section 106 Costs

- 3.9.1 The IDP highlights the various documents from which the required infrastructure and Section 106 costs have been identified. These include:
- Core Strategy: Policy CS09
 - Hardwick Transport Strategy
 - SADMPP: Policy E.1
 - Neighbourhood Plan: North Runcton and West Winch
 - Planning application 13/01615/OM
 - Norfolk County Council – Norfolk Schools.

3.10 Infrastructure Identified for Delivery and Trigger Points

Required Infrastructure

- 3.10.1 For the purposes of this document, the definition of the key infrastructure groups, and the types of facilities and services within each group required to develop the SEKLSGA, are broadly summarised below:

Transport

- Trunk roads
- Local roads and streets
- Lanes and home roads
- Cycle and shared use pathways.

Education

- Primary schools
- High school provision
- Sixth form capacity increase.

Utilities

- Electricity
- Gas
- Telecommunications
- Mains water distribution
- Sewerage and drainage.

Community

- Indoor recreation and sports facilities
- Fire Service requirements
- Community meeting space
- Allowances for expansion to West Winch Church Graveyard
- Libraries.

Green Infrastructure

- Outdoor sports facilities
- Play areas
- Green space and corridors
- Habitat creation
- Allotments.

It should be noted that this is a working document and this list will be revised and enlarged as more information and detail becomes available.

Section 106 Requirements and Trigger Points

- 3.10.2 There are trigger points that require the delivery of key infrastructure to support the development of the SEKLSGA. These are detailed in Table 2.

Table 2: Trigger Points for Required Infrastructure

Section 106 Infrastructure		
Infrastructure Theme	Item	Trigger Point for Delivery
Access and Transport	Minor Improvement to Hardwick for A10 Arm	To be delivered by 2020 or by the construction of 400 dwellings.
	A10 West Winch Bypass - Phase 1	To be delivered by 2020 or by the construction of 400 dwellings.
	A10 West Winch Bypass - Phase 2	To be delivered by 2026 or by the construction of 1,600 dwellings.
	A47 east of Hardwick dualling	To be delivered by 2026 or by the construction of 1,600 dwellings.
	Hardwick interchange local widening within junction	To be delivered by 2026 or by the construction of 1,600 dwellings.
	A47 retained but expanded	To be delivered by 2026 or by the construction of 1,600 dwellings.
	Traffic calming through West Winch Village	To be delivered within 12 months of development commencing.
	Bus Strategy	Bus service improvements are based on business case and therefore details and delivery of these are to be identified and agreed at a later date.
Education	West Winch Primary School capacity increase	£100,000 to be paid on commencement of the development. A further £1,000,000 to be paid on occupation of 100 new dwellings (6 months

Section 106 Infrastructure

		post commencement). The balance is to be paid on the occupation of 500 new dwellings across the overall IDP area (30 months post commencement)
	420 place primary school	2ha School site is to be purchased on commencement of the development and transferred to a fully serviced school site after the occupation of the 100th dwelling.
	315 place primary school	2ha School site to be purchased 3 years prior to the point where 2,000 units are estimated to be occupied (i.e. 84 months post commencement). The school is to be completed by the point when 2,000 units are occupied across the wider IDP area and cost apportioned across the previous 3 years.
	Nursery provision	To be delivered as part of the primary schools.
	High school capacity increase	To be paid in four equal instalments on occupation of 400 dwellings of each respective phase.
	Sixth form capacity increase	To be paid in four equal instalments on occupation of 400 dwellings of each respective phase.
Green Infrastructure	Neighbourhood parks, allotments and open spaces with equipped sports and play facilities	Contributions are to be apportioned and phased across the whole IDP area on a basis of cost per residential unit delivered. To be delivered in accordance with phasing plan to be agreed prior to development.
Community Facilities	Community centre 1	Contributions are to be apportioned and phased across the whole IDP area on a basis of cost per residential unit delivered. To be delivered in accordance with phasing plan to be agreed prior to development.
	Community centre 2	Contributions are to be apportioned and phased across the whole IDP area on a basis of cost per residential unit delivered. To be delivered in accordance with phasing plan to be agreed prior to development.
	Community centre 3	Contributions are to be apportioned and phased across the whole IDP area on a basis of cost per residential unit delivered. To be delivered in accordance with phasing plan to be agreed prior to development.
	Sports centre	Contributions are to be apportioned and phased across the whole IDP area on a basis of cost per residential unit delivered. To be delivered in accordance with phasing plan to be agreed prior to development.
	1no. Multi Use Games Area (MUGA) facility	Contributions are to be apportioned and phased across the whole IDP area on a basis of cost per residential unit delivered. To be delivered in accordance with phasing plan to be agreed prior to development.
	Health centre	Land is to be safeguarded for this, however, a need for a new health centre within the growth area is to be assessed at a later stage.
	3no. shops	Land is to be safeguarded for this.
	Library contributions	Contributions taken per dwelling and any upgrades are to be delivered as required, in

Section 106 Infrastructure

		accordance with phasing plan which is to be agreed prior to construction.
Utilities	Fire hydrants	One hydrant to be provided for every 50 dwellings, every school and neighbourhood centre.
	SuDS infrastructure	In accordance with agreed phasing plan prior to the commencement of development.

Source: SADMPP, BCKLWN Core Strategy, Neighbourhood Plan, and Norfolk County Council

4 Work to Date

4.1 Background

4.1.1 A document review was undertaken to aid a full understanding of the extent of work that had been previously carried out with regards to infrastructure planning in the local area and the future requirements for the Growth Area. The review of planning information has been summarised in Section 3 above. This was supplemented by consultation with the following organisations:

- Norfolk County Council on:
 - Education
 - Public transport
 - Flood risk and drainage
 - A47 Alliance
- Norfolk Community Health and Care NHS Trust
- UK Power Networks
- National Grid
- Anglian Water
- Internal Drainage Board
- BCKLWN Parks and Open Spaces Team
- Proposed developers
- Mott MacDonald cost intelligence team and Black Book authors
- Mott MacDonald Hardwick Transport Strategy Report

4.2 Strategic Infrastructure Costs

4.2.1 The following tables outline potential costs for the provision of infrastructure required to develop the SEKLSGA.

4.2.2 There are two sets of costs that have contributed to the Indicative Viability Assessment one set has been based on the proposed 3,500 homes (Appendix C1). Another set of costs has been developed based on slightly increased density scenarios across the site of 3,988 homes (Appendix C2), This scenario is tested in the attached Indicative Viability Assessment (Appendix B) demonstrates.

4.2.3 All cost data has been uplifted to a common base date of 3Q2018 using the BCIS All-in-Tender Price Index to arrive at current prices. This process enables a comparison of past projects by bringing their costs in line with current levels of inflation and subsequently allowing a like-for-like comparison to be made between past projects that have varying completion dates. As an example, projects completed 5 years ago will likely be cheaper than similar projects in the present-day due to ongoing inflation movements in labour, plant, and materials.

4.2.4 Cost data has been sourced from a combination of in-house project data and professional opinion based on experience. Mott MacDonald hold vast amounts of cost data on infrastructure projects both past and present due to the ongoing workload with relevant organisations in the infrastructure industry. Alongside this, a number of professionals within Mott MacDonald were contacted to gain their professional opinion; namely Highways and Infrastructure Estimators /

Quantity Surveyors with many years' experience in their field. The Cost Analysis Spreadsheets can be found in Appendix C. It should be noted that there is no change in these costs for either 3,500 or 3,988 homes apart from predicted education costs.

- 4.2.5 As a result of the length of the development programme for the SEKLSGA it is appropriate to assume growth in costs and values across the development period. For this reason the growth rates set out in Figure 9a of the Indicative Viability Assessment (Appendix B) have been adopted.
- 4.2.6 In order to ensure the robustness of construction cost forecast growth assumptions, figures have been used derived from an average of a range of latest forecasts from established market commentators. All costs have been derived from third quarter 2018 values (Q32018).

Table 3: Recalculated Infrastructure Costs for Hardwick Transport Strategy (Costs rounded to nearest £)

Infrastructure costs for 3500 homes	Recalculated 2018 Cost £	Developer Contribution £
Minor improvement to Hardwick for A10 arm	547,301.00	547,301.00
A10 West Winch Bypass – Phase 1	901,323.00	901,323.00
A10 West Winch Bypass – Phase 2	6,566,295.00	6,566,295.00
A47 east of Hardwick dualling	2,189,207.00	2,189,207.00
Hardwick Interchange local widening within junction	1,469,934.00	1,469,934.00
A47 roundabout retained but expanded	1,312,463.00	1,312,463.00
A47 flyover dualled	8,934,975.00	0
A149 dualled	2,407,066.00	0
Traffic calming through West Winch Village (nominal sum)	538,194.00	538,194.00
Total Cost	24,866,762.00	13,524,720.00
	£Q 2018	
Infrastructure costs for 3988 homes	Recalculated 2018 Cost £	Developer Contribution £
Minor improvement to Hardwick for A10 arm	547,301.00	547,301.00
A10 West Winch Bypass – Phase 1	901,323.00	901,323.00
A10 West Winch Bypass – Phase 2	6,566,295.00	6,566,295.00
A47 east of Hardwick dualling	2,189,207.00	2,189,207.00
Hardwick Interchange local widening within junction	1,469,934.00	1,469,934.00
A47 roundabout retained but expanded	1,312,463.00	1,312,463.00
A47 flyover dualled	8,934,975.00	0
A149 dualled	2,407,066.83	0
Traffic calming through West Winch Village (nominal sum)	£538,194.00	£538,194.00
Total Cost	24,866,762.00	13,524,720.00
	3Q 2018	

Source: Appendix C – Cost Analysis Reports

Public Transport

- 4.2.7 The requirement for financial contributions to make improvements to the local bus service is given in SADMPP section E.2.60. However, at present, this figure could not be ascertained as any improvements would be based on a viable business case proposed by the relevant bus service provider.

- 4.2.8 Development within the Growth Area can support a business case for such improvements and mitigate the size of any financial contribution sought for their delivery by providing layouts that facilitate bus access and maximise the catchment area for bus services.

Education

- 4.2.9 The education contribution requirements to make the development acceptable from the view of Norfolk County Council (NCC) are detailed in the document "Potential County Council Infrastructure Requirements – Proposed Housing Development – West Winch Growth Area (3500 Dwellings)" Appendix D. These requirements and their potential associated costs are shown in Table 4.

Table 4: Education Contribution Requirements

Item costs for 3,500 homes	Contribution Amount £
West Winch Primary School capacity increase	£2,084,276
420 place primary school	£6,900,000
315 place primary school	£5,150,000
High school capacity increase	£10,632,876
Sixth form capacity increase	£1,141,740
Total	£25,908,892
Item costs for 3,988 homes	
Contribution Amount £	
West Winch Primary School capacity increase	2,445,240
420 place primary school 1	6,900,000
420 place primary school 2	6,900,000
High school capacity increase	11,229,440
Sixth form capacity increase	1,198,827
Total	28,673,507

Source: Appendix C – Cost Analysis Reports

- 4.2.10 Further to the requirements outlined in Table 4, the "Potential County Council Infrastructure Requirements – Proposed Housing Development – West Winch Growth Area (3500 Dwellings)" document also states that:

" From September 2017, additional places will be needed due to the introduction of 30 Hours Free Entitlement for eligible families. These places will need planning for now, so nursery provision is being sought in this instance".

- 4.2.11 For the purposes of this IDP, this nursery provision is assumed to be part of the Primary School provision and therefore no cost has been included for this.
- 4.2.12 High school capacity increase costs will require further discussion as these are potentially 'theoretical' and not tied to planned projects (CIL vs S 106); however at present it is prudent to include these in the costs schedule.

Green Infrastructure

- 4.2.13 The green infrastructure requirements are outlined in the SADMPP Policy E2.1 – Part A – Paragraph 13 which states that the following is required:

"Significant 'green infrastructure', including (separately and/or combination, as appropriate)

- *Landscape planting to integrate the development within the local landscape, character and provide visual amenity within the growth area;*
- *Recreational open space of at least 9 hectares;*
- *Conservation and enhancement of local biodiversity;*
- *Measures to mitigate potential adverse recreational impacts on designated nature conservation sites (SPAs, SACs, Ramsar) outside the growth area”*

4.2.14 The green infrastructure allowances for the Growth Area outlined in Table 5 have been included in the cost analysis. There is no change in costs for either 3,500 or 3,988 homes.

Table 5: Green Infrastructure Allowances

Item costs for 3,500 homes	Land Allowance	Cost £
Formal recreation facilities such as playing fields	10ha	5,185,467.00
Play areas	6ha	12,786,084.00
Allotments	0.6ha	104,774.00
Other green spaces	4ha	355,169.00
Natural and semi-natural green spaces Inc. footpath links and hedgerows (i.e. landscape buffers)	28ha	1,988,946.00
Interim habitat mitigation payment	-	200,641.00
Maintenance costs formal recreation facilities such as playing fields	10ha	1,391,446.00
Maintenance costs play areas	4ha	4,350,589.00
Maintenance costs allotments	0.6ha	20,407.00
Maintenance costs green spaces	4ha	636,973.00
Maintenance costs natural and semi natural greenspace	28ha	995,656.00
Total	-	28,016,156.00
Item costs for 3,988 homes	Land Allowance	Cost £
Formal recreation facilities such as playing fields	10ha	5,185,467.00
Play areas	6ha	12,786,084.00
Allotments	0.6ha	104,774.00
Other green spaces	4ha	355,169.00
Natural and semi-natural green spaces Inc. footpath links and hedgerows (i.e. landscape buffers)	28ha	1,988,946.00
Interim habitat mitigation payment	-	200,641.00
Maintenance costs formal recreation facilities such as playing fields	10ha	1,391,446.00
Maintenance costs play areas	6ha	4,350,589.00
Maintenance costs allotments	0.6ha	20,407.00
Maintenance costs green spaces	4ha	636,973.00
Maintenance costs natural and semi natural greenspace	28ha	995,656.00
Total	-	28,016,156.00

Source: Appendix C – Cost Analysis Reports

4.2.15 The allowances outlined in Table 5 have been taken pro rata from a previous scheme that Mott MacDonald has undertaken, where the costs were available that related to green infrastructure. Projections of these costs are problematic as they vary considerably and from year to year and

are highly dependent on the nature and type of open space required. However, the exception is for the interim habitat mitigation payment costs, which are given in the SADMPP DM16.

Community Facilities

4.2.16 The community facilities required due to the development have been ascertained from the requirements outlined in Policy E2.1 of the SADMPP and are outlined in Table 6. They include both land and physical build costs. The requirement for sports facilities stems from the need for “active” recreation facilities. Policy GA03 (NP) states that:

“10 Ha of new active recreation facilities should be provided (which could include sports pitches, courts, MUGA facilities, children’s play areas or trim trails within the new Neighbourhood Plan area”.

This also accounts for the statement on the Hopkins Homes application from Sport England. However, the scope and nature of new sports facilities will ultimately be decided by BCKLWN in consultation with developers.

Table 6: Community Facilities Allowances

Item costs for 3,500 homes	Land Take	Cost £
Community centre 1	1000 m ²	2,447,133.00
Community centre 2	500 m ²	1,223,566.00
Community centre 3	500 m ²	1,223,566.00
Sports centre	1500 m ²	3,105,575.00
1no. MUGA facility	782 m ²	203,299.00
Health centre	-	-
3no. shops	280 m ² each	-
NLIS library contributions	-	979,128.00
Total	-	9,182,270.00
Item costs for 3,988 homes	Land Take	Cost £
Community centre 1	1000 m ²	2,447,133.00
Community centre 2	500 m ²	1,223,566.00
Community centre 3	500 m ²	1,223,566.00
Sports centre	1500 m ²	3,105,575.00
1no. MUGA facility	782 m ²	203,299.00
Health centre	-	-
3no. shops	280 m ² each	-
NLIS library contributions	-	979,128.00
Total	-	9,182,270.00

Source: Appendix C – Cost Analysis Reports

4.2.17 The land take associated with each of the items shown in Table 6 are conservative estimates, with the health centre assumed to be part of the larger community centre and the NLIS contributions coming directly from Council requirements.

Utilities

4.2.18 The SADMPP Policy E2.1 states the following as a requirement for the Growth Area;

“Incorporation of Sustainable Drainage Systems to address surface water run-off, flood risk, biodiversity and the avoidance of groundwater pollution”

- 4.2.19 To outline the existing drainage conditions and to ascertain the level and type of SuDS required because of the Growth Area at a high level, the Middle Level Commissioners for the East of Ouse, Polver and Nar Internal Drainage Board prepared the North Runcton & West Winch Surface Water Management Strategy in April 2014. Using the data from this in combination with Environmental Agency Report SC080039/R9 (March 2015) the costs associated with site drainage and the required strategic SuDS infrastructure have been ascertained.
- 4.2.20 The requirement for fire hydrants contributions has been detailed in the "Potential County Council Infrastructure Requirements – Proposed Housing Development – West Winch Growth Area (3500 Dwellings)" document and this has been included in the costs shown in Table 7.

Table 7: Utilities Requirements (Section 106 costs)

Item costs for 3,500 homes	Cost £
Fire hydrants contributions	70,167.00
Detention basins – capital cost (78317.4m ³ storage allowance)	6,359,864.00
Detention basins - maintenance	349,980.00
Total	6,780,012.00
Item costs for 3,988 homes	
Fire hydrants contributions	70,167.00
Detention basins – capital cost (78317.4m ³ storage allowance)	6,359,864.00
Detention basins - maintenance	349,980.00
Total	6,780,012.00

Source: Appendix C – Cost Analysis Reports

- 4.2.21 The requirements shown for detention basins in Table 8 are taken at a very high level and as such, detailed analysis will have to take place to determine exact site conditions.

4.3 Neighbourhood Plan Requirements

Access and Transport

- 4.3.1 The Neighbourhood Plan has raised several additional requirements with regards to planning and transport, these are shown in Table 8. There is no change in costs for either 3,500 or 3,988 homes.

Table 8: Neighbourhood Plan Additional Access and Transport Requirements

Item costs for 3,500 homes	Cost £
Redevelopment of A10 between Chapel Lane and Long Lane	-
Provision for future dual use path connection to Bawsey Country Park	-
Dual use path connection to the village of Middleton	519,552.00
Safe cycle and pedestrian crossing at Rectory Lane	103,412.00
Safe cycle and pedestrian crossing at Chequers Lane	103,412.00
Total	726,378.00
Item costs for 3,988 homes	
Redevelopment of A10 between Chapel Lane and Long Lane	-
Provision for future dual use path connection to Bawsey Country Park	-
Dual use path connection to the village of Middleton	519,552.00
Safe cycle and pedestrian crossing at Rectory Lane	103,412.00

Item costs for 3,500 homes	Cost £
Safe cycle and pedestrian crossing at Chequers Lane	103,412.00
Total	726,378.00

Source: Appendix C – Cost Analysis Report

- 4.3.2 It has been assumed that the redevelopment of the A10 between Long Lane and Chapel Lane will be included in the allowances for traffic calming listed in Table 3, with any other upgrades along this stretch not being directly related to the development.
- 4.3.3 The provision for a future dual use path to Bawsey Country Park is presumed to be an allowance for a tie-in point into the footpath network, and thus no cost has been associated with this as this can be facilitated with relative ease.
- 4.3.4 A dual use path to the village of Middleton has been allowed for in the cost plan, however this may not in its entirety be related to the development and as such it may be determined that the full costs for this item may not need to be covered by the development.
- 4.3.5 Safe cycle and pedestrian crossings at both Chequers Lane and Rectory Lane have been costed as Toucan Crossings, which would allow for the footway networks created by the development to be linked up over these roads.

Education

- 4.3.6 There were no additional education requirements raised in the Neighbourhood Plan.

Green Infrastructure

- 4.3.7 The Neighbourhood Plan has requested a 5ha fenced off nature reserve to be allocated as part of the development. No cost has been associated with this and it has been assumed that land take will be the only factor required.

Community Facilities

- 4.3.8 An allowance for the expansion to West Winch Church Graveyard has also been requested by the Neighbourhood Plan. This has been factored in and an allowance for the safeguarding of land has been made.

4.4 Other Required Infrastructure

Access and Transport

- 4.4.1 To allow for the development to function the additional access and transport requirements shown in Table 9 will be required. These have been derived from the masterplan layouts drawn up by potential developers. These will constitute costs to the developer. They have been included as part of the Indicative Viability Assessment but are not included as part of the Section 106 requirement.

Table 9: Additional Access and Transport Requirements

Item costs for 3,500 homes	Cost £
Neighbourhood streets – Site Masterplan	16,284,968.00
Village centre streets – Site Masterplan	2,175,525.00
Lanes and home roads – Site Masterplan	28,377,603.00
East to West road – Hopkins Homes	3,207,189.00
Other roads – Hopkins Homes	10,896,780.00

Item costs for 3,500 homes	Cost £
Cycle/shared use pathways associated with road network	4,332,938.00
2m footpath associated with road network	4,626,306.00
Cycle routes not associated with road network	957,955.00
Total	70,859,266.00

Item costs for 3,988 homes	Cost £
Neighbourhood streets – Site Masterplan	16,284,968.00
Village centre streets – Site Masterplan	2,175,525.00
Lanes and home roads – Site Masterplan	28,377,603.00
East to West road – Hopkins Homes	3,207,189.00
Other roads – Hopkins Homes	10,896,780.00
Cycle/shared use pathways associated with road network	4,332,938.00
2m footpath associated with road network	4,626,306.00
Cycle routes not associated with road network	957,955.00
Total	70,859,266.00

Source: Appendix C – Cost Analysis Reports

Utilities

4.4.2 The utilities required to facilitate the development are summarised in Table 10. These will constitute costs to the developer. They have been included as part of the Indicative Viability Assessment but are not included as part of the Section 106 requirement.

Table 10: Required Utilities

Utility	Company	Detail	Cost £ for 3,500 homes
Electricity	UKPN	Contestable works	1,091,603.00
		Non-contestable works	10,916,030.00
Gas	National Grid	Strategic improvements to gas supply	2,567,097.00
		Protection works to H/P line	1,637,404.00
		Infrastructure works	574,096.00
		On-site trenching	898,484.00
Water	Anglian Water	Mains water distribution	3,820,610.00
		Foul sewer connections	3,109,459.00
Total			£24,614,786.00

Utility	Company	Detail	Cost £ for 3,988 homes
Electricity	UKPN	Contestable works	1,091,603.00
		Non-contestable works	10,916,030.00
Gas	National Grid	Strategic improvements to gas supply	2,567,097.00
		Protection works to H/P line	1,637,404.00
		Infrastructure works	574,096.00
		On-site trenching	898,484.00
Water	Anglian Water	Mains water distribution	3,820,610.00
		Foul sewer connections	3,109,459.00
Total			£24,614,786.00

Source: Appendix C – Cost Analysis Reports

4.4.3 Full details of required utilities can be found in the utilities statement included in Appendix C.

4.5 Testing Viability

- 4.5.1 Using the cost information provided, a viability assessment was developed for the IDP to assess the viability of the proposed development of the Growth Area to deliver the infrastructure required. The Indicative Viability Assessment can be found in Appendix B and is summarised in Section 5.

4.6 Stakeholder Consultation

- 4.6.1 Discussions with developers were undertaken to gain an agreed way forward regarding delivery. Comments on the costing schedules used to underpin the Indicative Viability Assessment (Appendix B) can be found in Appendix E.

5 Delivery of the SEKLSGA

5.1 Infrastructure Delivery

5.1.1 This document has been compiled to present the findings and justification of the infrastructure required to enable the development of the SEKLSGA and to be used for discussion with stakeholders to inform future deliverable development within the SEKLSGA.

5.2 Indicative IDP Phasing Plan

5.2.1 As there is no adopted masterplan covering the whole of the SEKLSGA site and indicating geographical distribution of development or phasing, this section of the report sets out an indicative phasing plan adopted for the purposes of assessing the headline viability of the delivery of the SEKLSGA.

5.2.2 In producing the phasing plan, regard was given to the following data:

- The overall development capacity of the Growth Area as set out in the BCKLWN Site Allocations and Development Management Policies Plan (SADMPP) which totals 3,500 residential units
- The SADMPP indicates that of the 3,500 units, an allocation of 1,600 new homes with supporting infrastructure should be delivered up to 2026
- The number of units proposed by Hopkins Homes (1,110 units) in the northern portion of the Growth Area in planning application ref. 13/01615/OM
- The proposed residential build out rate and phasing plan set out in the above Hopkins Homes planning application
- The residential build out rate proposed for the Growth Area as set out in the BCKLWN Strategic Housing Land Availability Assessment (SHLAA)
- Market evidence of residential delivery rates
- The potential location of future road infrastructure
- Existing gas pipeline restrictions.

5.2.3 The resultant plan is set out at Appendix A. This assumes that a total of circa 200 residential units (affordable and private market) are delivered per annum across the whole Growth Area to achieve the target of delivering 1,600 new homes by 2026. A minimum of two outlets delivering units simultaneously is anticipated to reflect overall delivery. This results in a total development programme of 18 years. Taking this into account an indicative phasing plan was drafted which indicates potential delivery and geographical distribution to deliver 3,500 houses over four phases; each phase representing approximately 4 years or 875 units.

5.2.4 Associated infrastructure costs were then attributed to phases, meeting the specified trigger points for the provision of required infrastructure to coincide with housing delivery.

5.3 Testing Viability

5.3.1 Indicative viability assessments were undertaken of the entire Growth Area, using the estimated infrastructure costs identified in this document, having regard to all planning policy requirements, including affordable housing and CIL requirements (see Appendix B).

- 5.3.2 A number of additional assumptions were applied within the indicative viability assessment, which in the absence of a defined masterplan scheme or overall development partner have been determined with regard to publicly available data, such as BCIS, and industry standard assumptions for holistic masterplan assessments.
- 5.3.3 It is recognised that several assumptions are based on a holistic masterplan basis and that these may vary from those applied at a more specific level relating to individual applications within the Growth Area.
- 5.3.4 Given the size of the scheme and the circa 18-year delivery profile, in accordance with PPG the assessment has made an allowance for growth in assumed values and inflation in associated costs.
- 5.3.5 Viability of the development of the Growth Area has been determined having regard to the residual profit output, which given the size of the scheme and assumptions applied has been considered on an Internal Rate of Return (IRR) basis.
- 5.3.6 The indicative viability assessment indicates the notional IDP scheme may achieve an IRR of 10.4% over the whole of the proposed development. Taking into account the precautionary nature of the cost schedules due to the lack of an overall masterplan, the capacity for cost savings and potential funding contributions, sensitivity and scenario analysis further indicates that the notional IDP scheme is potentially capable of being viable over the life time of the development and that an overall return of circa 20% IRR is achievable.
- 5.3.7 The series of scenario and sensitivity analyses identified are detailed in the Indicative Viability Assessment in Appendix B.
- 5.3.8 The indicative viability assessment identifies that housing delivery will be strongly correlated to associated and required infrastructure, and as such delivery could be accelerated through forward funding investment. Given the holistic nature of the indicative viability assessment, individual elements of the SEKLSGA delivery will need to be considered on a site-specific basis.

5.4 Items not Included in the Indicative Viability Assessment

- 5.4.1 In addition to the considered inputs, it should be noted that there are potentially a number of other elements that could impact upon the viability of the notional IDP Scheme. However, for the purposes of this assessment, the following items have not been included:
- Additional costs for ransom issues between the parties
 - Commercial restrictions such as minimum land value drawdowns; although Gerald Eve takes note that £100,000 per acre is often cited in strategic contracts.
- 5.4.2 Whilst potential ransom costs have not been specifically identified in this assessment; it is considered that a significant proportion of the potential ransoms would simply reflect apportionment of land value and may have minimal impact on additional costs if they are required to deliver development at this location. They may have a greater impact if the scheme is developed piecemeal, where alternative value is defined.

6 Securing Development Infrastructure : Next Steps

6.1 Introduction

6.1.1 Development infrastructure and contributions are associated with the grant of planning permission. They are used to ensure that development proposals are acceptable in planning terms and deliver necessary improvements to, or contributions towards, supporting infrastructure. This section explains the mechanisms and next steps open to BCKLWN in terms of securing developer contributions for the infrastructure that will be required in the SEKLSGA.

6.2 Mechanisms for securing infrastructure

6.2.1 Legislation and national planning policy provide the tools for local authorities to secure developer contributions through the planning system for infrastructure and affordable housing, meet the needs of their area. There are a series of potential mechanisms for securing developer contributions (either individually or collectively) that could be applied by BCKLWN to the SEKLSGA. These are outlined below:

Section 106 Planning obligations

6.2.2 Planning Obligations are one of the key mechanisms available to BCKLWN. These are entered into with regard to Section 106 (S106) of the Town and Country Planning Act 1990 (as amended). The notable exception is Section 278 agreements, entered under the Highways Act 1980, which relate to off-site highways works.

6.2.3 A Planning Obligation is a legally binding document either contained in a bilateral agreement between local planning authorities and landowner(s)¹⁰ and other parties with an interest in land forming the application site or set out in the form of an undertaking made by the landowner(s) and other parties with an interest in land forming the application site to BCKLWN and (if applicable) Norfolk County Council. Planning obligations enable the local authority to secure the provision of infrastructure or services, or contributions towards them, to support development. Planning Obligations are used to make an otherwise unacceptable development acceptable and are only used where it is not possible to resolve an unacceptable impact through planning conditions.

6.2.4 The same tests that apply to Planning Conditions (Para 6.2.4.) apply to Planning Obligations this means that Planning Obligations can only be used to enable the provision of additional or renewed infrastructure to create additional capacity in order to satisfy the demands arising directly from that development and to make it acceptable and cannot be used to correct existing pre-development community infrastructure deficits.

6.2.5 BCKLWN may (at its discretion) apply contributions secured via planning obligations towards the costs associated with the professional fee and project management costs to fund the planning and implementation stages of delivering new infrastructure (including the process of obtaining all requisite consent orders agreements licences and permissions). Planning obligations could be used to secure on-site provision of, or financial contributions towards affordable housing. The policy for setting the threshold for affordable housing contributions is set out in the Local Plan.

- 6.2.6 Planning obligations are usually agreed to be spent within a reasonable period of time to programme and plan for the expenditure of contributions, provided that if at the end of such a period the BCKLWN shall have entered into a contract or other legally binding obligation or specific allocation to expend the requisite contribution(s) the BCKLWN shall not be required to refund the relevant contribution(s).

Section 278 Highway Agreements

- 6.2.7 A Section 278 agreement is another option open to the BCKLWN. These agreements secure modifications to the existing highway network to facilitate or service a proposed development. Such agreements enable the funding or undertaking of alteration or improvement works to the public highway necessary to support the development outside or beyond the development site itself (otherwise a Section 106 agreement is used). Section 278 agreements are made between landowners or developers and the Highways Authority. The developer can carry out the works themselves or pay the highway authority to do the works.
- 6.2.8 Works covered by Section 278 Agreements include:
- Roundabouts
 - Signalised junctions
 - Right turn lanes
 - Safety related works such as traffic calming
 - Street lighting
 - Improved facilities for pedestrians and cyclists
- 6.2.9 Pooling restrictions that apply to planning obligations secured under Section 106 of the Town and Country Planning Act 1990 do not apply to Section 278 Agreements. Section 278 agreements will not be replaced by the Community Infrastructure Levy when this is adopted

Land Development / Equalisation Agreement

- 6.2.10 Another option to secure the delivery of infrastructure in the SEKLSGA could be for BCKLWN to seek to enter into a commercial agreement with the land owners / developers within the SEKLSGA.
- 6.2.11 As part of the agreement, a land price equalisation arrangement could be documented between the relevant land owners / developers to ensure no developer or landowner within the SEKLSGA area is unfairly penalised with regard to paying for essential infrastructure
- 6.2.12 This would be achieved through the equalisation of land prices taking into account cost and infrastructure deductions in promoting the land to allow a fair and timely return.

BCKLWN led Outline Masterplan Application

- 6.2.13 BCKLWN could also seek to help secure the delivery of infrastructure through obtaining outline planning permission for a masterplan for the area of the SEKLSGA outside of (but compatible with) the existing Hopkins Homes application, alongside a detailed planning application for the required strategic road infrastructure. This would ensure the development of the site is coherent and to a proposed masterplan.
- 6.2.14 This could be undertaken by the BCKLWN in isolation or in partnership with the relevant landowner / developers in the SEKLSGA. If in partnership such an agreement could reflect BCKLWN and the land owners entering into a pro-rata share of the cost associated with making an outline planning application; in exchange for an equalised share in the benefits of the

application. These documents could be used as the lynch pin in securing a deliverable mechanism to support an outline planning application for the remaining elements of the SEKLGSA; ensuring any planning permission obtained can be implemented and mitigating the ability of parties to ransom the project; or the need for the use Compulsory Purchase Orders.

Careful thought would be required as to the most appropriate delivery structure - whether this is to be a limited company, an LLP, some other form of corporate development vehicle or a land trust. BCKLWN could be a 50% share partner in the delivery vehicle with the aggregate landowners' planning conditions

- 6.2.15 Planning conditions may also be used to secure the delivery of infrastructure. These are imposed on the grant of planning permission to enhance the quality of development and enable development proposals to proceed where otherwise it would have been necessary to refuse planning permission. Conditions may relate to phasing of development, timing of delivery of infrastructure (including up front delivery before the commencement of development), or the appearance of development - all of which can help to manage the adverse impacts or additional pressures of development (NPPF 2018, paragraph 54 enabled by Sections 70 and 72 of the Town and Country Planning Act 1990).
- 6.2.16 When imposing planning conditions, local planning authorities are required to ensure that they meet the following criteria:
- Necessary to make the development acceptable in planning terms
 - Directly related to the development
 - Reasonable in all other respects and kind to the development

Community Infrastructure Levy (CIL)

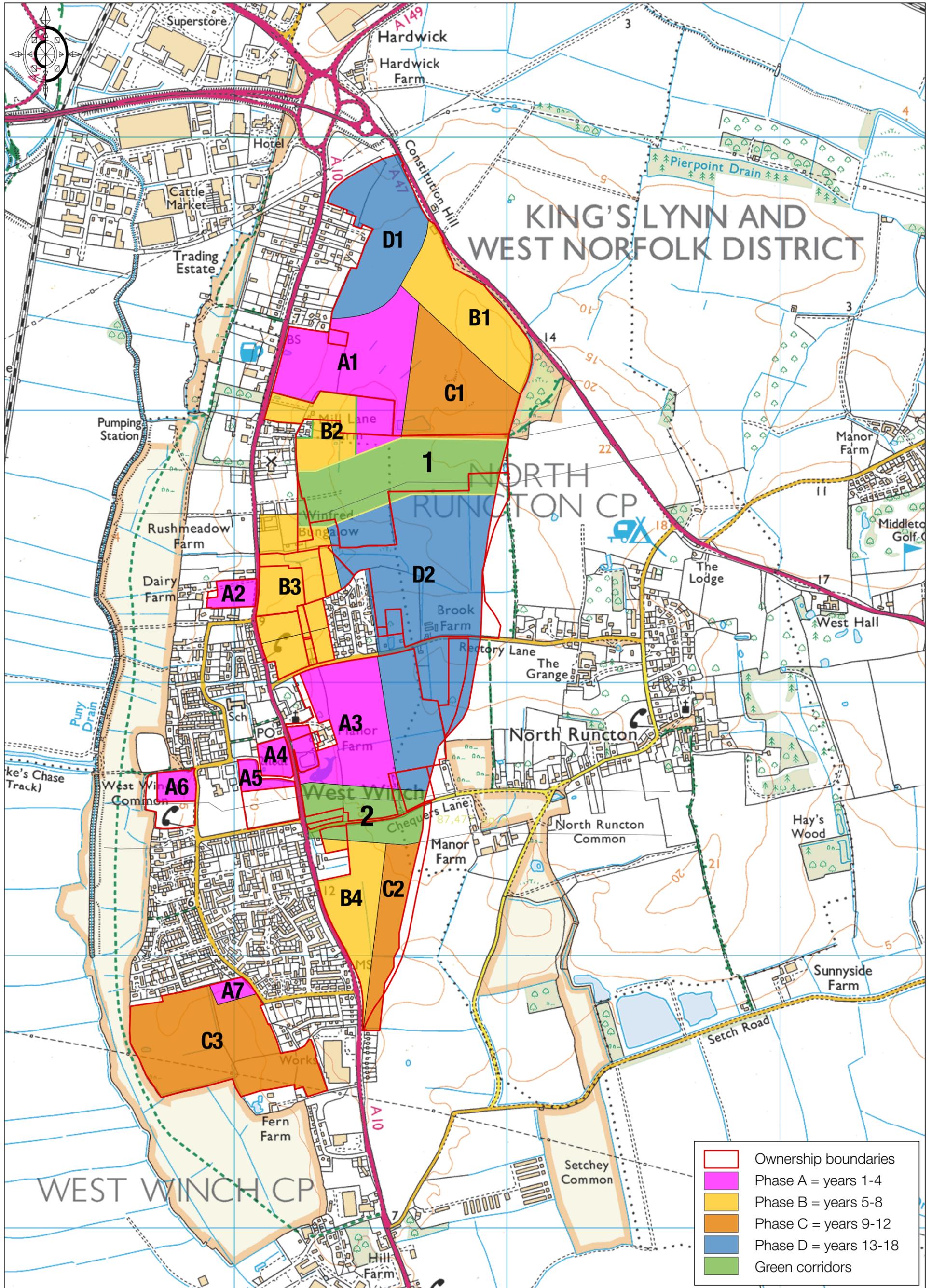
- 6.2.17 In terms of Community Infrastructure Levy (CIL) is one mechanism that could be used for securing contributions towards infrastructure. However, the BCKLWN CIL charging schedule sets out that the West Winch Strategic Growth Area has a zero £ per sq m rating, so that no CIL is currently chargeable on the proposed development of the SEKLSGA. Voluntary Agreements
- 6.2.18 Voluntary agreements such as Unilateral Undertakings cannot be taken into account in the decision-making process.

Appendices

A.	Phasing Plan	29
B.	Indicative Viability Assessment	30
C.	Cost Analysis Spreadsheets	31
D.	Potential County Council Education Infrastructure Requirements – Proposed Housing Development – South East King's Lynn Strategic Growth Area	32
E.	Consultation Responses	33

A. Phasing Plan

Indicative IDP Area Development Phasing



	Ownership boundaries
	Phase A = years 1-4
	Phase B = years 5-8
	Phase C = years 9-12
	Phase D = years 13-18
	Green corridors

B. Indicative Viability Assessment

Infrastructure Delivery Plan Indicative Viability Assessment

South East Kings Lynn Growth Area

On behalf of: Borough Council of Kings Lynn and West Norfolk

August 2018

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NOTE: The contents of this report are for Borough Council of Kings Lynn and West Norfolk and are provided on the understanding that it shall be used only to assist in the delivery of South East Kings Lynn Growth Area. The information contained within this report is believed to be correct as at August 2018 but Gerald Eve LLP give notice that:

- (i) All statements contained within this report are made without acceptance of any liability in negligence, tort or otherwise by Gerald Eve LLP. The information contained in this report has not been independently verified by Gerald Eve LLP;
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- (v) Any estimates of values or similar, other than specifically referred to otherwise, are subject to and for the purposes of discussion and are therefore only draft and excluded from the provisions of the RICS Valuation – Global Standards 2017.

EXECUTIVE SUMMARY

1. Mott MacDonald ('MM') with support from Gerald Eve LLP ('GE') have been instructed by the Borough Council of Kings Lynn and West Norfolk ('the Council') to undertake an independent assessment of the viability and deliverability of South East Kings Lynn Growth Area ('SEKLGA') to inform an Infrastructure Delivery Plan ('IDP') to understand and establish any potential funding issues.
2. GE's instruction was to review and assess the viability of the proposed development of the SEKLGA in line with the Council's infrastructure requirements. Using infrastructure costs provided by MM in August 2018, GE has undertaken an indicative viability and cash flow exercise to understand the potential funding issues when allowing for a policy compliant level of onsite Affordable Housing.
3. This report is part of the wider instruction which is divided into three stages.
4. Stage 1 reviewed the infrastructure required, clarified the costs of the key infrastructure items and build costs, developed an assumed housing delivery phasing strategy and identified any cashflow funding issues that may influence the delivery of the SEKLGA. Also forming part of Stage 1, this Gerald Eve report provides an assessment of the viability of the notional development of the SEKLGA using the information provided by Mott MacDonald.
5. Stage 2a comprises the provision of a draft IDP report by Mott MacDonald to which this Gerald Eve report is appended as a supporting document along with a series of other pieces of supporting documentation.
6. Stage 2b is to work with the various parties and stakeholders to agree an appropriate approach to delivery of the SEKLGA and to finalise the IDP.
7. This report concludes that having regard to the timescales assumed, information available at this point in time, and sensitivity testing around the assumptions applied, the development of 3,500 residential units and associated infrastructure required presented within the draft IDP is potentially capable of being viable and deliverable.

Contents	Page
1 Introduction	6
2 Site Description	7
3 Planning Policy Overview	8
4 Indicative SEKLGGA Phasing Plan	15
5 Infrastructure Costs and Trigger Points	16
6 Summary of Appraisal Inputs	18
7 Return Assumptions	27
8 Base Position Appraisal Results	31
9 Scenario and Sensitivity Testing	32
10 Conclusions	37

Appendices

- Appendix 1: Indicative IDP Area Phasing Plan
- Appendix 2(i): Mott MacDonald 3500 Unit Scheme Infrastructure Cost and Trigger Point Assessment
- Appendix 2(ii): Mott MacDonald 3988 Unit Scheme Infrastructure Cost and Trigger Point Assessment
- Appendix 3: Matrix of Indicative Base Position Appraisal Inputs
- Appendix 4: Base Position Mid-Case Development Appraisal with Sensitivity Analysis

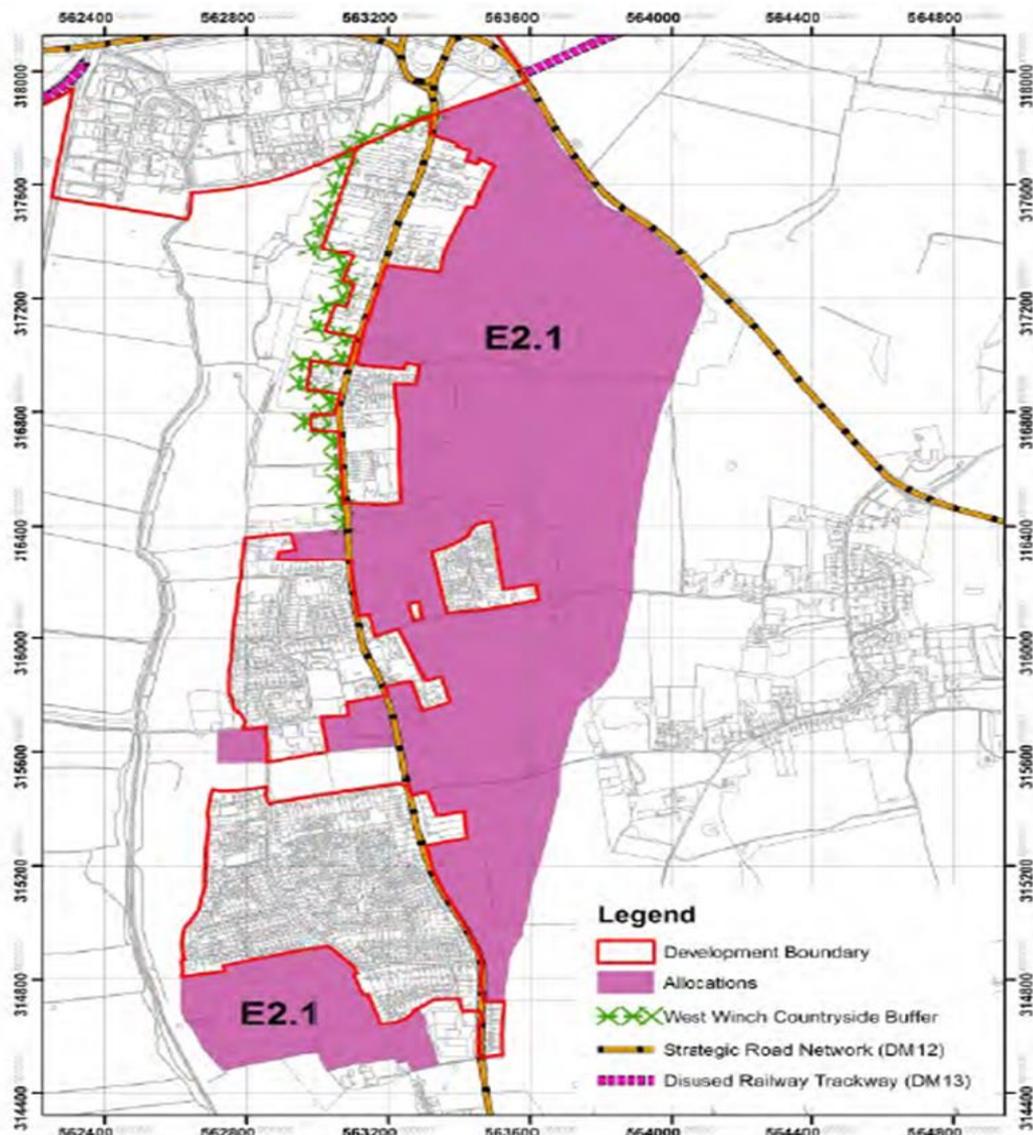
1 Introduction

- 1.1 Mott MacDonald ('MM') with support from Gerald Eve LLP ('GE') have been instructed by the Borough Council of Kings Lynn and West Norfolk ('the Council') to undertake an independent assessment of the viability and deliverability of South East Kings Lynn Growth Area ('SEKLGAs') to inform an Infrastructure Delivery Plan ('IDP') to understand and establish any potential funding issues.
- 1.2 GE's instruction was to review and assess the viability of SEKLGAs in line with the Council's infrastructure requirements. Using infrastructure costs provided by MM in August 2018, GE has undertaken a viability and cash flow exercise to understand the potential funding issues when allowing for a policy compliant level of on-site Affordable Housing.
- 1.3 This report provides an assessment of the viability of the notional development of the SEKLGAs using the information provided by Mott MacDonald in relation to the key infrastructure required and build costs of the infrastructure; and also the assumed housing delivery phasing strategy.
- 1.4 We understand that this report will be discussed with the various parties and stakeholders to agree an appropriate approach to delivery of the SEKLGAs.

2 Site Description

2.1 A description of the SEKLGGA site is set out in the MM IDP report. In summary, the area is defined by the Borough Council of Kings Lynn and West Norfolk Site Allocations and Development Management Plan (SADMP) adopted September 2016, as shown in the **Figure 1**. The Council's "Local Development Framework – Core Strategy" adopted July 2011 also shows this area as an allocated "Area for Urban Expansion".

Figure 1 : SEKLGGA Plan showing the IDP Area



Source: SADMP (September 2016) – page 119

3 Planning Policy Overview

- 3.1 In this section of the report we provide an overview of planning policy and guidance with specific reference to the background and need for the viability assessments. We also summarise local planning policy in relation to affordable housing and community infrastructure levy (CIL).
- 3.2 The viability assessment has been produced having regard to policy in the National Planning Policy Framework (NPPF) (2012, revised 2018), Planning Practice Guidance (PPG) (2016), National Practice Guidance (NPG) (2018) and other relevant practitioner guidance such as the RICS Guidance Note: Financial Viability in Planning (GN94/2012).

Planning Policy

- 3.3 MM has set out a review of national and local planning policy in relation to the SEKLGGA in section 3 of the MM IDP document. The NPPF is referred to in section 3.1 and PPG in section 3.5.
- 3.4 For Planning policy making Authorities are able to rely upon the 2012 NPPF, although the NPPF was revised in July 2018 along with viability guidance in the National Planning guidance (NPG -2018).
- 3.5 The NPPF (2012) has a clear presumption in favour of sustainable development and in determining planning applications local planning authorities should take account of this.
- 3.6 The NPPF (2012) recognises that development should not be subject to such a scale of obligation and policy burdens to where its viability is threatened; and in addition, obligations should be flexible to market changes in order to ensure planned developments are not stalled.
- 3.7 The current PPG (2015) relating to planning obligations reinforces this point relating to viability in relation to obligations:

PPG (2016) states:

“Planning obligations assist in mitigating the impact of unacceptable development to make it acceptable in planning terms. Planning obligations may only constitute a reason for granting planning permission if they meet the tests that they are necessary to make the development acceptable in planning terms, directly related to the development, and fairly and reasonably related in scale and kind.”

(Paragraph 001 Ref ID 23-b-001-20161116)

3.8 The PPG also indicates where local planning authorities are requiring affordable housing obligations or tariff style contributions to infrastructure:

..they should be flexible in their requirements. Their policy should be clear that such planning obligations will take into account specific site circumstances.

(Paragraph: 006 Reference ID: 23b-006-20140306)

3.9 The NPPF (2018) continues to recognise the place of viability testing, in both plan-making and decision-making.

3.10 Paragraph 57 of the NPPF (2018) states:-

“Where up-to-date policies have set out the contributions expected from development, planning applications that comply with them should be assumed to be viable. It is up to the applicant to demonstrate whether particular circumstances justify the need for a viability assessment at the application stage. The weight to be given to a viability assessment is a matter for the decision maker, having regard to all the circumstances in the case, including whether the plan and the viability evidence underpinning it is up to date, and any change in site circumstances since the plan was brought into force. All viability assessments, including any undertaken at the plan-making stage, should reflect the recommended approach in national planning guidance, including standardised inputs, and should be made publicly available.” – our emphasis

- 3.11 In the Viability section of the NPG (2018) which has been recently updated following a consultation exercise earlier in the year, applicants are now required to demonstrate whether particular circumstances justify the need for a viability assessment at the application stage. The NPG then sets out such circumstances which could include:

“...where development is proposed on unallocated sites of a wholly different type to those used in viability assessment that informed the plan; where further information on infrastructure or site costs is required; where particular types of development are proposed which may significantly vary from standard models of development for sale (for example build to rent or housing for older people); or where a recession or similar significant economic changes have occurred since the plan was brought into force.”

(Paragraph 007 Reference ID: 10-007-20180724)

- 3.12 Where viability assessments accompany applications the NPG at paragraph 008 (ID 008-20180724) requires these to be based upon and refer back to the viability assessment that informed the plan and provide evidence of what has changed. In these cases “the weight to be given to a viability assessment is a matter for the decision maker having regard to all the circumstances in the case ...”

The RICS Guidance Note: Financial Viability in Planning

- 1.1 The RICS Guidance Note (RICS GN) was published in August 2012 (CD REF A7). The purpose of the guidance note is to enable all participants in the planning process to have a more objective and transparent basis for understanding and evaluating financial viability in a planning context. It provides practitioners with advice in undertaking and assessing viability appraisals for planning purposes.
- 1.2 The RICS defines a guidance note is a document *“that provides users with recommendations for accepted good practice as followed by competent and conscientious practitioners”*. It also states that *“where members do not comply with practice recommended in this note, they should do so only for a good reason”* (RICS Guidance notes, page 1 RICS GN).
- 1.3 The RICS GN represents ‘best practice’ for its members and others who prepare and/or use financial viability assessments.

1.4 The RICS GN provides all those involved in financial viability in planning and related matters with an objective methodology framework and set of principles that can be applied for both plan making and development management.

1.5 It is grounded in the statutory and regulatory planning regime that currently operates in the UK. It is consistent with the Localism Act 2011, the NPPF and the CIL Regulations 2010. The production of the guidance note was subject to wide consultation with both the public and private sectors. In particular it was drafted to be consistent with the NPPF which preceded the release of the RICS GN.

1.6 Financial viability for planning purposes is defined in the RICS GN as follows:

“An objective financial viability test of the ability of a development project to meet its costs including the cost of planning obligations, whilst ensuring an appropriate site value for the landowner and a market risk adjusted return to the developer in delivering that project.”

1.7 The RICS GN definition of Site Value states:-

“Site Value should equate to the Market Value subject to the following assumption: that the value has regard to development plan policies and all other material planning considerations and disregards that which is contrary to the development plan.”

1.8 Market Value is defined in the International Valuation Standards (IVS) 2017, which are produced by the International Valuation Standards Council (IVSC) and serve as the key guidance for valuation professionals globally. The IVS 2017 are reproduced in full in the RICS Valuation – Global Standards 2017 (“**the Red Book**”) and are adopted and applied throughout the Red Book. Within the IVS 2017, Market Value is defined at paragraph 30.1. as *“the estimated amount for which an asset or liability should exchange on the valuation date between a willing buyer and a willing seller in an arm’s length transaction, after proper marketing and where the parties had each acted knowledgably, prudently and without compulsion.”*

1.9 Site Value is not unrestricted when compared to Market Value as defined in the IVS. The degree of variance will be subject to a judgement, having regard to the circumstances in each instance.

1.10 Paragraph 3.4.5 of the RICS GN states:

“The Site Value will be based on market value, which will be risk-adjusted, so it will normally be less than current market prices for development land for which planning permission has been secured and planning obligation requirements are known. The practitioner will have regard to current use value, alternative use value, market/transactional evidence (including the property itself if that has recently been subject to a disposal/acquisition), and all material considerations including planning policy in deriving the Site Value.” -Our emphasis

1.11 The RICS GN therefore supports the notion that Site Value must be at a level where the landowner is incentivised to sell for development when compared to other options as recognised by the NPPF and the NPG including holding the land or selling it on.

1.12 The RICS GN at paragraph 3.4.7 explicitly makes reference to the use of comparable evidence in providing an indication of the land value that a land owner might expect, albeit noting the need to risk adjust having regard to the planning permission, if in place. Whilst noting that often there might be a lack of up to date comparable information, the RICS GN stresses the importance of comparable information, even if limited as evidenced by court and lands tribunal decisions.

1.13 Although the updated NPPF and NPG has followed the publication of the RICS GN, the principles set out in the RICS GN are, in my opinion, relevant and wholly consistent with government policy and guidance.

Planning Policy relating to Development

- 3.13 It is important that the approach taken to affordable housing and scheme viability does not compromise the ability to deliver residential development on the Site.
- 3.14 This section therefore sets out the planning parameters and guidance under which the proposed development is assessed, having regard to the objectives of national, local and site specific planning policy.

Borough Council of Kings Lynn and West Norfolk Affordable Housing Policy

- 3.15 Policy CS09 of the Council's "Affordable Housing Policy" April 2011 document sets out that,

"The overall target for affordable housing in the borough during the plan period will be related to the ability to deliver in the market conditions that prevail at the time a planning application is made. At the present time the percentage which will be sought for affordable housing provision on qualifying sites is:

- *15% within the built up area of King's Lynn;*
- *20% in all other areas."*

- 3.16 The SEKLGGA falls within area where 20% affordable housing is required.
- 3.17 In terms of tenure split, section 6.6 of the Council's "Affordable Housing Policy" April 2011 document also sets out that,

"The tenure split of affordable housing sought as a requirement of S.106 agreements will be 70:30 rent to shared ownership. The need for rented to shared ownership in this proportion has been established through research evidenced in the Strategic Housing Market Assessment."

Community Infrastructure Levy

- 3.18 In terms of Community Infrastructure Levy (CIL), the Council's CIL charging schedule sets out that the West Winch Strategic Growth Area has a zero £ per sq m rating, so that no CIL is chargeable on the proposed development of the

SEKLGA site.

Identification of Infrastructure and Section 106 Costs

3.19 The MM draft IPD highlights the various documents from which the required infrastructure and section 106 costs have been identified. These include:

- Core Strategy: Policy CS09;
- SADMP: Policy E.1;
- Neighbourhood Plan: North Runcton and West Winch; and
- Planning application 13/01615/OM

4 Indicative SEKLGGA Phasing Plan

4.1 As there is no adopted masterplan which covers the whole of the SEKLGGA site indicating geographical distribution of development or phasing, in this section of the report we set out an indicative phasing plan we have adopted for the purposes of assessing the headline viability of the delivery of the SEKLGGA.

4.2 In producing the phasing plan, we have had regard to the following data :

- The overall development capacity of the Growth Area as set out in the BCKLWN Site Allocations and Development Management Policies Plan (SADMP) which totals 3,500 residential units;
- The SADMP indicates that of the 3500 units, an allocation of 1,600 new homes with supporting infrastructure should be delivered up to 2026¹;
- The number of units proposed by Hopkins Homes (1,110 units) in the northern portion of the Growth Area in planning application ref. 13/01615/OM;
- The proposed residential build out rate and phasing plan set out in the above Hopkins Homes planning application;
- The residential build out rate proposed for the Growth Area as set out in the BCKLWN Strategic Housing Land Availability Assessment (SHLAA).
- Market evidence of residential delivery rates; and
- The potential location of future road infrastructure and also existing gas pipeline restrictions.

4.3 The resultant plan is set out at **Appendix 1**. This assumes that a total of circa 200 residential units (affordable and private market) are delivered per annum across the whole growth area in order to achieve the target of delivering 1600 new homes by 2026. We would anticipate a minimum of two outlets delivering units simultaneously to reflect overall delivery. This results in a total development programme of 18 years.

¹ 1600 residential units assuming start on site no earlier than 2018 indicates a requirement for circa 200 units per annum

5 Infrastructure Costs and Trigger Points

- 5.1 MM has produced an assessment of the cost of the infrastructure requirements set out in the Local Development Framework and the draft Neighbourhood Plan, together with Section 106 costs and other infrastructure costs required for development as part of the SEKLG. For the purposes of our viability assessment we have relied on these costs.
- 5.2 The MM cost estimate has been agreed by the Council and split into four “pots”. A full schedule of costs dated 20th July 2018 is set out at **Appendix 2(i)** in relation to a notional scheme of 3500 residential units. These are summarised in **Figure 2** :

Figure 2 : Infrastructure Costs Summary

Cost Heading	Costs
1. Section 106 Costs	£83,412,053
2. Additional Draft Neighbourhood Plan Costs	£726,378
3. Developer Costs	£70,859,266
4. Other Infrastructure Costs	£24,614,787
Total	£179,612,484

Source – Mott MacDonald

- 5.3 **Figure 2** shows that the S106 Strategic Infrastructure and Neighbourhood Plan requirements equate to c. £51,000 per unit, based on the 3,500 units proposed for delivery. The total costs on a price per unit basis are consistent when compared to other Masterplan reviews which GE has assessed.
- 5.4 A further revised cost plan has been produced by MM to inform our sensitivity analysis relating to a notional scheme with a greater residential density of 3988 homes. This is set out at **Appendix 2(ii)** dated 20th July 2018.

Infrastructure Trigger Points

- 5.5 In terms of the trigger points for delivery of the infrastructure required throughout the

proposed development of the SEKLGA, these are set out in the MM schedule at **Appendix 2**. GE has relied on this information in producing this report, and it reflected in our appraisal analysis.

6 Summary of Appraisal Inputs

- 6.1 In addition to the phasing and infrastructure assumptions set out above, we have also used a series of other appraisal inputs in producing the headline IDP viability assessment.
- 6.2 Applied assumptions have been determined on the basis of review the Growth Area on a holistic approach. However it is recognised that individual detailed elements of the Masterplan may result the application of different assumptions, such as build cost, programme, land agreements and profit return. Cost and value and return recover will be over differing timescales for individual developments within the Masterplan; however this assessment has focused on the viability of the overall development which spans the delivery of 3,500 units and associated infrastructure over an approximate 18 year period.
- 6.3 These are set out in a matrix at **Appendix 3** along with a summary explanation of the reasoning behind each assumption. We have provided additional commentary below on some the key assumptions:

Build Costs

- 6.4 Other than planning application 13/01615/OM, there is no indication of a proposed scheme within the SEKLGGA.
- 6.5 As there is no clear product being delivered, no detailed cost assessment has been undertaken. We understand that Hopkins Homes are currently in the process of costing their element of the scheme, however, as at the date of this report, we have not been provided with a cost schedule.
- 6.6 Therefore, we have had regard to data publications to determine an appropriate build cost and we have then applied industry standard assumptions to reflect potential uplifts.
- 6.7 We have used Build Cost Information Services ('BCIS') to inform the build costs and, to factor in that there is no clear defined residential product, we have relied upon the median cost level. The BCIS costs for housing and for flats is summarised in **Figure 3**.

Figure 3 - BCIS Build Costs for Estate Housing and Flats

Type	BCIS Median £/sq m	BCIS Median £/sq ft
Estate Housing (2 storey)	£1,047	£97.26
Flats (3 to 5 storey)	£1,244	£115.57

Source: BCIS (21.01.17)

6.8 Having established the BCIS build cost we have then added 5% for external works and 3% for abnormalities to arrive at the residential build costs in **Figure 4** which we have adopted in our appraisals. Such costs are not included within BCIS costing but are anticipated with development of this type. In order to update the costs set out above (from our 2017 draft report) to August 2018 we have also applied the BCIS All-In Tender Price Index to these. Our adopted figures are set out below:

Figure 4 - Adopted Construction Costs (at as August 2018)

Type	Adopted Construction Cost £/sq m	Adopted Construction Cost £/sq ft
Houses	£1,172	£108.88
Flats	£1,392	£129.38

Private Residential Revenue

Figure 5 - Private Residential Units

Residential Units	Private Unit Area
1 bed flat size (Private Market Sale)	482 sq ft (45 sq m)
2 bed flat size (Private Market Sale)	655 sq ft (61 sq m)
2 bed house size (Private Market Sale)	700 sq ft (65 sq m)
3 bed house size (Private Market Sale)	950 sq ft (88 sq m)
4 bed house size (Private Market Sale)	1,350 sq ft (125 sq m)
5+ bed house size (Private Market Sale)	1,510 sq ft (140 sq m)

6.9 Having adopted the unit sizes set out above, we have then gone on to assess the value of each unit type based on our analysis of comparable market evidence. We have also then updated our original assessment from 2017 to August 2018 using the Land Registry House Price Index. Based on this information we have adopted the private residential units sales values set out in **Figure 6** :

Figure 6 - Private Residential Sales Values

Private Residential Units	Unit Sales Values as at 2017	Updated Unit Sales Values as at August 2018
1 bed flat capital value (Private Market Sale)	£87,000	£91,872
2 bed flat capital value (Private Market Sale)	£120,000	£126,720
2 bed house capital value (Private Market Sale)	£158,000	£166,848
3 bed house capital value (Private Market Sale)	£212,000	£223,872
4 bed house capital value (Private Market Sale)	£280,000	£295,680
5+ bed house capital value (Private Market Sale)	£293,000	£309,408

6.10 On the basis of the above capital values and the unit mix we have assumed (see **Appendix 3**) our opinion is that the private sales values that could be achieved in the SEKLG A on an overall blended basis is c.£230 per sq ft.

Affordable Housing

6.11 As set out in section 3, the Council “Affordable Housing Policy” 2011 indicates that 20% affordable housing policy is required, on the basis of a 70:30 rent to shared ownership split. We have therefore made these assumptions for the purposes of our analysis.

6.12 As instructed by the Council, in assessing the appropriate value to apply to the affordable residential component of the SEKLG A scheme we have adopted the unit areas set out in **Figure 7**.

Figure 7 - Affordable Residential Unit Type	Adopted Unit Sizes
1 bed flat size (Affordable Unit)	50 sq m (538 sq ft)
2 bed flat size (Affordable Unit)	70 sq m (753 sq ft)
2 bed house size (Affordable Unit)	80 sq m (861 sq ft)
3 bed 5 person house size (Affordable Unit)	93 sq m (1,001 sq ft)
3 bed 6 person house size (Affordable Unit)	102 sq m (1,098 sq ft)
4 bed house size (Affordable Unit)	115 sq m (1,238 sq ft)
5 bed house size (Affordable Unit)	119 sq m (1,281 sq ft)
2 bed bungalow size (Affordable Unit)	70 sq m (753 sq ft)
3 bed bungalow size (Affordable Unit)	86 sq m (926 sq ft)

6.13 Based on the assessment carried out by our affordable housing team and agreed by the Council, we have adopted the updated sales values as at August 2018 set out in **Figure 8** for the intermediate and affordable rented element of the affordable housing. Based on a policy compliant mix of units this equates to an average sales rate of circa £101 per sq ft for the affordable rent units and £126 per sq ft for the intermediate units.

Figure 8 - Affordable Residential Values

Affordable Residential Unit Type	Unit Values as at 2017	Updated Sales Values as at August 2018
1 bed flat capital value (Intermediate)	£81,000	£85,538
2 bed flat capital value (Intermediate)	£84,000	£88,704
2 bed house capital value (Intermediate)	£102,000	£107,712
3 bed 5 person house capital value (Intermediate)	£116,000	£122,496
3 bed 6 person house capital value (Intermediate)	£132,000	£139,392
4 bed house capital value (Intermediate)	£174,000	£183,744
5 bed house capital value (Intermediate)	£182,000	£192,192
2 bed bungalow capital value (Intermediate)	£98,000	£103,488
3 bed bungalow capital value (Intermediate)	£112,000	£118,272
1 bed flat capital value (Affordable Rent)	£68,000	£69,695
2 bed flat capital value (Affordable Rent)	£82,000	£84,370
2 bed house capital value (Affordable Rent)	£82,000	£84,370
3 bed 5 person house capital value (Affordable Rent)	£100,000	£99,534
3 bed 6 person house capital value (Affordable Rent)	£100,000	£99,534
4 bed house capital value (Affordable Rent)	£121,000	£124,720
5 bed house capital value (Affordable Rent)	£126,000	£125,779
2 bed bungalow capital value (Affordable Rent)	£69,000	£71,349
3 bed bungalow capital value (Affordable Rent)	£100,000	£99,534

Benchmark Land Value (BLV)

6.14 In concluding an appropriate Benchmark Land Value (BLV) for the proposed Growth Area GE has regard to the following:

- National Planning Practice Framework (NPPF);
- Planning Practice Guidance/National Planning Guidance (PPG/NPG);
- RICS Professional Guidance Note 12: Financial Viability in Planning (2012);
- The Harman Report – Local Housing Delivery Group (June 2012) Viability Testing Local Plans;

- The HCA Transparent Viability Assumptions Report (2010) Area Wide Viability Model Annex 1;
 - Turner Morum DCLG (2011) Cumulative impacts of regulations of house builders; and land owners research paper; and
 - BCKLWN CIL Viability Assessment (March 2016) by HRH.
- 6.15 Turner Morum on behalf of DCLG (in 2011) conclude land values were typically between £246,000 and £369,000 per gross hectare (£100,000 to £150,000 per gross acre) for greenfield agricultural sites with strategic development potential. It is noted that the Turner Morum report was based on their experience and observation although it did not appear to be supported by market analysis or evidence.
- 6.16 In the BCKLWM CIL viability assessment (2016) it was concluded based upon 19 known transactions that residential land with planning consent within the Kings Lynn area had a value of circa £354,000 per gross hectare or £143,261 per gross acre. It is noted that these transactions were significantly smaller and do not require the infrastructure delivery proposed for the Growth Area.
- 6.17 Following review of land values in BCKLWM the 2016 CIL viability assessment conclude the following land values:
- I. Agricultural land £25,000/ha (c.£10,000/acre);
 - II. Paddock land £50,000/ha (c.£20,000/acre);
 - III. Garden land £100,000/ha (c.£40,500/acre);
 - IV. Industrial land £380,000/ha (c.£153,700/acre); and
 - V. Residential land £650,000 net/ha, (c.£250,000 net/acre)
£350,000 gross/ha (£140,500 gross/acre)
- 6.18 The Growth Area has identified 3,500 houses to deliver within an area of circa 474 acres, with an anticipated minimum density of circa 11.5 per developable acre (c.28 per ha), suggesting the need for circa 303 residential developable acres with the remaining 170 acres for other uses including open space, roads and education.
- 6.19 However, the residential land value evidence would appear based on schemes at higher density circa 16-20 per net acre. When adjusted to reflect the Growth Area density this would indicate developable land values of circa £355,000 pdha (£144,000/pda) to £450,000 pdha (£180,000 pda); with non-developable land at circa £25,000 pha (£10,000 pa).

- 6.20 We are therefore of the opinion that due to the variations in potential required developable land, accounting for infrastructure costs and non-developable land within the masterplan area an appropriate Benchmark Land Value (BLV) with which to assess an indicative scheme should reflect a minimum of c.£47,700,000 or c.£247,000 pgha (c.£100,000 pga) for the landowner to release for development. This reflects c.£370,000 pdha (c.£150,000pda) for residential land and £25,000 for non-developable land (c.£10,000pa).
- 6.21 In accordance with NPG (2018) the BLV can be considered as the aggregation of component 1 (EUV) and component 2 (Land owners Incentive/Premium). The current predominant use of the property is agricultural and equine use and therefore component 1 reflects circa £25,000 to £50,000 per hectare with Component 2 reflecting circa £197,000 to £225,000 per acre.
- 6.22 We are of the opinion that due to the variations in development land (accounting for infrastructure costs) and non-developable land, it is possible that the Market Value of individual parcels of land may vary across the Growth Area when not considered on an equalised approach, however in order to the sustainable delivery of a holistic scheme site value should be considered on an equalised approach.

Cost and Value Growth

- 6.23 As a result of the length of the development programme for the SEKLGA it is appropriate to assume growth in costs and values across the development period. For this reason we have adopted the growth rates set out in **Figure 9** :
- 6.24 We would note that in order ensure the robustness of our construction cost forecast growth assumptions we have used figures derived from an average of a range of latest forecasts from established market commentators. We have termed this the “mid-case” and have set this out in the following table.

Figure 9a - Cost and Value Growth Rate Assumptions

Cost and Value Growth Assumptions	Forecast Adopted	Source
Construction Cost Growth (Infrastructure and build costs)	Yr1 0.5%; Yr2 2.2%; Yr3 3.0%; Yr4 3.7%; Yr5 3.8%; Yr6+ 2.6%	Average annual forecast based on Gardiner and Theobald; Turner and Townsend; Mace and BCIS All In Tender Price Index (TPI) forecast at August 2018
Private Residential Sales Value Growth	Yr1 2.0%; Yr2 3.0%; Yr3 4.0%; Yr4 3.0%; Yr5+ 3.2%.	Knight Frank UK Residential Market Forecast for East of England (as at May 2018) (Most up to date established forecast as at Aug 2018)
Intermediate Residential Sales Value Growth	Yr1 2.0%; Yr2 3.0%; Yr3 4.0%; Yr4 3.0%; Yr5+ 3.2%.	Knight Frank UK Residential Market Forecast for East of England (as at May 2018) (Most up to date established forecast as at Aug 2018)
Affordable Rent Residential Sales Value Growth	Yr1 3.4%; Yr2 3.1%; Yr3 3%; Yr4 3%; Yr5+ 3.12%	Bank of England Consumer Price Index (CPI) Projections as at August 2018 plus 1%
Commercial Land Value Growth	Yr1+ 2.1%	Bank of England Consumer Price Index (CPI) Projections as at August 2018 (4 year predicted average)
Residential Land Value Growth	Yr1 1.5%; Yr2 2.5%; Yr3 3.5 %; Yr4 2.5%; Yr5+ 2.7%.	Knight Frank UK Residential Market Forecast for East of England (as at May 2018). (Most up to date established forecast as at Aug 2018). Average for next 5 years less 0.5% to allow for notional effect of cost inflation.

Figure 9b - Construction cost Growth Assumptions

Case	Best Case		Worst Case		Mid Case
Forecast	Gardiner and Theobald	Turner and Townsend	Mace	BCIS - All In TPI	Average %
	Q2 18	Autumn 17	Q1 18	Aug-18	
2018	1.0	1.4	1	-1.6	0.5
2019	1.0	2.5	1.5	3.8	2.2
2020	1.5	3.2	3	4.3	3.0
2021	1.5	3.6	4	5.6	3.7
2022	2.0	N/A	N/A	5.6	3.8
Cumulative Total	7.0	10.7	9.5	17.7	13.1
Annual Forecast Average	1.4%	2.7%	2.4%	3.5%	2.6%

Professional Fees, Finance Costs, Agency and Disposal Fees

6.25 **Figure 10** sets out the professional fees, finance, agency and disposal fees that we have adopted in the appraisals we have undertaken.

6.26 The sources and assumptions that we have used as a basis for these adopted costs are also set out in **Figure 10**.

Items not included

6.27 In addition to the considered inputs, GE notes that there are potentially a number of other elements that could impact upon the viability of the Scheme. However, for the purposes of this assessment, the following items have not been included:

- Additional costs for ransom issues between the parties;
- Commercial restrictions such as minimum land value drawdowns; although GE is aware that £100,000 per acre is often cited in Strategic contracts.

Figure 10 - Adopted Professional Fees, Finance Costs, Agency and Disposal Fees

Input	Adopted Costs	Source / Assumption
Professional Fees	8%	Dependent on complexity of a development. Typically range from 6-15% with the lower end of the range being for housing delivered by a national housebuilder.
Finance	6.00%	Assumption based on finance rates available in the market
Acquisition Costs	1.8% (agent, legal & VAT)	Standard industry assumption
Residential Disposal Fees	1% marketing, 1% agent, 0.5% legal	Standard industry assumption
RP Purchase cost	0.8% of Affordable Housing GDV	Agency fees that the Developer pays to market and tender the Scheme to potential RP purchasers. Market norm on smaller schemes range from 1-1.25%. 0.8% assumed due to large size and estimated value of this scheme.
Land disposal fee for commercial serviced land	1% marketing, 1% agent, 0.5% legal	Standard industry assumptions

6.28 Whilst potential ransom costs have not been superficially identified this assessment; GE considers that a significant proportion of the potential ransoms

would simply reflect apportionment of land value and may have minimal impact on additional costs if they are required to deliver development at this location. They may have a greater impact if the scheme is developed piecemeal, where alternative value is defined.

7 Return Assumptions

- 7.1 In this section we look at the appropriate measure of return that a developer should consider being reasonable given the associated costs and risks that might be required for the Site.
- 7.2 The financial appraisals have been undertaken in accordance with generally accepted guidance in undertaking viability assessments, in particular, PPG (2016), NPG (2018), RICS guidance and emerging viability assessment guidance of Masterplan developments.
- 7.3 A significant factor in undertaking viability assessments is the level of profit which a developer might reasonably require from undertaking the development. This will depend on a number of factors including the size of the development, the perceived risks involved, the degree of competition for the site from competing developers, the state of the market in terms of demand for value of the completed development, etc.
- 7.4 It is recognised that Development profit is necessary if private sector investment is to deliver any given project. The level of profit is essentially the reward to the developer for the time, expertise and risk involved in carrying out the process of development. When the developer/land owners are one and the same this may be reflected in the development return.
- 7.5 The level of profit will vary between projects and will reflect a range of factors including market demand, competition, scheme complexity, financial risk and exposure particularly in relation to up-front or abnormal costs together with the anticipated timescales for the development.
- 7.6 The NPG (2018) paragraph 018 (Ref 10-018-20120724) indicates that for the purpose of plan making an assumption of 15-20% of gross development value (GDV) may be considered a suitable return to developers in order to establish the viability of plan policies.
- 7.7 This is not a direct guidance for scheme specific applications and that specific development returns need to account for type, scale and risk profile of the planned development. Furthermore it is recognized that lower returns are

considered more appropriate for affordable housing where risk to receipt of income are lower; and that alternative figures may also be appropriate for different development types.

7.8 As a measure of development return (GDV), it is commonly used as a benchmark for qualifying the risks of a standard development project when calculating a residual value, and as a simple measure of return in development appraisals. This methodology is reasonable where the influence of time is limited on both costs and revenues; for example, assessment of individual phases of the Masterplan at the time of implementation. However, a major masterplan type development is an exception to this approach.

7.9 It is considered by the Council that development type of this proposal reflects a masterplan and that the appropriate return proxy should reflect the scheme's size, development time frame, complexity and infrastructure requirements.

7.10 In terms of being satisfied of scheme viability, it is usual for any project proposal to be accompanied by a cashflow model – a residual appraisal or a Discounted Cash Flow (DCF) appraisal that shows both the expenditure and receipts and the time frame across which these will take place. In the case of long term development project types such as Regeneration and Masterplan developments, these appraisals will inform investors with a projected viability, Internal Rate of Return (IRR) or Net Present Value (NPV) (see Glossary). The rate of return (the target profit or Discount Rate) that the investor will apply to their investment in the project, and thereby informing the scheme's viability, will depend to a great extent on the way in which the landowner agrees with the assumptions within the appraisal. It is important, therefore, to ensure that the early project preparation and planning stages are comprehensive and robust.

7.11 RICS Guidance 2012 (P42- E3.2.8) further highlights that:

“The Nature of the development prevailing practice in the market for the sector influences the target profit margin or rate of return. This varies between developments....Increasingly, and particularly in respect of large scale or lengthy developments, the internal rate of return is used.”

7.12 Whilst the SEKLGGA will be delivered through a number smaller phases, where

standard methodologies for assessing a competitive return are appropriate; this approach is limited for considering viability of the holistic scheme where the development will be spread over at least 19 years and the risk and costs of the scheme will be spread between Stakeholders and phases.

7.13 In line with Government and RICS guidance, to reflect the prolonged period of the development which is anticipated to be approximately 19 years, GE considers that for this development type a more appropriate return proxy to be applied in this instance would be an Internal Rate of Return (IRR) rather than a GDV approach.

7.14 The RICS Workbook Financial Viability in Planning Principles and Methodologies V7 defines IRR as follows:

“The IRR on an investment or project is the “annualised effective compounded return rate” that makes the net present value of all cash flows (both positive and negative), including the initial investment and future cash flows, equal to zero. It is found by trial and error by applying present values at different rates of interest in turn to the net cash flow. It is sometimes called the discounted cash flow rate of return. In development financial viability appraisals the IRR is commonly, although not always, calculated on a without-finance basis as a total project IRR.”

7.15 Such an approach has been recently adopted for the assessment of :

- Ipswich Borough Council Infrastructure Development Plan for Ipswich Garden Suburb in 2016 (circa 3,500 residential units);
- Canada Water Area Action Plan 2013 (Montagu Evans /London Borough of Southwark);
- Convoys Wharf (3,500 residential units plus other associated uses) by the Greater London Authority;
- BNPPRE/ London Borough of Brent in 2015/2016 as an appropriate method of assessment for Wembley Masterplan (c.4,000 units plus A1/B1/C1/DS/DS);
- GVA/Birmingham City Council (2014) applied an IRR approach when

considering an appropriate CIL charging schedule.

- 7.16 Furthermore, RICS study paper ‘Financial Viability in planning appeals – theory and practice’, paragraph 4.4 which expresses a preference for IRR in viability testing. This states:

“Assumptions regarding finance are linked to those relating to profit. 100% debt financing appears to be universal and unchallenged and even the rate used appears on non-contentious with 7% adopted in four out of five cases where it is mentioned.

As stated above, the return to the developer is included as a cash sum, calculated as a ratio to total development costs or gross development value. In reality very few developments are funded using 100% debt finance. Instead financing arrangements are usually a mixture of debt and equity funding and the developer typically funds a proportion of the development costs as an equity provider. Consequently a measure of return on the developer’s investment should be a function of this equity stake, i.e. a return on equity or, more correctly, an equity IRR.”

Return to Developer Assumption

- 7.17 As set out in section 6, due to the length of the assumed development programme for the development of the SEKLGGA we have factored in to our assessment both cost and value growth over the life of the scheme.
- 7.18 Taking this into account, when considering whether the proposed development is potentially capable of being viable it is our opinion that a reasonable target IRR when testing the scheme on the basis of using grown costs and values, is 20%.

8 Base Position Appraisal Results

- 8.1 This section sets out the appraisal results from our assessment of the notional development of the SEKLGGA having regard to the inputs, and phasing outlined in the previous sections of this report together with the infrastructure costs and Section 106 requirements.
- 8.2 The base position appraisal results are set out in **Figure 11**.

Figure 11 - Base Position Appraisal Results

Phase	Base Position Scenario (IRR)
1	5.1%
2	11.7%
3	11.6%
4	18.0%
Merged	10.4%

- 8.3 The results shown in **figure 11**, show that in the base position, the notional IDP scheme can be seen to generate an IRR of 10.4% over the whole development. The development appraisal showing this result is attached at **Appendix 4**.
- 8.4 As set out in section 7 the target IRR for the scheme is 20% and so on the basis of the assessment this does not generate a viable scheme. For this reason we have gone to examine a series of alternative scenarios and also to test the base position appraisal using sensitivity analysis. This is set out in the following section.

Net Balancing Payment

- 8.5 In addition we have assessed what the approximate grant funding requirement would be in order to increase the overall scheme IRR to the 20% target. In this case, an upfront funding amount of circa £23.7m would appear to enable the scheme to reach a viable IRR of 20%.

9 Scenario and Sensitivity Testing

9.1 This section sets out the different scenarios we have tested in order to assess the viability of the notional development of the SEKLG. Given the indicative nature of the viability assessment, in accordance with RICS guidance it is important to consider the impact of sensitivity around chosen assumptions. We have therefore undertaken sensitivity analyses on the base position appraisal and also the scenario appraisals, in order to test the impact of changes in key appraisal inputs on those appraisals.

Base Position Sensitivity Analysis

9.2 As the base position appraisal does not generate sufficient return to reach the target IRR of 20% we have therefore tested the sensitivity of the appraisal to changes in private residential sales values and construction costs. **Figure 12** therefore shows how a variation + / - 5% in private residential sales values and construction costs impacts on the IRR of the notional scheme. The full sensitivity analysis results are shown in the appraisal at **Appendix 4**.

Figure 12 - Base Position Sensitivity Analysis Results

Phase	Base Position Scenario (IRR)	Sensitivity Upper Range (IRR) (+5% Sales / -5% Costs)	Sensitivity Lower Range (IRR) (-5% Sales / +5% Costs)
1	5.1%	15.8%	-5.3%
2	11.7%	26.3%	-1.4%
3	11.6%	24.3%	-0.2%
4	18.0%	30.5%	6.6%
Merged	10.4%	20.7%	1.0%

9.3 As can be seen the sensitivity analysis undertaken shows that if construction costs were to decrease by 5% and residential sales values were to increase by 5% on our current assumptions, the overall IRR would increase to 20.7%. This demonstrates that the base position is in fact potentially capable of being viable.

Scenario 1 – High School Costs Funded from Alternative Sources

9.4 The first alternative scenario we have tested is on the assumption that the high school costs (£10,632,876) which forms part of the section 106 costs are funded from alternative sources. As a result in this scenario the total section 106 costs assumed are £66,063,118 rather than £76,695,994 in the base position.

9.5 The results of this scenario are set out in **Figure 13** along with a sensitivity analysis of the results based on varying private residential sales values and construction costs by + / - 5%.

9.6 **Figure 13 - Scenario 1 Appraisal Results and Sensitivity Analysis**

Phase	Scenario 1 (IRR)	Sensitivity Upper Rate (IRR) (+5% Sales / -5% Costs)	Sensitivity Lower Rate (IRR) (-5% Sales / +5% Costs)
1	7.6%	18.5%	-3.1%
2	15.0%	29.9%	1.4%
3	14.4%	27.4%	2.3%
4	20.4%	33.4%	8.5%
Merged	12.7%	23.3%	2.8%

9.7 The results shown in **Figure 13**, demonstrate that in the Scenario 1, the notional IDP scheme can be seen to generate an IRR of 12.7% over the whole development. However the sensitivity analysis undertaken shows that if construction costs were to decrease by 5% and residential sales values were to increase by 5% on our current assumptions, the overall IRR would increase to 23.3% This demonstrates that the Scenario 1 is potentially capable of being viable and generates a greater return than the base position scenario.

Scenario 2a and 2b – Increased Residential Density

9.8 Whilst it is understood that the proposed allocation is for 3500 units, as a sensitivity test, an alternative scenario has been assessed to reflect a notional increase in the residential density of the development across the IDP area, having regard to the proposed density of 32.5 dwellings per hectare (dph) presented by Hopkins Homes (in line with their planning application for the site).

9.9 In scenario 2 we have increased the density to 32.5 dph across the site. This

brings the total number of units to 3988 across the whole IDP area in this scenario.

9.10 Scenario 2a shows the impact of the increased density on the Base Position appraisal and Scenario 2b shows the impact of the increased density on the Scenario 1 appraisal.

9.11 **Figures 14 and 15** show the results scenario 2a and 2b, in addition to a sensitivity analysis based on varying private residential sales values and construction costs by + / - 5%.

Figure 14 - Scenario 2a Results – Base Position with Increased Residential Density

Phase	Scenario 2a (IRR)	Sensitivity Upper Rate (IRR) (+5% Sales / -5% Costs)	Sensitivity Lower Rate (IRR) (-5% Sales / +5% Costs)
1	10.5%	22.0%	-0.7%
2	18.8%	34.8%	4.4%
3	16.1%	29.6%	3.6%
4	23.1%	36.7%	10.7%
Merged	15.1%	26.4%	4.7%

Figure 15 Scenario 2b Results – Scenario 1 with Increased Residential Density

Phase	Scenario 2b (IRR)	Sensitivity Upper Rate (IRR) (+5% Sales / -5% Costs)	Sensitivity Lower Rate (IRR) (-5% Sales / +5% Costs)
1	13.3%	25.0%	1.6%
2	22.4%	39.0%	7.4%
3	19.2%	33.3%	6.2%
4	23.1%	36.7%	10.7%
Merged	17.4%	29.3%	6.3%

9.12 The results shown in **Figures 14 and 15**, show that if the density of development is increased to 32.5 dph across the IDP area the scenario 2a generates an IRR of 15.1% and scenario 2b generates an IRR of 17.4%. This demonstrates that neither scenario reaches the target IRR of 20%. However the

sensitivity analysis undertaken shows that if construction costs were decrease by 5% and residential sales values were to increase by 5% on our current assumptions, the overall IRR in Scenario 2a would increase to 26.4% and to 29.3% in Scenario 2b. This demonstrates that Scenarios 2a and 2b are potentially capable of being viable and generate a greater return than the Base Position scenario and Scenario 1.

Scenario 3a and 3b – Revised Affordable Housing Tenure Split

9.13 The third alternative scenario we have tested is to change the affordable housing tenure split from 70 : 30 affordable rented to intermediate in the Base Position scenario to 50 : 50 affordable rented to intermediate tenure split in line with an alternative mix required by BCKLWN. We have applied this to the Base Position scenario and Scenario 1 appraisals in Scenario 3a and 3b respectively.

9.14 The results of this are shown in **Figures 16 and 17**.

Figure 16 - Scenario 3a Results – Base Position Scenario with Revised Affordable Housing Tenure Split

Phase	Scenario 4A (IRR)	Sensitivity Upper Rate (IRR) (+5% Sales / -5% Costs)	Sensitivity Lower Rate (IRR) (-5% Sales / +5% Costs)
1	5.7%	16.7%	-4.8%
2	12.6%	27.5%	0.8%
3	12.4%	25.4%	0.4%
4	18.8%	31.6%	7.2%
Merged	11.1%	21.5%	1.4%

Figure 17 - Scenario 3b Results –Scenario 1 with Revised Affordable Housing Tenure Split

Phase	Scenario 4B (IRR)	Sensitivity Upper Rate (IRR) (+5% Sales / -5% Costs)	Sensitivity Lower Rate (IRR) (-5% Sales / +5% Costs)
1	8.3%	19.5%	-2.6%
2	16.0%	31.5%	2.0%
3	15.4%	29.0%	2.9%
4	21.1%	34.3%	9.0%
Merged	13.4%	24.3%	3.3%

9.15 The results in **Figures 16 and 17**, show that if the affordable housing tenure split is revised to 50:50 social rented/intermediate across the IDP area the

Scenario 3a generates an IRR of 11.1% and Scenario 3b generates an IRR of 13.4%. This demonstrates that neither scenario reaches the target IRR of 20%.

9.16 However the sensitivity analysis undertaken shows that if construction costs were decrease by 5% and residential sales values were to increase by 5% on our current assumptions, the overall IRR in Scenario 3a would increase to 21.5% and to 24.3% in Scenario 3b.

9.17 This demonstrates that the Scenarios 3a and 3b are potentially capable of being viable and generate a greater return than the Base Position scenario and Scenario 1. However, the impact of changing the affordable housing tenure in this way can be seen to have a smaller impact on scheme viability than increasing the residential density as set out in Scenarios 2a and b.

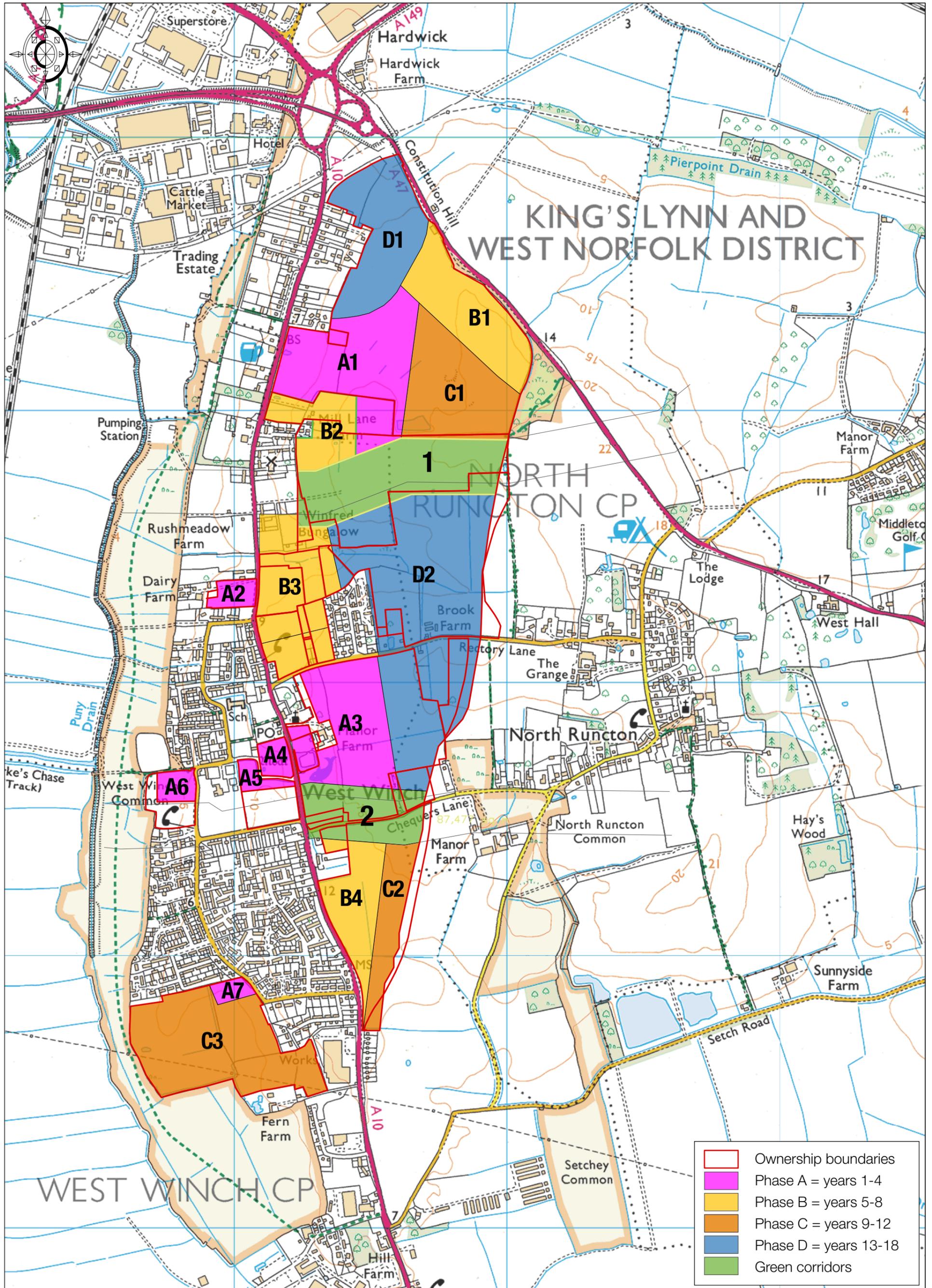
10 Conclusions

- 10.1 Gerald Eve has undertaken an indicative viability assessment of the SEKLGA which proposes the delivery of 3,500 residential units and associated infrastructure. The purpose of the headline assessment is to consider whether the proposed IDP is deliverable and viable.
- 10.2 In the absence of an agreed masterplan, a series of assumptions have been made in relation to the overall scheme as well as associated values and costs in delivering the proposed overall development. These assumptions have been considered and evidenced through the assessment of local, regional and national planning and development assumptions, such as the BCKLWN CIL viability assessment and BCIS costs.
- 10.3 On review, having regard to the timescales assumed, information available at this point in time, and sensitivity testing around the assumptions applied, Gerald Eve concludes that the overall proposed development is potentially capable of being viable while delivering the infrastructure and section 106 costs identified in this report. This has been demonstrated through stress testing the base viability assumptions through sensitivity analysis and also via various scenario tests.
- 10.4 It is recognised that the assessment is a reflection of overall proposed housing delivery for the SEKLGA, and that individual elements of the proposed scheme will need to be considered on a site specific basis. That said the SEKLGA has the best potential to be delivered if it is considered as a whole and in a consistent manner.

Appendix 1

Indicative IDP Area Phasing Plan

Indicative IDP Area Development Phasing



Appendix 2(i)

Mott MacDonald 3500 Unit Scheme Infrastructure Cost and Trigger Point Assessment

Cost Analysis
for
South East Kings Lynn Strategic Growth Area



Project Title: South East Kings Lynn Strategic Growth Area
Project No: 377873
Date: 20/07/2018

Revision: 18:
Base Date: Q3 2018

Introduction

This document is provided with the intent of identifying the potential costs of the infrastructure associated with the South East Kings Lynn Strategic Growth Area. The costs are broken down into the following 3 main sections;

1	Section 106 Costs	Pages:	1 to 5
2	Additional Neighbourhood Plan Requirements	Pages:	6
3	Developer Costs	Pages:	7
4	Other Infrastructure	Pages:	8

Within each of these sections, the costs are further broken down as follows;

- n.1 Access and Transport : Q3 2018
- n.2 Education Costs 2018
- n.3 Green Infrastructure Q3 2018
- n.4 Community Facilities Q3 2018
- n.5 Utilities Q3 2018
- n.6 Other Requirements Q3 2018

An explanation of the contents of the columns which appear in the sheets are as follows;

"Total Cost" - The total calculated cost associated with the item of infrastructure.

"Contributions" - The contribution amount required by developers. This only appears in the Section 106 costs section, all other sections require full contribution. Any blank (£0) values in the column, require no developer contribution.

"Assumptions" - Any assumptions made during the costing exercise.

"Trigger point for delivery/ Assumed Cost Phasing" - How costs are to be apportioned in the growth area.

"Cost Source" - Where the associated costs have been priced from.

NB where Optimism Bias (OB) is included in costs, a rate of 44% has been used.

**Cost Analysis
for
South East Kings Lynn Strategic Growth Area**

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Project Title: South East Kings Lynn Strategic Growth Area
Project No: 377873
Date: 20/07/2018

Revision: 18
Base Date: Q3 2018

1.0 Section 106 Costs (3500 homes)

Ref.	Infrastructure Theme	Item	Detail	Total Cost	Contribution	Total Cost Without OB	Contribution Without OB	OB level to be used once forecast	Assumptions	Trigger Point for Delivery/ Assumed Cost Phasing	Costing Source
1.1	Access and Transport										
1.1.1		Minor improvement to Hardwick for A10 arm							- As Hardwick Transport Strategy, but with updated unit costs. - Ref 1.8 will require additional land costs. Which have not been included.		See Appendix A
1.1.1.1		Single lane slip road	£ 547,301.90	£ 547,301.90	£ 380,070.76	£ 380,070.76	44%	To be delivered by 2020 or by 400 dwellings			
1.1.2		A10 West Winch Bypass - Phase 1									
1.1.2.1		Intermediate roundabout	£ 136,162.01	£ 136,162.01	£ 94,556.95	£ 94,556.95	44%	To be delivered by 2020 or by 400 dwellings			
1.1.2.2		200m single carriageway	£ 547,301.90	£ 547,301.90	£ 380,070.76	£ 380,070.76	44%				
1.1.2.3		A47 roundabout	£ 217,859.23	£ 217,859.23	£ 151,291.13	£ 151,291.13	44%				
1.1.3		A10 West Winch Bypass - Phase 2									
1.1.3.1		2no at-grade roundabout on single carriageway	£ 272,324.03	£ 272,324.03	£ 189,113.91	£ 189,113.91	44%	To be delivered by 2026 or by 1600 dwellings			
1.1.3.2		2300m single carriageway	£ 6,293,971.85	£ 6,293,971.85	£ 4,370,813.78	£ 4,370,813.78	44%				
1.1.4		A47 east of Hardwick dualled									
1.1.4.1		800m length widening of existing carriageway	£ 2,189,207.60	£ 2,189,207.60	£ 1,520,283.06	£ 1,520,283.06	44%	To be delivered by 2026			
1.1.5		Hardwick Interchange local widening within junction									
1.1.5.1		Widening parts of hardwick circulatory carriageway and exits	£ 1,368,254.75	£ 1,368,254.75	£ 950,176.91	£ 950,176.91	44%	To be delivered by 2026 or by 1600 dwellings			
1.1.5.2		Upgrade to Traffic Signals	£ 101,680.00	£ 101,680.00	£ 70,611.11	£ 70,611.11	44%				
1.1.6		A47 roundabout retained but expanded									
1.1.6.1		400m length slip road	£ 1,094,603.80	£ 1,094,603.80	£ 760,141.53	£ 760,141.53	44%	To be delivered by 2026			
1.1.6.2		Dual carriageway roundabout	£ 217,859.23	£ 217,859.23	£ 151,291.13	£ 151,291.13	44%				
1.1.7		A47 flyover dualled									
1.1.7.1		1no new viaduct 175m long x 9m wide	£ 8,934,975.00	£ -	£ 6,204,843.75	£ -	44%	To be delivered by 2031/35			
1.1.8		A149 dualled									
1.1.8.1		800m length widening of existing carriageway	£ 2,189,207.60	£ -	£ 1,520,283.06	£ -	44%	To be delivered by 2031/35			
1.1.8.2		Existing roundabout upgraded to dual roundabout	£ 217,859.23	£ -	£ 151,291.13	£ -	44%				
1.1.9		Traffic Calming through West Winch Village									
1.1.9.1		Nominal Sum	£ 538,194.44	£ 538,194.44	£ 538,194.44	£ 538,194.44	0%	- Allowance; Scope of traffic calming to be defined, nominal sum of £0.5m as suggested in NCC Document. Assume safe crossings are allowed for in this figure. (Uplifted to 3Q2018).	To be commenced within 12 months of development	Nominal sum, taken from previous scheme.	
1.1.10	Access and Transport cont...	Bus Strategy									
1.1.10.1		To be confirmed							- Contributions will need to be sought, however bus service improvements are based on business case.		
Access and Transport Total				£ 24,866,762.56	£ 13,524,720.74	£ 17,433,033.42	£ 9,556,615.48				
1.2	Education										
1.2.1		Contributions towards new facilities									
1.2.1.1		West Winch Primary School Capacity Increase						0%	- As advised by NCC - Nursery assumed to be part of primary school provision	• £100,000 on commencement of the development. • £1,000,000 on occupation of 100 new dwellings. (6 months post commencement) • Balance (£1,345,240) on occupation of 500 new dwellings across the overall IDP area (30 months post commencement)	Potential County Council Infrastructure Requirements - Proposed Housing Development Document, dated 12 October 2016.
				£ 2,084,276.00	£ 2,084,276.00	£ 2,084,276.00	£ 2,084,276.00				

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Date: 20/07/2018

Revision: 18
Base Date: Q3 2018

1.0 Section 106 Costs (3500 homes)

Ref.	Infrastructure Theme	Item	Detail	Total Cost	Contribution	Total Cost Without OB	Contribution Without OB	OB level to be used once forecast	Assumptions	Trigger Point for Delivery/ Assumed Cost Phasing	Costing Source
1.2.1.2			420 place primary school (2ha)	£ 6,900,000.00	£ 6,900,000.00	£ 6,900,000.00	£ 6,900,000.00	0%		<ul style="list-style-type: none"> • 2ha School site purchased on commencement of the development • Transfer of a fully serviced school site after occupation of the 100th dwelling (6 months post commencement) • £250,000 on transfer of the school site (costs for design and planning) (6 months post commencement) • £1,000,000 on occupation of the 200th dwelling. (12 months post commencement) • £2,400,000 on occupation of the 400th dwelling. (24 months post commencement) • Balance (£3,250,000) on occupation of the 600th dwelling. (36 months after commencement) 	
1.2.1.3	Education cont...	Contributions towards new facilities cont...	315 place primary school (1.5ha, total 2ha safeguarded)	£ 5,150,000.00	£ 5,150,000.00	£ 5,150,000.00	£ 5,150,000.00	0%	- As advised by NCC - Nursery assumed to be part of primary school provision	<ul style="list-style-type: none"> • 2 ha School site to be purchased 3 years prior to the point when 2000 units are estimated to be occupied (ie. 84 months post commencement) • School to be completed by the point when 2000 units are occupied across the wider IDP area and cost apportioned across the previous 3 years (£5,150,000 apportioned between 84 and 120 post commencement) 	Potential County Council Infrastructure Requirements - Proposed Housing Development Document, dated 12 October 2016.
1.2.1.4			Nursery provision	£ -	£ -	£ -	£ -				
1.2.1.5			High School Capacity 606 place Increase	£ 10,632,876.00	£ 10,632,876.00	£ 10,632,876.00	£ 10,632,876.00	0%		<ul style="list-style-type: none"> • To be paid by in four equal instalments on occupation of 400 dwellings of each respective phase. 	
1.2.1.6			Sixth Form Capacity 60 place Increase	£ 1,141,740.00	£ 1,141,740.00	£ 1,141,740.00	£ 1,141,740.00	0%		<ul style="list-style-type: none"> • To be paid by in four equal instalments on occupation of 400 dwellings within each respective phase. 	
Education Total				£ 25,908,892.00	£ 25,908,892.00	£ 25,908,892.00	£ 25,908,892.00				
1.3	Green Infrastructure										
1.3.1		Neighbourhood parks, allotments & open spaces with equipped sports and play facilities. Capital Costs.									
1.3.1.1			Formal recreation facilities such as playing fields (10ha)	£ 5,185,467.56	£ 5,185,467.56	£ 5,185,467.56	£ 5,185,467.56	0%	50% of total open space area. Assume 20ha total		
1.3.1.2			Play Areas (6ha)	£ 12,786,084.40	£ 12,786,084.40	£ 12,786,084.40	£ 12,786,084.40	0%	30% of total open space area from DM 16. Assume 20ha total		
1.3.1.3			Allotments (0.6ha)	£ 104,774.86	£ 104,774.86	£ 104,774.86	£ 104,774.86	0%			
1.3.1.4			Other green spaces (4ha)	£ 355,169.01	£ 355,169.01	£ 355,169.01	£ 355,169.01	0%	20% of total open space area. Assume 20ha total		
1.3.1.5			Natural and semi natural green spaces inc. footpath links and hedgegroves (i.e. landscape buffers) (28ha)	£ 1,988,946.46	£ 1,988,946.46	£ 1,988,946.46	£ 1,988,946.46	0%	Assume landscape buffer zones are approx 700m x 164m and 700m x 236m.		
1.3.2		Neighbourhood parks, allotments & open spaces with equipped									Pro-rata from previous scheme

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Ref.	Infrastructure Theme	Item	Detail	Total Cost	Contribution	Total Cost Without OB	Contribution Without OB	OB level to be used once forecast	Assumptions	Trigger Point for Delivery/ Assumed Cost Phasing	Costing Source
1.3.2.1		Open spaces with equipped sports and play facilities. Maintenance Costs.	Formal recreation facilities such as playing fields (10ha)	£ 1,391,446.71	£ 1,391,446.71	£ 1,391,446.71	£ 1,391,446.71	0%			
1.3.2.2	Green Infrastructure cont...	Neighbourhood parks, allotments & open spaces with equipped sports and play facilities. Maintenance Costs cont...	Play Areas (6ha)	£ 4,350,589.52	£ 4,350,589.52	£ 4,350,589.52	£ 4,350,589.52	0%		• Costs to be apportioned and phased across the IDP area on the basis of a cost per residential unit delivered.	Pro-rata from previous scheme
1.3.2.3	Allotments (0.6ha)		£ 20,407.77	£ 20,407.77	£ 20,407.77	£ 20,407.77	0%				
1.3.2.4	Other green spaces (4ha)		£ 636,973.13	£ 636,973.13	£ 636,973.13	£ 636,973.13	0%				
1.3.2.5	Natural and semi natural green spaces inc. footpath links and hedgegroves (i.e. landscape buffers) (28ha)		£ 995,656.24	£ 995,656.24	£ 995,656.24	£ 995,656.24	0%	Assume landscape buffer zones are approx 700m x 164m and 700m x 236m.			
1.3.2.6	Interim Habitat Mitigation Payment		£ 200,641.03	£ 200,641.03	£ 200,641.03	£ 200,641.03	0%	Nominal contribution of £50 per home, as required by SADMP, assume 3500 homes. (Uplifted to 3Q2018).			
Green Infrastructure Total				£ 28,016,156.69	£ 28,016,156.69	£ 28,016,156.69	£ 28,016,156.69				
1.4	Community Facilities	Neighbourhood Centres									
1.4.1											
1.4.1.1			Community Centre 1 (Assumed 1000m ²)	£ 2,447,133.76	£ 2,447,133.76	£ 2,008,841.15	£ 2,008,841.15	24%	- Assumed as one large community centre and 2 smaller community centres. - The costs shown are the estimated physical build costs of the centres.	• Costs to be apportioned and phased across the IDP area on the basis of a cost per residential unit delivered.	F+A Little Black Book (Q1 2011) mid-range at 1277.77/m ²
1.4.1.2			Community Centre 2 (Assumed 500m ²)	£ 1,223,566.88	£ 1,223,566.88	£ 1,004,420.57	£ 1,004,420.57	24%			
1.4.1.3			Community Centre 3 (Assumed 500m ²)	£ 1,223,566.88	£ 1,223,566.88	£ 1,004,420.57	£ 1,004,420.57	24%			
1.4.1.4			Sports Centre (1500m ²)	£ 3,105,575.59	£ 3,105,575.59	£ 2,504,496.44	£ 2,504,496.44	24%	Assumed 1500m ² sports halls (approx. 4 hall). However, this may change in detailed design. - The costs shown are the estimated physical build costs of the centres.	Sport England Facility Costs, April Revision 001, 2016	
1.4.1.5			1no. MUGA Facility (782m ²)	£ 203,299.53	£ 203,299.53	£ 163,951.23	£ 163,951.23	24%	Taken from Sport England Guidance		
1.4.1.6			Health Centre	£ -	£ -	£ -	£ -		- Land to be safeguarded only.	F+A Little Black Book (Q1 2011) mid-range at £1291.66/m ²	
1.4.1.7			3no. Shops (Assumed 280m ²)	£ -	£ -	£ -	£ -		- Land to be safeguarded only.		
1.4.1.8			NLIS library contributions	£ 979,128.21	£ 979,128.21	£ 979,128.21	£ 979,128.21	0%	- Taken as £244 per dwelling (assuming 3500 dwellings) as advised by BCKLWN. (Uplifted to 3Q2018).	Potential County Council Infrastructure Requirements - Proposed Housing Development Document, dated 12 October 2016	
Community Facilities Total				£ 9,182,270.85	£ 9,182,270.85	£ 7,665,258.18	£ 7,665,258.18				
1.5	Utilities										
1.5.1		SADMP Fire Service Requirement									
1.5.1.1		Fire hydrants Contributions	£ 70,167.03	£ 70,167.03	£ 70,167.03	£ 70,167.03	0%	Allowance for 1 hydrant per 50 homes (assuming 3500) and one additional hydrant per school and neighbourhood centre at £816 each. (Uplifted to 3Q2018).	• Costs to be apportioned and phased across the IDP area on the basis of a cost per residential unit delivered.	Potential County Council Infrastructure Requirements - Proposed Housing Development Document, dated 12 October 2016	
1.5.2		Strategic SUDS Infrastructure									

**Cost Analysis
for
South East Kings Lynn Strategic Growth Area**

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Project Title: South East Kings Lynn Strategic Growth Area
Project No: 377873
Date: 20/07/2018

Revision: 18
Base Date: Q3 2018

1.0 Section 106 Costs (3500 homes)

Ref.	Infrastructure Theme	Item	Detail	Total Cost	Contribution	Total Cost Without OB	Contribution Without OB	OB level to be used once forecast	Assumptions	Trigger Point for Delivery/ Assumed Cost Phasing	Costing Source
1.5.2.1			Detention Basins; Capital Cost	£ 6,359,864.96	£ 6,359,864.96	£ 5,128,923.36	£ 5,128,923.36	24%	Allowance for detention basins which are to store a total of 78317.4m3 of water. Works to existing watercourses to be defined. Scope to be defined.	• Costs to be apportioned and phased across the IDP area on the basis of a cost per residential unit delivered.	Cost details taken from Environmental Agency Report SC080039/R9 (March 2015). Required volume of storage taken from: North Runcton and West Winch Surface Water Management Strategy (April 2014).
1.5.2.2			Detention Basins; 15year Maintenance Cost	£ 349,980.88	£ 349,980.88	£ 349,980.88	£ 349,980.88	0%			
Utilities Total				£ 6,780,012.88	£ 6,780,012.88	£ 5,549,071.27	£ 5,549,071.27				
Total Cost of Strategic Infrastructure (Contribution Portion)				£83,412,053.15		£76,695,993.62					
Total Cost of Strategic Infrastructure				£94,754,094.98		£84,572,411.55					

Notes/ Comments

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 - Cost data has been sourced from a combination of in-house project data and professional opinion based on past experience.
 - Optimism bias of 44% is taken for all standard civil engineering works and for all standard building costs.
 - Development and Supervision allowance of 10% is assumed for all works.
 - Contributions for section 106 costs have been taken as a 100% contribution for those costs necessary to development and 0% for those as a direct cost to the development. This has been derived with guidance from the Borough Council of King's Lynn and West Norfolk.
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**Cost Analysis
for
South East Kings Lynn Strategic Growth Area**



Project Title: South East Kings Lynn Strategic Growth Area
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2.0 Additional Neighbourhood Plan Requirements

Ref	Infrastructure Theme	Item	Detail	Cost	Cost Without OB	OB level to be used once forecast	Assumptions	Trigger Point for Delivery/ Assumed Cost Phasing	Costing Source
2.1	Access and Transport								
2.1.1		Off-Site Improvements to Road Network							
2.1.1.1			Redevelopment of A10 between Chapel Lane and Long Lane	£ -	£ -		Assume to be included in traffic calming, other upgrades not directly related to development.	In accordance with agreed phasing plan prior to the commencement of development	
2.1.1.2			Provision for future dual use path connection to Bawsey Country Park	£ -	£ -		This will tie into an new development footpath, therefore no contribution related to development.		
2.1.1.3			Dual use path connection to the village of Middleton	£ 519,552.47	£ 519,552.47	0%	Allowance for new 3m pavement on A47 south of New Road (approx. 1.7km)		
2.1.1.4			Safe Cycle and Pedestrian Crossing at Rectory Lane	£ 103,412.81	£ 73,866.29	44%	Allowance for 2 Toucan Crossings		
2.1.1.5			Safe Cycle and Pedestrian Crossing at Chequers Lane	£ 103,412.81	£ 73,866.29	44%	Allowance for 2 Toucan Crossings		
Access and Transport				£726,378.08	£667,285.05				
2.2	Education								
Education				£0.00	£0.00				
2.3	Green Infrastructure								
2.3.1		New nature reserve (5ha)							
2.3.1.1			5ha fenced off nature reserve	£ -			Assumed land take implications only. Scope to be defined		
Green Infrastructure				£0.00	£0.00				
2.4	Community Facilities								
2.4.1		Existing community facilities							
2.4.1.1			Upgrade existing community facilities	£ -			A need for this would need to be assessed. At this point it is assumed that the communities will be serviced by new facilities.		
Community Facilities				£0.00	£0.00				
2.5	Other Requirements								
2.5.1		Allowance for expansion to West Winch Church graveyard							
2.5.1.1			Land safeguarded only	£ -			Assume land take only.		
Other Requirements				£0.00	£0.00				
Total Cost of Neighbourhood Infrastructure				£726,378.08	£667,285.05				

Notes/ Comments

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**Cost Analysis
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South East Kings Lynn Strategic Growth Area**



Project Title: South East Kings Lynn Strategic Growth Area
Project No: 377873
Date: 20/07/2018

Revision: 18
Base Date: Q3 2018

3.0 Developer Costs

Ref	Infrastructure Theme	Item	Detail	Cost	Cost Without OB	OB level to be used once forecast	Assumptions	Trigger Point for Delivery/ Assumed Cost Phasing	Costing Source
3.1	Access and Transport	On-site road network							
3.1.1.1			Neighbourhood Streets - Site Masterplan	£ 16,284,968.04	£ 16,284,968.04	0%	Estimate from masterplan drawing 1565/01 SK306. Allowance; 5151m neighbourhood streets, 795m village centre streets and 10370m lanes and home roads. These have all been estimated as single carriageway all purpose road, and will be defined in detailed design stage. Scope to be defined.	Costs to be apportioned and phased across the IDP area outside of the Hopkins Homes scheme only, on the basis of a cost per residential unit delivered.	See Appendix A
3.1.1.2		Village Centre Streets - Site Masterplan	£ 2,175,525.06	£ 2,175,525.06	0%				
3.1.1.3		Lanes and Home Roads - Site Masterplan	£ 28,377,603.52	£ 19,706,669.11	44%				
3.1.1.4		East to West Road - Hopkins Homes	£ 3,207,189.13	£ 2,227,214.68	44%				
3.1.1.5		Hopkins Homes - Other Roads	£ 10,896,780.83	£ 7,567,208.91	44%				
3.1.2		On site footpaths							
3.1.2.1			Cycle/ Shared use pathways associated with road network	£ 4,332,938.31	£ 3,094,955.93	44%	Allowance; 10016m estimated from site masterplan drawing 1565/01 SK306. Allowance; 6326m from hopkins homes masterplan. Scope to be defined.	Costs to be apportioned and phased across the whole IDP area on the basis of a cost per residential unit delivered	F+A Little Black Book (Q3 2010) mid-range at £154.17/m2. Pro rata
3.1.2.2			2m footpath associated with road network	£ 4,626,306.14	£ 3,304,504.38	44%	Allowance; 10016m estimated from site masterplan drawing 1565/01 SK306. Allowance; 3982m from hopkins homes masterplan. Scope to be defined		F+A Little Black Book (Q3 2010) mid-range at £87.69/m2. Pro rata
3.1.3		Cycle Routes							
3.1.3.1			Not associated with road network (3m wide)	£ 957,955.34	£ 684,253.81	44%	Allowance; 3613m at 3m wide	In accordance with agreed phasing plan prior to the commencement of development	F+A Little Black Book (Q3 2010) mid-range at £154.17/m2. Pro rata
Access and Transport				£70,859,266.36	£55,045,299.92				
Total Cost of Neighbourhood Infrastructure				£70,859,266.36	£55,045,299.92				

Notes/ Comments

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**Cost Analysis
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South East Kings Lynn Strategic Growth Area**



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Date: 20/07/2018

Revision: 18
Base Date: Q3 2018

3.0 Other Infrastructure

Ref	Infrastructure Theme	Item	Detail	Cost	Assumptions	Trigger Point for Delivery/ Assumed Cost Phasing	Costing Source
3.5	Utilities						
3.5.1		UKPN					
3.5.1.1			Contestable works	£ 1,091,603.05	Figures from UKPN Pre-development Enquiry Budget Estimate	• Costs to be apportioned and phased across the IDP area on the basis of a cost per residential unit delivered.	Pre-development Enquiry
3.5.1.2			Non-contestable works	£ 10,916,030.53			
3.5.2		National Grid					
3.5.2.1			Strategic improvements to gas supply	£ 2,567,097.81	Allowance in lieu of National Grid feasibility study	• Costs to be apportioned and phased across the IDP area on the basis of a cost per residential unit delivered, from the point of 300 units delivered onwards.	Pro-rata from previous scheme
3.5.2.2			Protection works to H/P Line	£ 1,637,404.58	This is a highly conservative estimate based on two crossing points with complex slab protection measures. This assumption does not allow for diversion works at both crossing points.		Due to lack of site information a nominal figure has been used based on diverting the gas main
3.5.2.3			Infrastructure works	£ 574,096.42	Allowance; assume no offsite diversion works.		Pro-rata from previous scheme
3.5.2.4			On-site trenching	£ 898,484.23	Allowance; scope to be defined		Pro-rata from previous scheme
3.5.3		Anglian Water					
3.5.3.1			Mains water distribution	£ 3,820,610.69	Allowance; £1000 per dwelling, assume no upgrades required in lieu of response from Anglian Water. Assume 3500 dwellings. Assume no offsite diversion works. (Uplifted to 3Q2018).	• Costs to be apportioned and phased across the IDP area on the basis of a cost per residential unit delivered.	Pro-rata from previous scheme
3.5.3.2			Foul Sewer Connections	£ 3,109,459.65	Allowance in lieu of response from Anglian Water. Assume no upgrades and no off site diversion works.		Pro-rata from previous scheme
Utilities				£24,614,786.98			
3.6	Other Requirements						
Other Requirements				£0.00			
Total Cost of Neighbourhood Infrastructure				£24,614,786.98			

Notes/ Comments

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Appendix 2(ii)

Mott MacDonald 3988 Unit Scheme Infrastructure Cost and Trigger Point Assessment

Cost Analysis
for
South East Kings Lynn Strategic Growth Area



Project Title: South East Kings Lynn Strategic Growth Area
Project No: 377873
Date: 20/07/2018

Revision: 19:
Base Date: Q3 2018

Introduction

This document is provided with the intent of identifying the potential costs of the infrastructure associated with the South East Kings Lynn Strategic Growth Area. The costs are broken down into the following 3 main sections;

1	Section 106 Costs	Pages:	1 to 5
2	Additional Neighbourhood Plan Requirements	Pages:	6
3	Developer Costs	Pages:	7
4	Other Infrastructure	Pages:	8

Within each of these sections, the costs are further broken down as follows;

- n.1 Access and Transport : Q3 2018
- n.2 Education Costs 2018
- n.3 Green Infrastructure Q3 2018
- n.4 Community Facilities Q3 2018
- n.5 Utilities Q3 2018
- n.6 Other Requirements Q3 2018

An explanation of the contents of the columns which appear in the sheets are as follows;

"Total Cost" - The total calculated cost associated with the item of infrastructure.

"Contributions" - The contribution amount required by developers. This only appears in the Section 106 costs section, all other sections require full contribution. Any blank (£0) values in the column, require no developer contribution.

"Assumptions" - Any assumptions made during the costing exercise.

"Trigger point for delivery/ Assumed Cost Phasing" - How costs are to be apportioned in the growth area.

"Cost Source" - Where the associated costs have been priced from.

**Cost Analysis
for
South East Kings Lynn Strategic Growth Area**



Project Title: South East Kings Lynn Strategic Growth Area
Project No: 377873
Date: 20/07/2018

Revision: 19
Base Date: Q3 2018

1.0 Section 106 Costs

Ref.	Infrastructure Theme	Item	Detail	Total Cost	Contribution	Total Cost Without OB	Contribution Without OB	OB level to be used once forecast	Assumptions	Trigger Point for Delivery/ Assumed Cost Phasing	Costing Source
1.1	Access and Transport										
1.1.1		Minor improvement to Hardwick for A10 arm							- As Hardwick Transport Strategy, but with updated unit costs. - Ref 1.8 will require additional land costs. Which have not been included.	To be delivered by 2020 or by 400 dwellings	See Appendix A
1.1.1.1		Single lane slip road		£ 547,301.90	£ 547,301.90	£ 380,070.76	£ 380,070.76	44%			
1.1.2		A10 West Winch Bypass - Phase 1									
1.1.2.1		Intermediate roundabout		£ 136,162.01	£ 136,162.01	£ 94,556.95	£ 94,556.95	44%			
1.1.2.2		200m single carriageway		£ 547,301.90	£ 547,301.90	£ 380,070.76	£ 380,070.76	44%			
1.1.2.3		A47 roundabout		£ 217,859.23	£ 217,859.23	£ 151,291.13	£ 151,291.13	44%			
1.1.3		A10 West Winch Bypass - Phase 2									
1.1.3.1		2no at-grade roundabout on single carriageway		£ 272,324.03	£ 272,324.03	£ 189,113.91	£ 189,113.91	44%			
1.1.3.2		2300m single carriageway		£ 6,293,971.85	£ 6,293,971.85	£ 4,370,813.78	£ 4,370,813.78	44%			
1.1.4		A47 east of Hardwick dualled									
1.1.4.1		800m length widening of existing carriageway		£ 2,189,207.60	£ 2,189,207.60	£ 1,520,283.06	£ 1,520,283.06	44%			
1.1.5		Hardwick Interchange local widening within junction									
1.1.5.1		Widening parts of hardwick circulatory carriageway and exits		£ 1,368,254.75	£ 1,368,254.75	£ 950,176.91	£ 950,176.91	44%			
1.1.5.2		Upgrade to Traffic Signals		£ 101,680.00	£ 101,680.00	£ 70,611.11	£ 70,611.11	44%			
1.1.6		A47 roundabout retained but expanded									
1.1.6.1		400m length slip road		£ 1,094,603.80	£ 1,094,603.80	£ 760,141.53	£ 760,141.53	44%			
1.1.6.2		Dual carriageway roundabout		£ 217,859.23	£ 217,859.23	£ 151,291.13	£ 151,291.13	44%			
1.1.7		A47 flyover dualled									
1.1.7.1		1no new viaduct 175m long x 9m wide		£ 8,934,975.00	£ -	£ 6,204,843.75	£ -	44%			
1.1.8		A149 dualled									
1.1.8.1		800m length widening of existing carriageway		£ 2,189,207.60	£ -	£ 1,520,283.06	£ -	44%			
1.1.8.2		Existing roundabout upgraded to dual roundabout		£ 217,859.23	£ -	£ 151,291.13	£ -	44%			
1.1.9		Traffic Calming through West Winch Village									
1.1.9.1		Nominal Sum		£ 538,194.44	£ 538,194.44	£ 538,194.44	£ 538,194.44	0%	- Allowance; Scope of traffic calming to be defined, nominal sum of £0.5m as suggested in NCC Document. Assume safe crossings are allowed for in this figure. (Uplifted to 3Q2018).	To be commenced within 12 months of development	Nominal sum, taken from previous scheme.
1.1.10	Access and Transport cont...	Bus Strategy									
1.1.10.1		To be confirmed							- Contributions will need to be sought, however bus service improvements are based on business case.		
Access and Transport Total				£ 24,866,762.56	£ 13,524,720.74	£ 17,433,033.42	£ 9,556,615.48				
1.2	Education										
1.2.1		Contributions towards new facilities									
1.2.1.1		West Winch Primary School Capacity Increase		£ 2,445,240.00	£ 2,445,240.00	£ 2,445,240.00	£ 2,445,240.00	0%	- As advised by NCC - Nursery assumed to be part of primary school provision	• £100,000 on commencement of the development. • £1,000,000 on occupation of 100 new dwellings. (6 months post commencement) • Balance (£1,345,240) on occupation of 500 new dwellings across the overall IDP area (30 months post commencement)	Potential County Council Infrastructure Requirements - Proposed Housing Development Document, dated 12 October 2016.

**Cost Analysis
for
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Project Title: South East Kings Lynn Strategic Growth Area
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1.0 Section 106 Costs

Ref.	Infrastructure Theme	Item	Detail	Total Cost	Contribution	Total Cost Without OB	Contribution Without OB	OB level to be used once forecast	Assumptions	Trigger Point for Delivery/ Assumed Cost Phasing	Costing Source
1.2.1.2			420 place primary school (2ha)	£ 6,900,000.00	£ 6,900,000.00	£ 6,900,000.00	£ 6,900,000.00	0%		<ul style="list-style-type: none"> 2ha School site purchased on commencement of the development Transfer of a fully serviced school site after occupation of the 100th dwelling (6 months post commencement) £250,000 on transfer of the school site (costs for design and planning) (6 months post commencement) £1,000,000 on occupation of the 200th dwelling. (12 months post commencement) £2,400,000 on occupation of the 400th dwelling. (24 months post commencement) Balance (£3,250,000) on occupation of the 600th dwelling. (36 months after commencement) 	
1.2.1.3	Education cont...	Contributions towards new facilities cont...	315 place primary school (1.5ha, total 2ha safeguarded)	£ 6,900,000.00	£ 6,900,000.00	£ 6,900,000.00	£ 6,900,000.00	0%	- As advised by NCC - Nursery assumed to be part of primary school provision	<ul style="list-style-type: none"> 2 ha School site to be purchased 3 years prior to the point when 2000 units are estimated to be occupied (ie. 84 months post commencement) School to be completed by the point when 2000 units are occupied across the wider IDP area and cost apportioned across the previous 3 years (£5,150,000 apportioned between 84 and 120 post commencement) 	Potential County Council Infrastructure Requirements - Proposed Housing Development Document, dated 12 October 2016.
1.2.1.4			Nursery provision	£ -	£ -	£ -	£ -				
1.2.1.5			High School Capacity 640 place Increase	£ 11,229,440.00	£ 11,229,440.00	£ 11,229,440.00	£ 11,229,440.00	0%		<ul style="list-style-type: none"> To be paid by in four equal instalments on occupation of 400 dwellings of each respective phase. 	
1.2.1.6			Sixth Form Capacity 63 place Increase	£ 1,198,827.00	£ 1,198,827.00	£ 1,198,827.00	£ 1,198,827.00	0%		<ul style="list-style-type: none"> To be paid by in four equal instalments on occupation of 400 dwellings within each respective phase. 	
Education Total				£ 28,673,507.00	£ 28,673,507.00	£ 28,673,507.00	£ 28,673,507.00				
1.3	Green Infrastructure										
1.3.1		Neighbourhood parks, allotments & open spaces with equipped sports and play facilities. Capital Costs.									
1.3.1.1			Formal recreation facilities such as playing fields (10ha)	£ 5,185,467.56	£ 5,185,467.56	£ 5,185,467.56	£ 5,185,467.56	0%	50% of total open space area. Assume 20ha total	<ul style="list-style-type: none"> Costs to be apportioned and phased across the IDP area on the basis of a cost per residential unit delivered. 	Pro-rata from previous scheme
1.3.1.2			Play Areas (6ha)	£ 12,786,084.40	£ 12,786,084.40	£ 12,786,084.40	£ 12,786,084.40	0%	30% of total open space area from DM 16. Assume 20ha total		
1.3.1.3			Allotments (0.6ha)	£ 104,774.86	£ 104,774.86	£ 104,774.86	£ 104,774.86	0%			
1.3.1.4			Other green spaces (4ha)	£ 355,169.01	£ 355,169.01	£ 355,169.01	£ 355,169.01	0%	20% of total open space area. Assume 20ha total		
1.3.1.5			Natural and semi natural green spaces inc. footpath links and hedgegrows (i.e. landscape buffers) (28ha)	£ 1,988,946.46	£ 1,988,946.46	£ 1,988,946.46	£ 1,988,946.46	0%	Assume landscape buffer zones are approx 700m x 164m and 700m x 236m.		
1.3.2		Neighbourhood parks, allotments & open spaces with equipped sports and play facilities. Maintenance Costs.									
1.3.2.1			Formal recreation facilities such as playing fields (10ha)	£ 1,391,446.71	£ 1,391,446.71	£ 1,391,446.71	£ 1,391,446.71	0%			

**Cost Analysis
for
South East Kings Lynn Strategic Growth Area**

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Project Title: South East Kings Lynn Strategic Growth Area
Project No: 377873
Date: 20/07/2018

Revision: 19
Base Date: Q3 2018

1.0 Section 106 Costs

Ref.	Infrastructure Theme	Item	Detail	Total Cost	Contribution	Total Cost Without OB	Contribution Without OB	OB level to be used once forecast	Assumptions	Trigger Point for Delivery/ Assumed Cost Phasing	Costing Source
1.3.2.2	Green Infrastructure cont...	Neighbourhood parks, allotments & open spaces with equipped sports and play facilities. Maintenance Costs cont...	Play Areas (6ha)	£ 4,350,589.52	£ 4,350,589.52	£ 4,350,589.52	£ 4,350,589.52	0%		• Costs to be apportioned and phased across the IDP area on the basis of a cost per residential unit delivered.	Pro-rata from previous scheme
1.3.2.3			Allotments (0.6ha)	£ 20,407.77	£ 20,407.77	£ 20,407.77	£ 20,407.77	0%			
1.3.2.4			Other green spaces (4ha)	£ 636,973.13	£ 636,973.13	£ 636,973.13	£ 636,973.13	0%			
1.3.2.5			Natural and semi natural green spaces inc. footpath links and hedgerows (i.e. landscape buffers) (28ha)	£ 995,656.24	£ 995,656.24	£ 995,656.24	£ 995,656.24	0%	Assume landscape buffer zones are approx 700m x 164m and 700m x 236m.		
1.3.2.6			Interim Habitat Mitigation Payment	£ 200,641.03	£ 200,641.03	£ 200,641.03	£ 200,641.03	0%	Nominal contribution of £50 per home, as required by SADMP, assume 3988 homes. (Uplifted to 3Q2018).		
Green Infrastructure Total				£ 28,016,156.69	£ 28,016,156.69	£ 28,016,156.69	£ 28,016,156.69				
1.4	Community Facilities										
1.4.1	Neighbourhood Centres									• Costs to be apportioned and phased across the IDP area on the basis of a cost per residential unit delivered.	F+A Little Black Book (Q1 2011) mid-range at 1277.77/m ²
1.4.1.1		Community Centre 1 (Assumed 1000m ²)	£ 2,447,133.76	£ 2,447,133.76	£ 2,008,841.15	£ 2,008,841.15	24%	- Assumed as one large community centre and 2 smaller community centres. - The costs shown are the estimated physical build costs of the centres.			
1.4.1.2		Community Centre 2 (Assumed 500m ²)	£ 1,223,566.88	£ 1,223,566.88	£ 1,004,420.57	£ 1,004,420.57	24%				
1.4.1.3		Community Centre 3 (Assumed 500m ²)	£ 1,223,566.88	£ 1,223,566.88	£ 1,004,420.57	£ 1,004,420.57	24%				
1.4.1.4		Sports Centre (1500m ²)	£ 3,105,575.59	£ 3,105,575.59	£ 2,504,496.44	£ 2,504,496.44	24%	Assumed 1500m ² sports halls (approx. 4 hall). However, this may change in detailed design. - The costs shown are the estimated physical build costs of the centres.			
1.4.1.5		1no. MUGA Facility (782m ²)	£ 203,299.53	£ 203,299.53	£ 163,951.23	£ 163,951.23	24%	Taken from Sport England Guidance			
1.4.1.6		Health Centre	£ -	£ -	£ -	£ -		- Land to be safeguarded only.			
1.4.1.7		3no. Shops (Assumed 280m ²)	£ -	£ -	£ -	£ -		- Land to be safeguarded only.			
1.4.1.8		NLIS library contributions	£ 979,128.21	£ 979,128.21	£ 979,128.21	£ 979,128.21	0%	- Taken as £244 per dwelling (assuming 3988 dwellings) as advised by BCKLWN. (Uplifted to 3Q2018).			
Community Facilities Total				£ 9,182,270.85	£ 9,182,270.85	£ 7,665,258.18	£ 7,665,258.18				
1.5	Utilities										
1.5.1	SADMP Fire Service Requirement									• Costs to be apportioned and phased across the IDP area on the basis of a cost per residential unit delivered.	Potential County Council Infrastructure Requirements - Proposed Housing Development Document, dated 12 October 2016
1.5.1.1		Fire hydrants Contributions	£ 70,167.03	£ 70,167.03	£ 70,167.03	£ 70,167.03	0%	Allowance for 1 hydrant per 50 homes (taken as 4000 (rounded up to the nearest 50)/homes) and one additional hydrant per school and neighbourhood centre at £816 each. (Uplifted to 3Q2018).			
1.5.2		Strategic SUDS Infrastructure									
1.5.2.1	Strategic SUDS Infrastructure	Detention Basins; Capital Cost	£ 6,359,864.96	£ 6,359,864.96	£ 5,128,923.36	£ 5,128,923.36	24%	Allowance for detention basins which are to store a total of 78317.4m ³ of water. Works to existing watercourse to be defined. Scope to be defined.			
1.5.2.2		Detention Basins; 15year Maintenance Cost	£ 349,980.88	£ 349,980.88	£ 349,980.88	£ 349,980.88	24%				

**Cost Analysis
for
South East Kings Lynn Strategic Growth Area**



Project Title: South East Kings Lynn Strategic Growth Area
Project No: 377873
Date: 20/07/2018

Revision: 19
Base Date: Q3 2018

1.0 Section 106 Costs

Ref.	Infrastructure Theme	Item	Detail	Total Cost	Contribution	Total Cost Without OB	Contribution Without OB	OB level to be used once forecast	Assumptions	Trigger Point for Delivery/ Assumed Cost Phasing	Costing Source
			Utilities Total	£ 6,780,012.88	£ 6,780,012.88	£ 5,549,071.27	£ 5,549,071.27				
			Total Cost of Strategic Infrastructure (Contribution Portion)	£86,176,668.15		£79,460,608.62					
			Total Cost of Strategic Infrastructure	£97,518,709.98							

Notes/ Comments

- All cost data has been uplifted to a common base date to 3Q18 using BCIS Tender Price Indices to arrive at current prices.
 - Cost data has been sourced from a combination of in-house project data and professional opinion based on past experience.
 - Optimism bias of 44% is taken for all standard civil engineering works and 24% for all standard buildings as recommended by HM Treasury supplementary green book guidance.
 - Development and Supervision allowance of 10% is assumed for all works.
 - Contributions for strategic Hardwick infrastructure improvements its taken as 19% based on the percentage of traffic flow presented in the Hardwick Transport Strategy. This was taken as the maximum between the morning and evening peak flows identified.
 - Potential traffic diversion works are not included in these estimates, it is assumed that these will be defined by the phasing and construction techniques used during construction.
 - Where trigger points for delivery have not been provided to Mott MacDonald by the Borough Council of Kings Lynn and West Norfolk, they have been provided by Gerald Eve and have been included in this schedule in order to provide information on the inputs being used for viability purposes.
- Disclaimer:**
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**Cost Analysis
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Project Title: South East Kings Lynn Strategic Growth Area

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Revision: 19

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2.0 Additional Neighbourhood Plan Requirements

Ref	Infrastructure Theme	Item	Detail	Cost	Cost Without OB	OB level to be used once forecast	Assumptions	Trigger Point for Delivery/ Assumed Cost Phasing	Costing Source
2.1	Access and Transport								
2.1.1		Off-Site Improvements to Road Network							
2.1.1.1			Redevelopment of A10 between Chapel Lane and Long Lane	£ -	£ -		Assume to be included in traffic calming, other upgrades not directly related to development.	In accordance with agreed phasing plan prior to the commencement of development	
2.1.1.2			Provision for future dual use path connection to Bawsey Country Park	£ -	£ -		This will tie into an new development footpath, therefore no contribution related to development.		
2.1.1.3			Dual use path connection to the village of Middleton	£ 519,552.47	£ 519,552.47	0%	Allowance for new 3m pavement on A47 south of New Road (approx. 1.7km)		
2.1.1.4			Safe Cycle and Pedestrian Crossing at Rectory Lane	£ 103,412.81	£ 73,866.29	44%	Allowance for 2 Toucan Crossings		
2.1.1.5			Safe Cycle and Pedestrian Crossing at Chequers Lane	£ 103,412.81	£ 73,866.29	44%	Allowance for 2 Toucan Crossings		
Access and Transport				£726,378.08	£667,285.05				
2.2	Education								
Education				£0.00	£0.00				
2.3	Green Infrastructure								
2.3.1		New nature reserve (5ha)							
2.3.1.1			5ha fenced off nature reserve	£ -	£ -		Assumed land take implications only. Scope to be defined		
Green Infrastructure				£0.00	£0.00				
2.4	Community Facilities								
2.4.1		Existing community facilities							
2.4.1.1			Upgrade existing community facilities	£ -	£ -		A need for this would need to be assessed. At this point it is assumed that the communities will be serviced by new facilities.		
Community Facilities				£0.00	£0.00				
2.5	Other Requirements								
2.5.1		Allowance for expansion to West Winch Church graveyard							
2.5.1.1			Land safeguarded only	£ -	£ -		Assume land take only.		
Other Requirements				£0.00	£0.00				
Total Cost of Neighbourhood Infrastructure				£726,378.08	£667,285.05				

Notes/ Comments

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- Optimism bias of 44% is taken for all standard civil engineering works and 24% for all standard buildings as recommended by HM Treasury supplementary green book guidance.
- Development and Supervision allowance of 10% is assumed for all works.
- Contributions for section 106 costs have been taken as a 100% contribution for those costs necessary to development and 0% for those as a direct cost to the development. This has been derived with guidance from the Borough Council of King's Lynn and West Norfolk.
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**Cost Analysis
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3.0 Developer Costs

Ref	Infrastructure Theme	Item	Detail	Cost	Cost Without OB	OB level to be used once forecast	Assumptions	Trigger Point for Delivery/ Assumed Cost Phasing	Costing Source
3.1	Access and Transport	On-site road network							
3.1.1.1		On-site road network	Neighbourhood Streets - Site Masterplan	£ 16,284,968.04	£ 16,284,968.04	0%	Estimate from masterplan drawing 1565/01 SK306. Allowance; 5151m neighbourhood streets, 795m village centre streets and 10370m lanes and home roads. These have all been estimated as single carriageway all purpose road, and will be defined in detailed design stage. Scope to be defined.	Costs to be apportioned and phased across the IDP area outside of the Hopkins Homes scheme only, on the basis of a cost per residential unit delivered.	See Appendix A
3.1.1.2	Village Centre Streets - Site Masterplan		£ 2,175,525.06	£ 2,175,525.06	0%				
3.1.1.3	Lanes and Home Roads - Site Masterplan		£ 28,377,603.52	£ 19,706,669.11	44%				
3.1.1.4	East to West Road - Hopkins Homes		£ 3,207,189.13	£ 2,227,214.68	44%				
3.1.1.5	Hopkins Homes - Other Roads		£ 10,896,780.83	£ 7,567,208.91	44%				
3.1.2	On site footpaths								
3.1.2.1		On site footpaths	Cycle/ Shared use pathways associated with road network	£ 4,332,938.31	£ 3,094,955.93	44%	Allowance; 10016m estimated from site masterplan drawing 1565/01 SK306. Allowance; 6326m from hopkins homes masterplan Scope to be defined.	Costs to be apportioned and phased across the whole IDP area on the basis of a cost per residential unit delivered	F+A Little Black Book (Q3 2010) mid-range at £154.17/m2. Pro rata
3.1.2.2			2m footpath associated with road network	£ 4,626,306.14	£ 3,304,504.38	44%			
3.1.3	Cycle Routes								
3.1.3.1			Not associated with road network (3m wide)	£ 957,955.34	£ 684,253.81	44%	Allowance; 3613m at 3m wide	In accordance with agreed phasing plan prior to the commencement of development	F+A Little Black Book (Q3 2010) mid-range at £154.17/m2. Pro rata
Access and Transport				£70,859,266.36	£55,045,299.92				
Total Cost of Neighbourhood Infrastructure				£70,859,266.36	£55,045,299.92				

Notes/ Comments

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**Cost Analysis
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3.0 Other Infrastructure

Ref	Infrastructure Theme	Item	Detail	Cost	Assumptions	Trigger Point for Delivery/ Assumed Cost Phasing	Costing Source
3.5	Utilities						
3.5.1	UKPN						
3.5.1.1		Contestable works		£ 1,091,603.05	Figures from UKPN Pre-development Enquiry Budget Estimate	• Costs to be apportioned and phased across the IDP area on the basis of a cost per residential unit delivered.	Pre-development Enquiry
3.5.1.2		Non-contestable works		£ 10,916,030.53			
3.5.2		National Grid					
3.5.2.1	National Grid					• Costs to be apportioned and phased across the IDP area on the basis of a cost per residential unit delivered, from the point of 300 units delivered onwards.	Pro-rata from previous scheme
3.5.2.2		Strategic improvements to gas supply		£ 2,567,097.81	Allowance in lieu of National Grid feasibility study		
3.5.2.3		Protection works to H/P Line		£ 1,637,404.58	This is a highly conservative estimate based on two crossing points with complex slab protection measures. This assumption does not allow for diversion works at both crossing points.		Due to lack of site information a nominal figure has been used based on diverting the gas main
3.5.2.4		Infrastructure works		£ 574,096.42	Allowance; assume no ofsite diversion works.		Pro-rata from previous scheme
3.5.3	Anglian Water						
3.5.3.1		Mains water distribution		£ 3,820,610.69	Allowance; £1000 per dwelling, assume no upgrades required in lieu of response from Anglian Water. Assume 3988 dwellings. Assume no ofsite diversion works. (Uplifted to 3Q2018).	• Costs to be apportioned and phased across the IDP area on the basis of a cost per residential unit delivered.	Pro-rata from previous scheme
3.5.3.2		Foul Sewer Connections		£ 3,109,459.65	Allowance in lieu of response from Anglian Water. Assume no upgrades and no off site diversion works.		Pro-rata from previous scheme
Utilities				£24,614,786.98			
3.6	Other Requirements						
Other Requirements				£0.00			
Total Cost of Neighbourhood Infrastructure				£24,614,786.98			

Notes/ Comments

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 - Optimism bias of 44% is taken for all standard civil engineering works and 24% for all standard buildings as recommended by HM Treasury supplementary green book guidance.
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 - Potential traffic diversion works are not included in these estimates, it is assumed that these will be defined by the phasing and construction techniques used during construction.
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Appendix 3

Matrix of Indicative Base Position Appraisal Inputs

Appraisal Item	Input	Source	Notes
Land Area Inputs			
Total Site Area	c.192 ha (474 acres)	Gerard Eve	Based on the area of the IDP agreed with BCKLWN as shown in Gerard Eve IDP plan area
Residential Developable Land	c.122.6 ha (303 acres)	Gerard Eve	Based on the area of the IDP agreed with BCKLWN as shown in Gerard Eve IDP plan area
Employment Land	c. 1.0 ha (2.5 acres)	Gerard Eve	Based on the area of the IDP agreed with BCKLWN as shown in Gerard Eve IDP plan area
Local Centres Area	c.0.36 ha (0.9 acres)	Gerard Eve	Based on the area of the IDP agreed with BCKLWN as shown in Gerard Eve IDP plan area
Educational Use Land	c. 4.0 ha (9.9 acres)	Gerard Eve	Based on the area of the IDP agreed with BCKLWN as shown in Gerard Eve IDP plan area
Green Space	c. 48.0 ha (119 acres)	Gerard Eve	Based on the area of the IDP agreed with BCKLWN as shown in Gerard Eve IDP plan area
Surplus land	c. 16.0 ha (39.5 acres)	Gerard Eve	Based on the area of the IDP agreed with BCKLWN as shown in Gerard Eve IDP plan area
Residential Market Inputs			
Units	up to 3,500	BCKLWN	Based on BCKLWN policy CS09 of Core Strategy and E2 of SADMP
Delivery Velocity	Up to 200 dwellings per annum	Gerard Eve	GE assumption based on HH delivery plan and market considerations. Assuming more than one outlet developing at one time. Equates to c.160 private market housing per annum. C.80 dwellings per outlet. SHMA indicated delivery of 150 per annum.
Density	28.4 dwha (11.5 per acre) (overall)	Gerard Eve	Based on target dwellings/ha onsite using available land area within IDP. (Hopkins Homes planning application has density of 32.5 dwellings per hectare).
Private Market Housing Unit Mix	1bed(flat) 7.4%; 2bed(flat) 2.7%; 2bed(house) 26.7%; 3bed(house) 43.4%; 4bed(house) 15.4%; 5bed(house) 4.4%	Gerard Eve	Mix proposed by Gerard Eve based on market based evidence and proposed by Hopkins Homes planning application (ref.13/01615/OM) and agreed by the BCKLWN
1 bed flat size (Private Market Sale)	482 sq ft (45 sq m)	Gerard Eve	Gerard Eve assumption based on average size of comparable residential schemes
2 bed flat size (Private Market Sale)	655 sq ft (61 sq m)	Gerard Eve	Gerard Eve assumption based on average size of comparable residential schemes
2 bed house size (Private Market Sale)	700 sq ft (65 sq m)	BCKLWN amendment to GE assumption	BCKLWN amendment to Gerard Eve assumption based on average size of comparable residential schemes
3 bed house size (Private Market Sale)	950 sq ft (88 sq m)	Gerard Eve	Gerard Eve assumption based on average size of comparable residential schemes
4 bed house size (Private Market Sale)	1,350 sq ft (125 sq m)	Gerard Eve	Gerard Eve assumption based on average size of comparable residential schemes
5+ bed house size (Private Market Sale)	1,510 sq ft (140 sq m)	Gerard Eve	Gerard Eve assumption based on average size of comparable residential schemes
Private Market Sale Indexation on original 2017 value	5.60%	Gerard Eve	Gerard Eve assumption based on the Land Registry index position from January 2017 to May 2018
1 bed flat capital value (Private Market Sale)	Original 2017 value £87,000, grown to £91,872	Gerard Eve	Gerard Eve assessment based on comparable market evidence
2 bed flat capital value (Private Market Sale)	Original 2017 value £120,000, grown to £126,720	Gerard Eve	Gerard Eve assessment based on comparable market evidence
2 bed house capital value (Private Market Sale)	Original 2017 value £158,000, grown to £166,848	Gerard Eve	Gerard Eve assessment based on comparable market evidence
3 bed house capital value (Private Market Sale)	Original 2017 value £212,000, grown to £223,872	Gerard Eve	Gerard Eve assessment based on comparable market evidence
4 bed house capital value (Private Market Sale)	Original 2017 value £280,000, grown to £295,680	Gerard Eve	Gerard Eve assessment based on comparable market evidence
5+ bed house capital value (Private Market Sale)	Original 2017 value £293,000, grown to £309,408	Gerard Eve	Gerard Eve assessment based on comparable market evidence
Affordable Housing Inputs			
Affordable Housing Percentage Base Assumption	20% Affordable Housing	Gerard Eve	BCKLWN Policy compliant percentage (Affordable Housing Policy April 2011)
Affordable Housing Tenure Mix	70% Rented / 30% Shared Ownership	Gerard Eve	BCKLWN Policy compliant tenure mix
1 bed flat size (Affordable Unit)	50 sq m (538 sq ft)	BCKLWN	BCKLWN assumption - confirmed
2 bed flat size (Affordable Unit)	70 sq m (753 sq ft)	BCKLWN	BCKLWN assumption - confirmed
2 bed house size (Affordable Unit)	80 sq m (861 sq ft)	BCKLWN	BCKLWN assumption - confirmed
3 bed 5 person house size (Affordable Unit)	93 sq m (1,001 sq ft)	BCKLWN	BCKLWN assumption - confirmed
3 bed 6 person house size (Affordable Unit)	102 sq m (1,098 sq ft)	BCKLWN	BCKLWN assumption - confirmed
4 bed house size (Affordable Unit)	115 sq m (1,238 sq ft)	BCKLWN	BCKLWN assumption - confirmed
5 bed house size (Affordable Unit)	119 sq m (1,281 sq ft)	BCKLWN	BCKLWN assumption - confirmed
2 bed bungalow size (Affordable Unit)	70 sq m (753 sq ft)	BCKLWN	BCKLWN assumption - confirmed
3 bed bungalow size (Affordable Unit)	83 sq m (892 sq ft)	BCKLWN	BCKLWN assumption - confirmed
1 bed flat capital value (Affordable Rent)	£69,695	Gerard Eve	Gerard Eve affordable housing team assessment - Affordable Rent per week (80% of market rent) - adjusted and confirmed by BCKLWN
2 bed flat capital value (Affordable Rent)	£84,370	Gerard Eve	Gerard Eve affordable housing team assessment - Affordable Rent per week (80% of market rent) - adjusted and confirmed by BCKLWN
2 bed house capital value (Affordable Rent)	£84,370	Gerard Eve	Gerard Eve affordable housing team assessment - Affordable Rent per week (80% of market rent) - adjusted and confirmed by BCKLWN
3 bed 5 person house capital value (Affordable Rent)	£99,543	Gerard Eve	Gerard Eve affordable housing team assessment - Affordable Rent per week (80% of market rent) - adjusted and confirmed by BCKLWN
3 bed 6 person house capital value (Affordable Rent)	£99,543	Gerard Eve	Gerard Eve affordable housing team assessment - Affordable Rent per week (80% of market rent) - adjusted and confirmed by BCKLWN
4 bed capital value (Affordable Rent)	£124,720	Gerard Eve	Gerard Eve affordable housing team assessment - Affordable Rent per week (80% of market rent) - adjusted and confirmed by BCKLWN
5 bed rental value (Affordable Rent)	£125,779	Gerard Eve	Gerard Eve affordable housing team assessment - Affordable Rent per week (80% of market rent) - adjusted and confirmed by BCKLWN
2 bed bungalow capital value (Affordable Rent)	£71,349	Gerard Eve	Gerard Eve affordable housing team assessment - Affordable Rent per week (80% of market rent) - adjusted and confirmed by BCKLWN
3 bed bungalow capital value (Affordable Rent)	£99,543	Gerard Eve	Gerard Eve affordable housing team assessment - Affordable Rent per week (80% of market rent) - adjusted and confirmed by BCKLWN
Affordable Housing Capitalisation and Deductions	15% management deductions from the gross rent. This includes a 10% management fee, 3% Voids & Bad Debts, 2% Repairs and Maintenance inc Sinking Fund. Rental stream to be capitalised at 5.75%.	Gerard Eve	Gerard Eve affordable housing team assessment - industry standard assumption
Intermediate Indexation on original 2017 value	5.60%	Gerard Eve	Gerard Eve assumption based on the Land Registry index position from January 2017 to May 2018
1 bed flat capital value (Intermediate)	Original 2017 value £81,000, grown to £85,538	Gerard Eve	Gerard Eve affordable housing team assessment - Intermediate Rent element at £155.62
2 bed flat capital value (Intermediate)	Original 2017 value £84,000, grown to £88,704	Gerard Eve	Gerard Eve affordable housing team assessment - Intermediate Rent element at £155.62
2 bed house capital value (Intermediate)	Original 2017 value £102,000, grown to £107,712	Gerard Eve	Gerard Eve affordable housing team assessment - Intermediate Rent element at £155.62
3 bed 5 person house capital value (Intermediate)	Original 2017 value £116,000, grown to £122,496	Gerard Eve	Gerard Eve affordable housing team assessment - Intermediate Rent element at £155.62
3 bed 6 person house capital value (Intermediate)	Original 2017 value £132,000, grown to £138,392	Gerard Eve	Gerard Eve affordable housing team assessment - Intermediate Rent element at £155.62
4 bed house capital value (Intermediate)	Original 2017 value £174,000, grown to £183,744	Gerard Eve	Gerard Eve affordable housing team assessment - Intermediate Rent element at £155.62
5 bed house capital value (Intermediate)	Original 2017 value £182,000, grown to £192,192	Gerard Eve	Gerard Eve affordable housing team assessment - Intermediate Rent element at £155.62
2 bed bungalow capital value (Intermediate)	Original 2017 value £98,000, grown to £103,488	Gerard Eve	Gerard Eve affordable housing team assessment - Intermediate Rent element at £155.62
3 bed bungalow capital value (Intermediate)	Original 2017 value £100,000, grown to £105,543	Gerard Eve	Gerard Eve affordable housing team assessment - Intermediate Rent element at £155.62
Intermediate Capitalisation and Deductions	4% management deductions from the gross rent. This includes a 1% management fee, 3% Voids & Bad Debts to cover the rental element paid on the unsold equity. Rental stream to be capitalised at 5%.	Gerard Eve	Gerard Eve affordable housing team assessment - industry standard assumption
Other Income Inputs			
Loan (Not used at present)	3.5% over a 25 year period to be included in the model at a later date	BCKLWN	HCA model does not allow differential loan rates to be included in the model. Awaiting meeting with the HCA to address this point.
Commercial Land Income	£100,000 less 2.5% disposal fees	Gerard Eve	Assumption of selling serviced plot of commercial land for the local centre to be developed. Income reflects land value less purchasers costs.
Cost Inputs			
Residential Build Cost	Houses: £108.85 psf (£1,172psm); Flats: £129.30 psf (£1,392 psm)	RICS Building Cost Information Service (BCIS) / Gerard Eve	Cost assumed BCIS median build cost for West Norfolk Estate Housing (£/sq m) plus an uplift of 10% for External Works and 3% for abnormalities - See base cost breakdown
Contingency	5%	Gerard Eve	Assumption based on an appropriate contingency for a project at an early stage in its development.
Strategic Infrastructure	£83,412,053	Mott MacDonald	Based on Mott MacDonald infrastructure cost estimate
Neighbourhood Infrastructure	£726,378	Mott MacDonald	Based on Mott MacDonald infrastructure cost estimate
Developer Infrastructure	£70,859,226	Mott MacDonald	Based on Mott MacDonald infrastructure cost estimate
Other Infrastructure	£24,614,787	Mott MacDonald	Based on Mott MacDonald infrastructure cost estimate
Strategic Infrastructure cost per residential unit	£23,832	Mott MacDonald	For information/comparison based on total cost provided by Mott MacDonald
Neighbourhood Infrastructure cost per residential unit	£208	Mott MacDonald	For information/comparison based on total cost provided by Mott MacDonald
Developer Infrastructure costs per residential unit	£20,245	Mott MacDonald	For information/comparison based on total cost provided by Mott MacDonald
Other Infrastructure costs per residential unit	£7,033	Mott MacDonald	For information/comparison based on total cost provided by Mott MacDonald
Professional Fees	8%	Gerard Eve	Dependent on complications of a development. Typically range from 6-15% with the lower end of the range being for housing delivered by a national housebuilder.
CIL	£Nil - Exempt area	BCKLWN	Based on BCKLWN CIL policy
S106	£Contained within Strategic and Neighbourhood Infrastructure	BCKLWN	Awaiting confirmation from BCKLWN on S106 amounts
Finance	7.00%	Gerard Eve	Assumption based on finance rates available in the market
Acquisition Costs	1.8% (agent, legal & VAT)	Gerard Eve	Standard industry assumption
Stamp Duty Land Tax	5% (HCA model does not reflect latest legislation)	Gov.UK	HCA DAT model does not allow specific stepped levels - This needs to be updated to reflect current legislation - Awaiting meeting with HCA to address this point.
Residential Disposal Fees	1% marketing, 1% agent, 0.5% legal	Gerard Eve	Standard industry assumption
Developer cost of sale to RP	3% of Affordable GDV	Gerard Eve	These are administrative/ oncosts that that RP will incur in order to purchase the affordable element of the scheme. For example, Legal, sales and marketing.
RP Purchase cost	0.8% of Affordable Housing GDV	Gerard Eve	Agency fees that the Developer pays to market and tender the Scheme to potential RP purchasers. Market norm on smaller schemes range from 1-1.25%. Have suggested 0.8% due to size and estimated value of this scheme.
Land disposal fee for commercial serviced land	1% marketing, 1% agent, 0.5% legal	Gerard Eve	Standard industry assumption
Land Value Inputs			
Residential Developable Land Value	Assumed £100k per developable acre (c.£247k per ha)	Gerard Eve	Assessment of typical developable acre and supported with market evidence
Employment Developable Land Value	Assumed £100k per developable acre (c.£247k per ha)	Gerard Eve	Assessment of typical developable acre and supported with market evidence
Local Centre Developable Land Value	Assumed £100k per developable acre (c.£247k per ha)	Gerard Eve	Assessment of typical developable acre and supported with market evidence
Education Developable Land Value	Assumed £100k per developable acre (c.£247k per ha)	Gerard Eve	Assessment of typical developable acre and supported with market evidence
Green Infrastructure Land Value	Assumed £100k per developable acre (c.£247k per ha)	Gerard Eve	Assessment of typical developable acre and supported with market evidence
Surplus Land Value	Assumed £10k per developable acre (c.£24.7k per ha)	Gerard Eve	Hopkins and Harrison website - land transactions (fields etc.) / DCLG Publications etc.
Development Profit			
Internal Rate of Return which is potential capable of being viable	20% IRR (on a gross cost and value basis)	Gerard Eve	Based on Gerard Eve assessment of IRR level which is potentially capable of being viable.
Cost and Value Growth Assumptions			
Construction Cost Growth (Infrastructure and build costs)	Y1 0.5%; Y2 2.2%; Y3 3.0%; Y4 3.7%; Y5 3.8%; Y6+ 2.6%	Gardiner and Theobald; Turner and Townsend; Mace and BCIS All In Tender Price Index (TPI)	Average annual forecast based on Gardiner and Theobald; Turner and Townsend; Mace and BCIS All In Tender Price Index (TPI) forecast at August 2018
Private Residential Sales Value Growth	Y1 2.0%; Y2 3.0%; Y3 4.0%; Y4 3.0%; Y5+ 3.2%	Knight Frank	Knight Frank UK Residential Market Forecast for East of England (as at May 2018)
Intermediate Residential Sales Value Growth	Y1 2.0%; Y2 3.0%; Y3 4.0%; Y4 3.0%; Y5+ 3.2%	Knight Frank	Knight Frank UK Residential Market Forecast for East of England (as at May 2018)
Affordable Rent Residential Sales Value Growth	Y1 3.4%; Y2 3.1%; Y3 3% Y4 3%; Y5+ 3.12%	Bank of England	Bank of England Consumer Price Index (CPI) Projections as at August 2018 plus 1%
Commercial Land Value Growth	Y1+ 2.1%	Bank of England	Bank of England Consumer Price Index (CPI) Projections as at August 2018 (4 year predicted average)
Residential Land Value Growth	Y1 1.5%; Y2 2.5%; Y3 3.5 %; Y4 2.5%; Y5+ 2.7%.	Knight Frank	Knight Frank UK Residential Market Forecast for East of England (as at May 2018). Average for next 5 years less 0.5% to allow for notional effect of cost inflation.

Appendix 4 (i)

Base Position Development Appraisal with Sensitivity Analysis

West Winch Urban Extension
Kings Lynn
Scenario 3

Development Appraisal
Gerald Eve LLP
14 August 2018

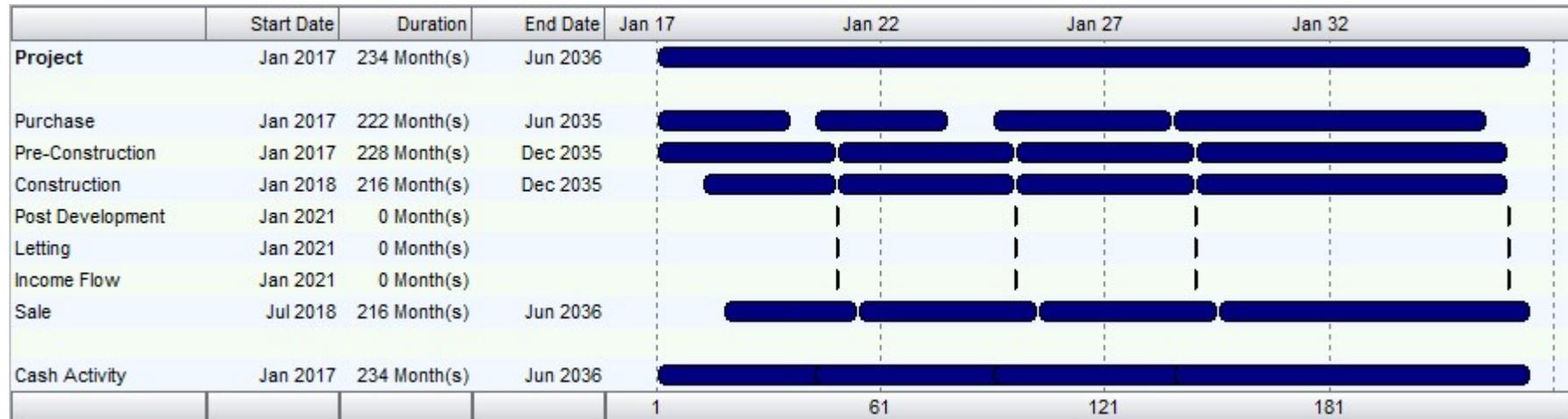
TIMESCALE AND PHASING GRAPH REPORT

GERALD EVE LLP

West Winch Urban Extension
 Kings Lynn
 Scenario 3

Project Timescale	
Project Start Date	Jan 2017
Project End Date	Jun 2036
Project Duration (Inc Exit Period)	234 months

All Phases

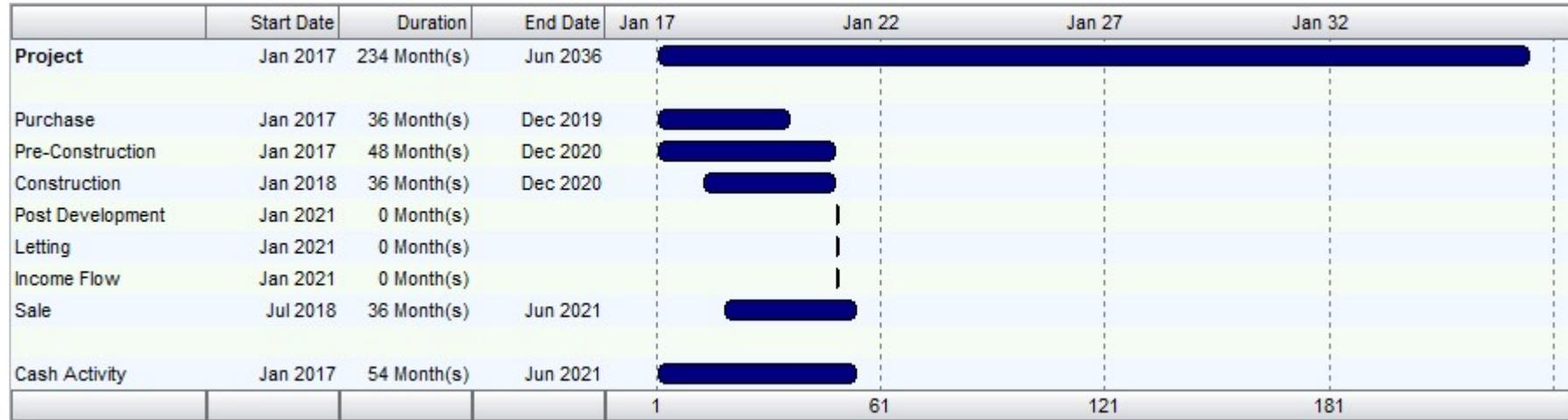


TIMESCALE AND PHASING GRAPH REPORT

GERALD EVE LLP

West Winch Urban Extension
 Kings Lynn
 Scenario 3

1. Phase 1

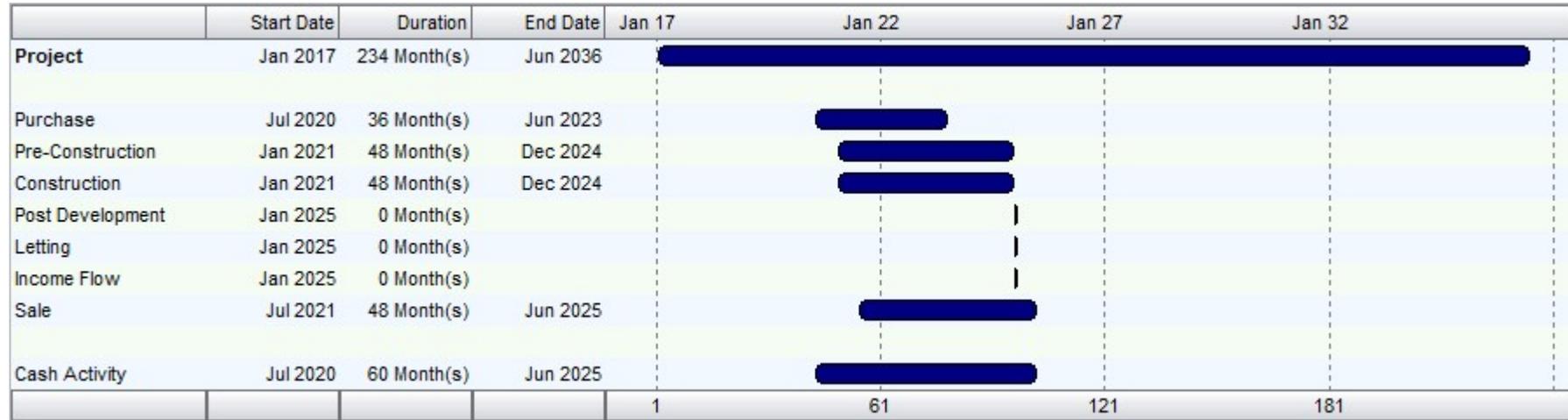


TIMESCALE AND PHASING GRAPH REPORT

GERALD EVE LLP

**West Winch Urban Extension
Kings Lynn
Scenario 3**

2. Phase 2



TIMESCALE AND PHASING GRAPH REPORT

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**West Winch Urban Extension
Kings Lynn
Scenario 3**

3. Phase 3



TIMESCALE AND PHASING GRAPH REPORT

GERALD EVE LLP

**West Winch Urban Extension
Kings Lynn
Scenario 3**

4. Phase 4



APPRAISAL SUMMARY**GERALD EVE LLP****West Winch Urban Extension
Kings Lynn
Scenario 3****Summary Appraisal for Merged Phases 1 2 3 4**

Currency in £

REVENUE

Sales Valuation	Units	ft²	Rate ft²	Unit Price	Gross Sales	Adjustment	Net Sales
‡ 1 bedroom flat - private market sale	47	22,654	190.61	91,872	4,317,984	365,247	4,683,231
‡ 2 bedroom flat - private market sale	17	11,135	193.47	126,720	2,154,240	182,222	2,336,462
‡ 2 bedroom house - private market sale	171	119,700	238.35	166,848	28,531,008	2,413,367	30,944,375
‡ 3 bedroom house - private market sale	278	264,100	235.65	223,872	62,236,416	5,264,423	67,500,839
‡ 4 bedroom house - private market sale	99	133,650	219.02	295,680	29,272,320	2,476,073	31,748,393
‡ 5 bedroom house - private market sale	28	42,280	204.91	309,408	8,663,424	732,817	9,396,241
‡ 2 bedroom flat - intermediate	6	4,518	117.80	88,704	532,224	45,020	577,244
‡ 2 bedroom house - intermediate	20	17,220	125.10	107,712	2,154,240	182,222	2,336,462
‡ 2 bedroom bungalow - intermediate	2	1,506	137.43	103,488	206,976	17,508	224,484
‡ 3 bedroom (5 person) house - intermediate	10	10,010	122.37	122,496	1,224,960	103,616	1,328,576
‡ 3 bedroom (6 person) house - intermediate	5	5,490	126.95	139,392	696,960	58,954	755,914
‡ 3 bedroom bungalow - intermediate	2	1,852	127.72	118,272	236,544	20,009	256,553
‡ 4 bedroom house - intermediate	3	3,714	148.42	183,744	551,232	46,627	597,859
‡ 1 bedroom flat - affordable rent	9	4,842	129.54	69,695	627,255	60,869	688,124
‡ 2 bedroom flat - affordable rent	12	9,036	112.05	84,370	1,012,440	98,247	1,110,687
‡ 2 bedroom house - affordable rent	40	34,440	97.99	84,370	3,374,800	327,489	3,702,289
‡ 2 bedroom bungalow - affordable rent	3	2,259	94.75	71,349	214,047	20,771	234,818
‡ 3 bedroom house (5 person) - affordable rent	25	25,025	99.44	99,543	2,488,575	241,490	2,730,065
‡ 3 bedroom house (6 person) - affordable rent	13	14,274	90.66	99,543	1,294,059	125,575	1,419,634
‡ 3 bedroom bungalow - affordable rent	4	3,704	107.50	99,543	398,172	38,638	436,810
‡ 4 bedroom house - affordable rent	2	2,476	100.74	124,720	249,440	24,206	273,646
‡ 5 bedroom house - affordable rent	4	5,124	98.19	125,779	503,116	48,822	551,938
‡ 1 bedroom flat - private market sale	47	22,654	190.61	91,872	4,317,984	926,368	5,244,352
‡ 2 bedroom flat - private market sale	17	11,135	193.47	126,720	2,154,240	462,165	2,616,405
‡ 2 bedroom house - private market sale	171	119,700	238.35	166,848	28,531,008	6,120,964	34,651,972
‡ 3 bedroom house - private market sale	278	264,100	235.65	223,872	62,236,416	13,352,029	75,588,445
‡ 4 bedroom house - private market sale	99	133,650	219.02	295,680	29,272,320	6,280,003	35,552,323
‡ 5 bedroom house - private market sale	28	42,280	204.91	309,408	8,663,436	1,858,630	10,522,065
‡ 2 bedroom flat - intermediate	6	4,518	117.80	88,704	532,224	114,182	646,406
‡ 2 bedroom house - intermediate	20	17,220	125.10	107,712	2,154,240	462,165	2,616,405

APPRAISAL SUMMARY

GERALD EVE LLP

West Winch Urban Extension Kings Lynn Scenario 3

‡ 2 bedroom bungalow - intermediate	2	1,506	137.43	103,488	206,976	44,404	251,380
‡ 3 bedroom (5 person) house - intermediate	10	10,010	122.37	122,496	1,224,960	262,800	1,487,760
‡ 3 bedroom (6 person) house - intermediate	5	5,490	126.95	139,392	696,960	149,524	846,484
‡ 3 bedroom bungalow - intermediate	2	1,852	127.72	118,272	236,544	50,747	287,291
‡ 4 bedroom house - intermediate	3	3,714	148.42	183,744	551,232	118,260	669,492
‡ 1 bedroom flat - affordable rent	9	4,842	129.54	69,695	627,255	138,293	765,548
‡ 2 bedroom flat - affordable rent	12	9,036	112.05	84,370	1,012,440	223,215	1,235,655
‡ 2 bedroom house - affordable rent	40	34,440	97.99	84,370	3,374,800	744,052	4,118,852
‡ 2 bedroom bungalow - affordable rent	3	2,259	94.75	71,349	214,047	47,192	261,239
‡ 3 bedroom house (5 person) - affordable rent	25	25,025	99.44	99,543	2,488,575	548,663	3,037,238
‡ 3 bedroom house (6 person) - affordable rent	13	14,274	90.66	99,543	1,294,059	285,305	1,579,364
‡ 3 bedroom bungalow - affordable rent	4	3,704	107.50	99,543	398,172	87,786	485,958
‡ 4 bedroom house - affordable rent	2	2,476	100.74	124,720	249,440	54,995	304,435
‡ 5 bedroom house - affordable rent	4	5,124	98.19	125,779	503,116	110,923	614,039
‡ 1 bedroom flat - private market sale	47	22,654	190.61	91,872	4,317,984	1,630,163	5,948,147
‡ 2 bedroom flat - private market sale	17	11,135	193.47	126,720	2,154,240	813,287	2,967,527
‡ 2 bedroom house - private market sale	171	119,700	238.35	166,848	28,531,008	10,771,272	39,302,280
‡ 3 bedroom house - private market sale	278	264,100	235.65	223,872	62,236,416	23,496,028	85,732,444
‡ 4 bedroom house - private market sale	99	133,650	219.02	295,680	29,272,320	11,051,139	40,323,459
‡ 5 bedroom house - private market sale	28	42,280	204.91	309,408	8,663,424	3,270,691	11,934,115
‡ 2 bedroom flat - intermediate	6	4,518	117.80	88,704	532,224	200,930	733,154
‡ 2 bedroom house - intermediate	20	17,220	125.10	107,712	2,154,240	813,287	2,967,527
‡ 2 bedroom bungalow - intermediate	2	1,506	137.43	103,488	206,976	78,139	285,115
‡ 3 bedroom (5 person) house - intermediate	10	10,010	122.37	122,496	1,224,960	462,457	1,687,417
‡ 3 bedroom (6 person) house - intermediate	5	5,490	126.95	139,392	696,960	263,122	960,082
‡ 3 bedroom bungalow - intermediate	2	1,852	127.72	118,272	236,544	89,302	325,846
‡ 4 bedroom house - intermediate	3	3,714	148.42	183,744	551,232	208,106	759,338
‡ 1 bedroom flat - affordable rent	9	4,842	129.54	69,695	627,255	238,398	865,653
‡ 2 bedroom flat - affordable rent	12	9,036	112.05	84,370	1,012,440	384,794	1,397,234
‡ 2 bedroom house - affordable rent	40	34,440	97.99	84,370	3,374,800	1,282,645	4,657,445
‡ 2 bedroom bungalow - affordable rent	3	2,259	94.75	71,349	214,047	81,352	295,399
‡ 3 bedroom house (5 person) - affordable rent	25	25,025	99.44	99,543	2,488,575	945,822	3,434,397
‡ 3 bedroom house (6 person) - affordable rent	13	14,274	90.66	99,543	1,294,059	491,827	1,785,886
‡ 3 bedroom bungalow - affordable rent	4	3,704	107.50	99,543	398,172	151,331	549,503
‡ 4 bedroom house - affordable rent	2	2,476	100.74	124,720	249,440	94,804	344,244
‡ 5 bedroom house - affordable rent	4	5,124	98.19	125,779	503,116	191,217	694,333
‡ 1 bedroom flat - private market sale	65	31,330	190.61	91,872	5,971,680	3,823,844	9,795,524

APPRAISAL SUMMARY

GERALD EVE LLP

West Winch Urban Extension Kings Lynn Scenario 3

‡ 2 bedroom flat - private market sale	24	15,720	193.47	126,720	3,041,280	1,947,422	4,988,702
‡ 2 bedroom house - private market sale	235	164,500	238.35	166,848	39,209,280	25,106,863	64,316,143
‡ 3 bedroom house - private market sale	382	362,900	235.65	223,872	85,519,104	54,760,415	140,279,519
‡ 4 bedroom house - private market sale	135	182,250	219.02	295,680	39,916,800	25,559,909	65,476,709
‡ 5 bedroom house - private market sale	39	58,890	204.91	309,408	12,066,912	7,726,801	19,793,713
‡ 2 bedroom flat - intermediate	9	6,777	117.80	88,704	798,336	511,198	1,309,534
‡ 2 bedroom house - intermediate	28	24,108	125.10	107,712	3,015,936	1,931,193	4,947,129
‡ 2 bedroom bungalow - intermediate	2	1,506	137.43	103,488	206,976	132,533	339,509
‡ 3 bedroom (5 person) house - intermediate	14	14,014	122.37	122,496	1,714,944	1,098,129	2,813,073
‡ 3 bedroom (6 person) house - intermediate	7	7,686	126.95	139,392	975,744	624,798	1,600,542
‡ 3 bedroom bungalow - intermediate	2	1,852	127.72	118,272	236,544	151,466	388,010
‡ 4 bedroom house - intermediate	4	4,952	148.42	183,744	734,976	470,627	1,205,603
‡ 1 bedroom flat - affordable rent	12	6,456	129.54	69,695	836,340	532,119	1,368,459
‡ 2 bedroom flat - affordable rent	17	12,801	112.05	84,370	1,434,290	912,564	2,346,854
‡ 2 bedroom house - affordable rent	55	47,355	97.99	84,370	4,640,350	2,952,412	7,592,762
‡ 2 bedroom bungalow - affordable rent	5	3,765	94.75	71,349	356,745	226,978	583,723
‡ 3 bedroom house (5 person) - affordable rent	34	34,034	99.44	99,543	3,384,462	2,153,356	5,537,818
‡ 3 bedroom house (6 person) - affordable rent	17	18,666	90.66	99,543	1,692,231	1,076,678	2,768,909
‡ 3 bedroom bungalow - affordable rent	5	4,630	107.50	99,543	497,715	316,670	814,385
‡ 4 bedroom house - affordable rent	3	3,714	100.74	124,720	374,160	238,058	612,218
‡ 5 bedroom house - affordable rent	<u>6</u>	<u>7,686</u>	98.19	125,779	<u>754,674</u>	<u>480,160</u>	<u>1,234,834</u>
Totals	3,500	3,232,619			660,200,787	235,081,182	895,281,969

Rental Area Summary

	Units	ft ²	Rate ft ²	Initial MRV/Unit	Net Rent at Sale	Initial MRV
Ground rent - private rented 1 bedroom flat	47	22,654	0.31	150	7,050	7,050
Ground rent - private rented 2 bedroom flat	17	11,135	0.38	250	4,250	4,250
Ground rent - private rented 1 bedroom flat	47	22,654	0.31	150	7,050	7,050
Ground rent - private rented 2 bedroom flat	17	11,135	0.38	250	4,250	4,250
Ground rent - private rented 1 bedroom flat	47	22,654	0.31	150	7,050	7,050
Ground rent - private rented 2 bedroom flat	17	11,135	0.38	250	4,250	4,250
Ground rent - private rented 1 bedroom flat	65	31,330	0.31	150	9,750	9,750
Ground rent - private rented 2 bedroom flat	<u>24</u>	<u>15,720</u>	0.38	250	<u>6,000</u>	<u>6,000</u>
Totals	281	148,417			49,650	49,650

Investment Valuation

Ground rent - private rented 1 bedroom flat

APPRAISAL SUMMARY**GERALD EVE LLP****West Winch Urban Extension
Kings Lynn
Scenario 3**

Market Rent	7,050	YP @	4.0000%	25.0000	
		PV 2yrs 5mths @	4.0000%	0.9096	160,312
Ground rent - private rented 2 bedroom flat					
Market Rent	4,250	YP @	4.0000%	25.0000	
		PV 2yrs 5mths @	4.0000%	0.9096	96,642
Ground rent - private rented 1 bedroom flat					
Market Rent	7,050	YP @	4.0000%	25.0000	
		PV 11mths @	4.0000%	0.9647	170,026
Ground rent - private rented 2 bedroom flat					
Market Rent	4,250	YP @	4.0000%	25.0000	
		PV 11mths @	4.0000%	0.9647	102,498
Ground rent - private rented 1 bedroom flat					
Market Rent	7,050	YP @	4.0000%	25.0000	
		PV 3yrs 5mths @	4.0000%	0.8746	154,146
Ground rent - private rented 2 bedroom flat					
Market Rent	4,250	YP @	4.0000%	25.0000	
		PV 3yrs 5mths @	4.0000%	0.8746	92,925
Ground rent - private rented 1 bedroom flat					
Market Rent	9,750	YP @	4.0000%	25.0000	
		PV 6yrs 6mths @	4.0000%	0.7750	188,898
Ground rent - private rented 2 bedroom flat					
Market Rent	6,000	YP @	4.0000%	25.0000	
		PV 6yrs 6mths @	4.0000%	0.7750	116,245
					1,081,691
GROSS DEVELOPMENT VALUE				896,363,661	
Additional Revenue					
Commercial Land Revenue			102,100		
				102,100	
NET REALISATION				896,465,761	
OUTLAY					
ACQUISITION COSTS					
Fixed Price		10,593,601			

APPRAISAL SUMMARY**GERALD EVE LLP****West Winch Urban Extension****Kings Lynn****Scenario 3**

Fixed Price	11,774,408		
Fixed Price	12,253,105		
Fixed Price	19,946,383		
Total Acquisition (474.31 Acres 115,046.06 pAcre)		54,567,498	
			54,567,498
Stamp Duty		2,678,375	
Acquisition Cost	1.80%	982,215	
			3,660,590

CONSTRUCTION COSTS

Construction	ft ²	Rate ft ²	Cost
‡ 1 bedroom flat - private market sale	27,166 ft ²	129.38 pf ²	3,669,241
‡ 2 bedroom flat - private market sale	13,362 ft ²	129.38 pf ²	1,804,771
‡ 2 bedroom house - private market sale	119,700 ft ²	108.88 pf ²	13,606,624
‡ 3 bedroom house - private market sale	264,100 ft ²	108.88 pf ²	30,020,965
‡ 4 bedroom house - private market sale	133,650 ft ²	108.88 pf ²	15,192,359
‡ 5 bedroom house - private market sale	42,280 ft ²	108.88 pf ²	4,806,083
‡ 2 bedroom flat - intermediate	5,424 ft ²	129.38 pf ²	732,606
‡ 2 bedroom house - intermediate	17,220 ft ²	108.88 pf ²	1,957,444
‡ 2 bedroom bungalow - intermediate	1,506 ft ²	108.88 pf ²	171,191
‡ 3 bedroom (5 person) house - intermediate	10,010 ft ²	108.88 pf ²	1,137,864
‡ 3 bedroom (6 person) house - intermediate	5,490 ft ²	108.88 pf ²	624,063
‡ 3 bedroom bungalow - intermediate	1,852 ft ²	108.88 pf ²	210,522
‡ 4 bedroom house - intermediate	3,714 ft ²	108.88 pf ²	422,180
‡ 1 bedroom flat - affordable rent	5,814 ft ²	129.38 pf ²	785,282
‡ 2 bedroom flat - affordable rent	10,848 ft ²	129.38 pf ²	1,465,211
‡ 2 bedroom house - affordable rent	34,440 ft ²	108.88 pf ²	3,914,888
‡ 2 bedroom bungalow - affordable rent	2,259 ft ²	108.88 pf ²	256,787
‡ 3 bedroom house (5 person) - affordable rent	25,025 ft ²	108.88 pf ²	2,844,660
‡ 3 bedroom house (6 person) - affordable rent	14,274 ft ²	108.88 pf ²	1,622,564
‡ 3 bedroom bungalow - affordable rent	3,704 ft ²	108.88 pf ²	421,044
‡ 4 bedroom house - affordable rent	2,476 ft ²	108.88 pf ²	281,454
‡ 5 bedroom house - affordable rent	5,124 ft ²	108.88 pf ²	582,459
‡ 1 bedroom flat - private market sale	27,166 ft ²	129.38 pf ²	4,097,574
‡ 2 bedroom flat - private market sale	13,362 ft ²	129.38 pf ²	2,015,453
‡ 2 bedroom house - private market sale	119,700 ft ²	108.88 pf ²	15,195,012
‡ 3 bedroom house - private market sale	264,100 ft ²	108.88 pf ²	33,525,502
‡ 4 bedroom house - private market sale	133,650 ft ²	108.88 pf ²	16,965,859

APPRAISAL SUMMARY**GERALD EVE LLP****West Winch Urban Extension****Kings Lynn****Scenario 3**

‡ 5 bedroom house - private market sale	42,280 ft ²	108.88 pf ²	5,367,127
‡ 2 bedroom flat - intermediate	5,424 ft ²	129.38 pf ²	818,127
‡ 2 bedroom house - intermediate	17,220 ft ²	108.88 pf ²	2,185,949
‡ 2 bedroom bungalow - intermediate	1,506 ft ²	108.88 pf ²	191,175
‡ 3 bedroom (5 person) house - intermediate	10,010 ft ²	108.88 pf ²	1,270,694
‡ 3 bedroom (6 person) house - intermediate	5,490 ft ²	108.88 pf ²	696,914
‡ 3 bedroom bungalow - intermediate	1,852 ft ²	108.88 pf ²	235,097
‡ 4 bedroom house - intermediate	3,714 ft ²	108.88 pf ²	471,464
‡ 1 bedroom flat - affordable rent	5,814 ft ²	129.38 pf ²	876,953
‡ 2 bedroom flat - affordable rent	10,848 ft ²	129.38 pf ²	1,636,254
‡ 2 bedroom house - affordable rent	34,440 ft ²	108.88 pf ²	4,371,898
‡ 2 bedroom bungalow - affordable rent	2,259 ft ²	108.88 pf ²	286,763
‡ 3 bedroom house (5 person) - affordable rent	25,025 ft ²	108.88 pf ²	3,176,735
‡ 3 bedroom house (6 person) - affordable rent	14,274 ft ²	108.88 pf ²	1,811,977
‡ 3 bedroom bungalow - affordable rent	3,704 ft ²	108.88 pf ²	470,195
‡ 4 bedroom house - affordable rent	2,476 ft ²	108.88 pf ²	314,310
‡ 5 bedroom house - affordable rent	5,124 ft ²	108.88 pf ²	650,453
‡ 1 bedroom flat - private market sale	27,166 ft ²	129.38 pf ²	4,547,465
‡ 2 bedroom flat - private market sale	13,362 ft ²	129.38 pf ²	2,236,738
‡ 2 bedroom house - private market sale	119,700 ft ²	108.88 pf ²	16,863,337
‡ 3 bedroom house - private market sale	264,100 ft ²	108.88 pf ²	37,206,410
‡ 4 bedroom house - private market sale	133,650 ft ²	108.88 pf ²	18,828,613
‡ 5 bedroom house - private market sale	42,280 ft ²	108.88 pf ²	5,956,407
‡ 2 bedroom flat - intermediate	5,424 ft ²	129.38 pf ²	907,953
‡ 2 bedroom house - intermediate	17,220 ft ²	108.88 pf ²	2,425,954
‡ 2 bedroom bungalow - intermediate	1,506 ft ²	108.88 pf ²	212,165
‡ 3 bedroom (5 person) house - intermediate	10,010 ft ²	108.88 pf ²	1,410,209
‡ 3 bedroom (6 person) house - intermediate	5,490 ft ²	108.88 pf ²	773,431
‡ 3 bedroom bungalow - intermediate	1,852 ft ²	108.88 pf ²	260,910
‡ 4 bedroom house - intermediate	3,714 ft ²	108.88 pf ²	523,228
‡ 1 bedroom flat - affordable rent	5,841 ft ²	129.38 pf ²	977,757
‡ 2 bedroom flat - affordable rent	10,848 ft ²	129.38 pf ²	1,815,906
‡ 2 bedroom house - affordable rent	34,440 ft ²	108.88 pf ²	4,851,907
‡ 2 bedroom bungalow - affordable rent	2,259 ft ²	108.88 pf ²	318,248
‡ 3 bedroom house (5 person) - affordable rent	25,025 ft ²	108.88 pf ²	3,525,522
‡ 3 bedroom house (6 person) - affordable rent	14,274 ft ²	108.88 pf ²	2,010,921
‡ 3 bedroom bungalow - affordable rent	3,704 ft ²	108.88 pf ²	521,820

APPRAISAL SUMMARY**GERALD EVE LLP****West Winch Urban Extension****Kings Lynn****Scenario 3**

‡ 4 bedroom house - affordable rent	2,476 ft ²	108.88 pf ²	348,819	
‡ 5 bedroom house - affordable rent	5,124 ft ²	108.88 pf ²	721,869	
‡ 1 bedroom flat - private market sale	37,570 ft ²	129.38 pf ²	7,249,175	
‡ 2 bedroom flat - private market sale	18,864 ft ²	129.38 pf ²	3,639,831	
‡ 2 bedroom house - private market sale	164,500 ft ²	108.88 pf ²	26,712,777	
‡ 3 bedroom house - private market sale	362,900 ft ²	108.88 pf ²	58,930,497	
‡ 4 bedroom house - private market sale	182,250 ft ²	108.88 pf ²	29,595,159	
‡ 5 bedroom house - private market sale	58,890 ft ²	108.88 pf ²	9,563,012	
‡ 2 bedroom flat - intermediate	8,136 ft ²	129.38 pf ²	1,569,851	
‡ 2 bedroom house - intermediate	24,108 ft ²	108.88 pf ²	3,914,843	
‡ 2 bedroom bungalow - intermediate	1,506 ft ²	108.88 pf ²	244,556	
‡ 3 bedroom (5 person) house - intermediate	14,014 ft ²	108.88 pf ²	2,275,701	
‡ 3 bedroom (6 person) house - intermediate	7,686 ft ²	108.88 pf ²	1,248,112	
‡ 3 bedroom bungalow - intermediate	1,852 ft ²	108.88 pf ²	300,742	
‡ 4 bedroom house - intermediate	4,952 ft ²	108.88 pf ²	804,144	
‡ 1 bedroom flat - affordable rent	7,788 ft ²	129.38 pf ²	1,502,704	
‡ 2 bedroom flat - affordable rent	15,368 ft ²	129.38 pf ²	2,965,274	
‡ 2 bedroom house - affordable rent	47,355 ft ²	108.88 pf ²	7,689,870	
‡ 2 bedroom bungalow - affordable rent	3,765 ft ²	108.88 pf ²	611,390	
‡ 3 bedroom house (5 person) - affordable rent	34,034 ft ²	108.88 pf ²	5,526,703	
‡ 3 bedroom house (6 person) - affordable rent	18,666 ft ²	108.88 pf ²	3,031,129	
‡ 3 bedroom bungalow - affordable rent	4,630 ft ²	108.88 pf ²	751,855	
‡ 4 bedroom house - affordable rent	3,714 ft ²	108.88 pf ²	603,108	
‡ 5 bedroom house - affordable rent	<u>7,686 ft²</u>	108.88 pf ²	<u>1,248,112</u>	
Totals	3,456,593 ft²		460,385,876	460,385,876
Contingency		5.00%	23,019,294	
S106 (44% OB)			9,990,337	
S106 (24% OB)			12,054,335	
S106 (No OB)			68,189,749	
Neighbourhood Plan (44% OB)			187,584	
Neighbourhood Plan (No OB)			659,701	
Developer Costs (44% OB)			26,815,467	
Developer Costs (No OB)			12,990,059	
Other Infrastructure			18,014,941	
Optimism Bias (44%)		44.00%	25,008,280	
Optimum Bias (24%)		24.00%	610,408	

APPRAISAL SUMMARY**GERALD EVE LLP****West Winch Urban Extension
Kings Lynn
Scenario 3**

Optimism Bias (24%)	24.00%	2,282,632	
Developer Cost (44% OB)		19,843,612	
Developer Cost (No OB)		10,901,715	
Other Infrastructure		13,394,420	
Notional Balancing Payment	1.00%	4	243,962,538
PROFESSIONAL FEES			
Professional Fees	8.00%	36,830,870	36,830,870
DISPOSAL FEES			
Sales Agent Fee	1.00%	8,963,637	
Sales Legal Fee	0.50%	4,481,818	
Marketing	1.00%	8,963,637	
RP Purchase Cost	0.80%	749,109	23,158,200
FINANCE			
Debit Rate 6.000%, Credit Rate 0.000% (Nominal)			
Total Finance Cost			16,689,639
TOTAL COSTS			839,255,211
PROFIT			57,210,550
Performance Measures			
Profit on Cost%	6.82%		
Profit on GDV%	6.38%		
IRR	10.42%		
Land Cost pAcre	115,046		
‡ Inflation/Growth applied			

Growth on Sales		Ungrown	Growth	Total
1 bedroom flat - private market sale	Growth Set 1 at 2.000% var.	4,317,984	365,247	4,683,231

APPRAISAL SUMMARY**GERALD EVE LLP****West Winch Urban Extension
Kings Lynn
Scenario 3**

2 bedroom flat - private market sale	Growth Set 1 at 2.000% var.	2,154,240	182,222	2,336,462
2 bedroom house - private market sale	Growth Set 1 at 2.000% var.	28,531,008	2,413,367	30,944,375
3 bedroom house - private market sale	Growth Set 1 at 2.000% var.	62,236,416	5,264,423	67,500,839
4 bedroom house - private market sale	Growth Set 1 at 2.000% var.	29,272,320	2,476,073	31,748,393
5 bedroom house - private market sale	Growth Set 1 at 2.000% var.	8,663,424	732,817	9,396,241
2 bedroom flat - intermediate	Growth Set 1 at 2.000% var.	532,224	45,020	577,244
2 bedroom house - intermediate	Growth Set 1 at 2.000% var.	2,154,240	182,222	2,336,462
2 bedroom bungalow - intermediate	Growth Set 1 at 2.000% var.	206,976	17,508	224,484
3 bedroom (5 person) house - intermediate	Growth Set 1 at 2.000% var.	1,224,960	103,616	1,328,576
3 bedroom (6 person) house - intermediate	Growth Set 1 at 2.000% var.	696,960	58,954	755,914
3 bedroom bungalow - intermediate	Growth Set 1 at 2.000% var.	236,544	20,009	256,553
4 bedroom house - intermediate	Growth Set 1 at 2.000% var.	551,232	46,627	597,859
1 bedroom flat - affordable rent	Growth Set 4 at 3.400% var.	627,255	60,869	688,124
2 bedroom flat - affordable rent	Growth Set 4 at 3.400% var.	1,012,440	98,247	1,110,687
2 bedroom house - affordable rent	Growth Set 4 at 3.400% var.	3,374,800	327,489	3,702,289
2 bedroom bungalow - affordable rent	Growth Set 4 at 3.400% var.	214,047	20,771	234,818
3 bedroom house (5 person) - affordable rent	Growth Set 4 at 3.400% var.	2,488,575	241,490	2,730,065
3 bedroom house (6 person) - affordable rent	Growth Set 4 at 3.400% var.	1,294,059	125,575	1,419,634
3 bedroom bungalow - affordable rent	Growth Set 4 at 3.400% var.	398,172	38,638	436,810
4 bedroom house - affordable rent	Growth Set 4 at 3.400% var.	249,440	24,206	273,646
5 bedroom house - affordable rent	Growth Set 4 at 3.400% var.	503,116	48,822	551,938
1 bedroom flat - private market sale	Growth Set 1 at 2.000% var.	4,317,984	926,368	5,244,352
2 bedroom flat - private market sale	Growth Set 1 at 2.000% var.	2,154,240	462,165	2,616,405
2 bedroom house - private market sale	Growth Set 1 at 2.000% var.	28,531,008	6,120,964	34,651,972
3 bedroom house - private market sale	Growth Set 1 at 2.000% var.	62,236,416	13,352,029	75,588,445
4 bedroom house - private market sale	Growth Set 1 at 2.000% var.	29,272,320	6,280,003	35,552,323
5 bedroom house - private market sale	Growth Set 1 at 2.000% var.	8,663,436	1,858,630	10,522,065
2 bedroom flat - intermediate	Growth Set 1 at 2.000% var.	532,224	114,182	646,406
2 bedroom house - intermediate	Growth Set 1 at 2.000% var.	2,154,240	462,165	2,616,405
2 bedroom bungalow - intermediate	Growth Set 1 at 2.000% var.	206,976	44,404	251,380
3 bedroom (5 person) house - intermediate	Growth Set 1 at 2.000% var.	1,224,960	262,800	1,487,760
3 bedroom (6 person) house - intermediate	Growth Set 1 at 2.000% var.	696,960	149,524	846,484
3 bedroom bungalow - intermediate	Growth Set 1 at 2.000% var.	236,544	50,747	287,291
4 bedroom house - intermediate	Growth Set 1 at 2.000% var.	551,232	118,260	669,492
1 bedroom flat - affordable rent	Growth Set 4 at 3.400% var.	627,255	138,293	765,548
2 bedroom flat - affordable rent	Growth Set 4 at 3.400% var.	1,012,440	223,215	1,235,655
2 bedroom house - affordable rent	Growth Set 4 at 3.400% var.	3,374,800	744,052	4,118,852

APPRAISAL SUMMARY**GERALD EVE LLP****West Winch Urban Extension
Kings Lynn
Scenario 3**

2 bedroom bungalow - affordable rent	Growth Set 4 at 3.400% var.	214,047	47,192	261,239
3 bedroom house (5 person) - affordable rent	Growth Set 4 at 3.400% var.	2,488,575	548,663	3,037,238
3 bedroom house (6 person) - affordable rent	Growth Set 4 at 3.400% var.	1,294,059	285,305	1,579,364
3 bedroom bungalow - affordable rent	Growth Set 4 at 3.400% var.	398,172	87,786	485,958
4 bedroom house - affordable rent	Growth Set 4 at 3.400% var.	249,440	54,995	304,435
5 bedroom house - affordable rent	Growth Set 4 at 3.400% var.	503,116	110,923	614,039
1 bedroom flat - private market sale	Growth Set 1 at 2.000% var.	4,317,984	1,630,163	5,948,147
2 bedroom flat - private market sale	Growth Set 1 at 2.000% var.	2,154,240	813,287	2,967,527
2 bedroom house - private market sale	Growth Set 1 at 2.000% var.	28,531,008	10,771,272	39,302,280
3 bedroom house - private market sale	Growth Set 1 at 2.000% var.	62,236,416	23,496,028	85,732,444
4 bedroom house - private market sale	Growth Set 1 at 2.000% var.	29,272,320	11,051,139	40,323,459
5 bedroom house - private market sale	Growth Set 1 at 2.000% var.	8,663,424	3,270,691	11,934,115
2 bedroom flat - intermediate	Growth Set 1 at 2.000% var.	532,224	200,930	733,154
2 bedroom house - intermediate	Growth Set 1 at 2.000% var.	2,154,240	813,287	2,967,527
2 bedroom bungalow - intermediate	Growth Set 1 at 2.000% var.	206,976	78,139	285,115
3 bedroom (5 person) house - intermediate	Growth Set 1 at 2.000% var.	1,224,960	462,457	1,687,417
3 bedroom (6 person) house - intermediate	Growth Set 1 at 2.000% var.	696,960	263,122	960,082
3 bedroom bungalow - intermediate	Growth Set 1 at 2.000% var.	236,544	89,302	325,846
4 bedroom house - intermediate	Growth Set 1 at 2.000% var.	551,232	208,106	759,338
1 bedroom flat - affordable rent	Growth Set 4 at 3.400% var.	627,255	238,398	865,653
2 bedroom flat - affordable rent	Growth Set 4 at 3.400% var.	1,012,440	384,794	1,397,234
2 bedroom house - affordable rent	Growth Set 4 at 3.400% var.	3,374,800	1,282,645	4,657,445
2 bedroom bungalow - affordable rent	Growth Set 4 at 3.400% var.	214,047	81,352	295,399
3 bedroom house (5 person) - affordable rent	Growth Set 4 at 3.400% var.	2,488,575	945,822	3,434,397
3 bedroom house (6 person) - affordable rent	Growth Set 4 at 3.400% var.	1,294,059	491,827	1,785,886
3 bedroom bungalow - affordable rent	Growth Set 4 at 3.400% var.	398,172	151,331	549,503
4 bedroom house - affordable rent	Growth Set 4 at 3.400% var.	249,440	94,804	344,244
5 bedroom house - affordable rent	Growth Set 4 at 3.400% var.	503,116	191,217	694,333
1 bedroom flat - private market sale	Growth Set 1 at 2.000% var.	5,971,680	3,823,844	9,795,524
2 bedroom flat - private market sale	Growth Set 1 at 2.000% var.	3,041,280	1,947,422	4,988,702
2 bedroom house - private market sale	Growth Set 1 at 2.000% var.	39,209,280	25,106,863	64,316,143
3 bedroom house - private market sale	Growth Set 1 at 2.000% var.	85,519,104	54,760,415	140,279,519
4 bedroom house - private market sale	Growth Set 1 at 2.000% var.	39,916,800	25,559,909	65,476,709
5 bedroom house - private market sale	Growth Set 1 at 2.000% var.	12,066,912	7,726,801	19,793,713
2 bedroom flat - intermediate	Growth Set 1 at 2.000% var.	798,336	511,198	1,309,534
2 bedroom house - intermediate	Growth Set 1 at 2.000% var.	3,015,936	1,931,193	4,947,129
2 bedroom bungalow - intermediate	Growth Set 1 at 2.000% var.	206,976	132,533	339,509

APPRAISAL SUMMARY**GERALD EVE LLP****West Winch Urban Extension
Kings Lynn
Scenario 3**

3 bedroom (5 person) house - intermediate	Growth Set 1 at 2.000% var.	1,714,944	1,098,129	2,813,073
3 bedroom (6 person) house - intermediate	Growth Set 1 at 2.000% var.	975,744	624,798	1,600,542
3 bedroom bungalow - intermediate	Growth Set 1 at 2.000% var.	236,544	151,466	388,010
4 bedroom house - intermediate	Growth Set 1 at 2.000% var.	734,976	470,627	1,205,603
1 bedroom flat - affordable rent	Growth Set 4 at 3.400% var.	836,340	532,119	1,368,459
2 bedroom flat - affordable rent	Growth Set 4 at 3.400% var.	1,434,290	912,564	2,346,854
2 bedroom house - affordable rent	Growth Set 4 at 3.400% var.	4,640,350	2,952,412	7,592,762
2 bedroom bungalow - affordable rent	Growth Set 4 at 3.400% var.	356,745	226,978	583,723
3 bedroom house (5 person) - affordable rent	Growth Set 4 at 3.400% var.	3,384,462	2,153,356	5,537,818
3 bedroom house (6 person) - affordable rent	Growth Set 4 at 3.400% var.	1,692,231	1,076,678	2,768,909
3 bedroom bungalow - affordable rent	Growth Set 4 at 3.400% var.	497,715	316,670	814,385
4 bedroom house - affordable rent	Growth Set 4 at 3.400% var.	374,160	238,058	612,218
5 bedroom house - affordable rent	Growth Set 4 at 3.400% var.	754,674	480,160	1,234,834

Inflation on Construction Costs

		Uninflated	Inflation	Total
1 bedroom flat - private market sale	Inflation Set 1 at 0.500% var.	3,514,601	154,640	3,669,241
2 bedroom flat - private market sale	Inflation Set 1 at 0.500% var.	1,728,709	76,062	1,804,771
2 bedroom house - private market sale	Inflation Set 1 at 0.500% var.	13,033,175	573,449	13,606,624
3 bedroom house - private market sale	Inflation Set 1 at 0.500% var.	28,755,736	1,265,229	30,020,965
4 bedroom house - private market sale	Inflation Set 1 at 0.500% var.	14,552,079	640,280	15,192,359
5 bedroom house - private market sale	Inflation Set 1 at 0.500% var.	4,603,531	202,552	4,806,083
2 bedroom flat - intermediate	Inflation Set 1 at 0.500% var.	701,730	30,876	732,606
2 bedroom house - intermediate	Inflation Set 1 at 0.500% var.	1,874,948	82,496	1,957,444
2 bedroom bungalow - intermediate	Inflation Set 1 at 0.500% var.	163,976	7,215	171,191
3 bedroom (5 person) house - intermediate	Inflation Set 1 at 0.500% var.	1,089,909	47,955	1,137,864
3 bedroom (6 person) house - intermediate	Inflation Set 1 at 0.500% var.	597,762	26,301	624,063
3 bedroom bungalow - intermediate	Inflation Set 1 at 0.500% var.	201,649	8,872	210,522
4 bedroom house - intermediate	Inflation Set 1 at 0.500% var.	404,388	17,793	422,180
1 bedroom flat - affordable rent	Inflation Set 1 at 0.500% var.	752,186	33,096	785,282
2 bedroom flat - affordable rent	Inflation Set 1 at 0.500% var.	1,403,460	61,751	1,465,211
2 bedroom house - affordable rent	Inflation Set 1 at 0.500% var.	3,749,896	164,992	3,914,888
2 bedroom bungalow - affordable rent	Inflation Set 1 at 0.500% var.	245,964	10,822	256,787
3 bedroom house (5 person) - affordable rent	Inflation Set 1 at 0.500% var.	2,724,772	119,888	2,844,660
3 bedroom house (6 person) - affordable rent	Inflation Set 1 at 0.500% var.	1,554,182	68,383	1,622,564
3 bedroom bungalow - affordable rent	Inflation Set 1 at 0.500% var.	403,299	17,745	421,044
4 bedroom house - affordable rent	Inflation Set 1 at 0.500% var.	269,592	11,862	281,454
5 bedroom house - affordable rent	Inflation Set 1 at 0.500% var.	557,911	24,548	582,459

APPRAISAL SUMMARY**GERALD EVE LLP****West Winch Urban Extension
Kings Lynn
Scenario 3**

1 bedroom flat - private market sale	Inflation Set 1 at 0.500% var.	3,514,601	582,973	4,097,574
2 bedroom flat - private market sale	Inflation Set 1 at 0.500% var.	1,728,709	286,744	2,015,453
2 bedroom house - private market sale	Inflation Set 1 at 0.500% var.	13,033,175	2,161,836	15,195,012
3 bedroom house - private market sale	Inflation Set 1 at 0.500% var.	28,755,736	4,769,766	33,525,502
4 bedroom house - private market sale	Inflation Set 1 at 0.500% var.	14,552,079	2,413,780	16,965,859
5 bedroom house - private market sale	Inflation Set 1 at 0.500% var.	4,603,531	763,596	5,367,127
2 bedroom flat - intermediate	Inflation Set 1 at 0.500% var.	701,730	116,397	818,127
2 bedroom house - intermediate	Inflation Set 1 at 0.500% var.	1,874,948	311,001	2,185,949
2 bedroom bungalow - intermediate	Inflation Set 1 at 0.500% var.	163,976	27,199	191,175
3 bedroom (5 person) house - intermediate	Inflation Set 1 at 0.500% var.	1,089,909	180,785	1,270,694
3 bedroom (6 person) house - intermediate	Inflation Set 1 at 0.500% var.	597,762	99,152	696,914
3 bedroom bungalow - intermediate	Inflation Set 1 at 0.500% var.	201,649	33,448	235,097
4 bedroom house - intermediate	Inflation Set 1 at 0.500% var.	404,388	67,077	471,464
1 bedroom flat - affordable rent	Inflation Set 1 at 0.500% var.	752,186	124,766	876,953
2 bedroom flat - affordable rent	Inflation Set 1 at 0.500% var.	1,403,460	232,794	1,636,254
2 bedroom house - affordable rent	Inflation Set 1 at 0.500% var.	3,749,896	622,002	4,371,898
2 bedroom bungalow - affordable rent	Inflation Set 1 at 0.500% var.	245,964	40,799	286,763
3 bedroom house (5 person) - affordable rent	Inflation Set 1 at 0.500% var.	2,724,772	451,963	3,176,735
3 bedroom house (6 person) - affordable rent	Inflation Set 1 at 0.500% var.	1,554,182	257,795	1,811,977
3 bedroom bungalow - affordable rent	Inflation Set 1 at 0.500% var.	403,299	66,896	470,195
4 bedroom house - affordable rent	Inflation Set 1 at 0.500% var.	269,592	44,718	314,310
5 bedroom house - affordable rent	Inflation Set 1 at 0.500% var.	557,911	92,542	650,453
1 bedroom flat - private market sale	Inflation Set 1 at 0.500% var.	3,514,601	1,032,863	4,547,465
2 bedroom flat - private market sale	Inflation Set 1 at 0.500% var.	1,728,709	508,029	2,236,738
2 bedroom house - private market sale	Inflation Set 1 at 0.500% var.	13,033,175	3,830,161	16,863,337
3 bedroom house - private market sale	Inflation Set 1 at 0.500% var.	28,755,736	8,450,674	37,206,410
4 bedroom house - private market sale	Inflation Set 1 at 0.500% var.	14,552,079	4,276,534	18,828,613
5 bedroom house - private market sale	Inflation Set 1 at 0.500% var.	4,603,531	1,352,876	5,956,407
2 bedroom flat - intermediate	Inflation Set 1 at 0.500% var.	701,730	206,223	907,953
2 bedroom house - intermediate	Inflation Set 1 at 0.500% var.	1,874,948	551,006	2,425,954
2 bedroom bungalow - intermediate	Inflation Set 1 at 0.500% var.	163,976	48,189	212,165
3 bedroom (5 person) house - intermediate	Inflation Set 1 at 0.500% var.	1,089,909	320,300	1,410,209
3 bedroom (6 person) house - intermediate	Inflation Set 1 at 0.500% var.	597,762	175,669	773,431
3 bedroom bungalow - intermediate	Inflation Set 1 at 0.500% var.	201,649	59,260	260,910
4 bedroom house - intermediate	Inflation Set 1 at 0.500% var.	404,388	118,841	523,228
1 bedroom flat - affordable rent	Inflation Set 1 at 0.500% var.	755,679	222,077	977,757
2 bedroom flat - affordable rent	Inflation Set 1 at 0.500% var.	1,403,460	412,446	1,815,906

APPRAISAL SUMMARY**GERALD EVE LLP****West Winch Urban Extension
Kings Lynn
Scenario 3**

2 bedroom house - affordable rent	Inflation Set 1 at 0.500% var.	3,749,896	1,102,011	4,851,907
2 bedroom bungalow - affordable rent	Inflation Set 1 at 0.500% var.	245,964	72,283	318,248
3 bedroom house (5 person) - affordable rent	Inflation Set 1 at 0.500% var.	2,724,772	800,750	3,525,522
3 bedroom house (6 person) - affordable rent	Inflation Set 1 at 0.500% var.	1,554,182	456,740	2,010,921
3 bedroom bungalow - affordable rent	Inflation Set 1 at 0.500% var.	403,299	118,521	521,820
4 bedroom house - affordable rent	Inflation Set 1 at 0.500% var.	269,592	79,227	348,819
5 bedroom house - affordable rent	Inflation Set 1 at 0.500% var.	557,911	163,958	721,869
1 bedroom flat - private market sale	Inflation Set 1 at 0.500% var.	4,860,619	2,388,557	7,249,175
2 bedroom flat - private market sale	Inflation Set 1 at 0.500% var.	2,440,530	1,199,301	3,639,831
2 bedroom house - private market sale	Inflation Set 1 at 0.500% var.	17,911,089	8,801,688	26,712,777
3 bedroom house - private market sale	Inflation Set 1 at 0.500% var.	39,513,278	19,417,219	58,930,497
4 bedroom house - private market sale	Inflation Set 1 at 0.500% var.	19,843,745	9,751,414	29,595,159
5 bedroom house - private market sale	Inflation Set 1 at 0.500% var.	6,412,061	3,150,951	9,563,012
2 bedroom flat - intermediate	Inflation Set 1 at 0.500% var.	1,052,595	517,256	1,569,851
2 bedroom house - intermediate	Inflation Set 1 at 0.500% var.	2,624,927	1,289,915	3,914,843
2 bedroom bungalow - intermediate	Inflation Set 1 at 0.500% var.	163,976	80,580	244,556
3 bedroom (5 person) house - intermediate	Inflation Set 1 at 0.500% var.	1,525,872	749,829	2,275,701
3 bedroom (6 person) house - intermediate	Inflation Set 1 at 0.500% var.	836,867	411,245	1,248,112
3 bedroom bungalow - intermediate	Inflation Set 1 at 0.500% var.	201,649	99,093	300,742
4 bedroom house - intermediate	Inflation Set 1 at 0.500% var.	539,184	264,960	804,144
1 bedroom flat - affordable rent	Inflation Set 1 at 0.500% var.	1,007,572	495,131	1,502,704
2 bedroom flat - affordable rent	Inflation Set 1 at 0.500% var.	1,988,235	977,039	2,965,274
2 bedroom house - affordable rent	Inflation Set 1 at 0.500% var.	5,156,107	2,533,762	7,689,870
2 bedroom bungalow - affordable rent	Inflation Set 1 at 0.500% var.	409,941	201,449	611,390
3 bedroom house (5 person) - affordable rent	Inflation Set 1 at 0.500% var.	3,705,690	1,821,013	5,526,703
3 bedroom house (6 person) - affordable rent	Inflation Set 1 at 0.500% var.	2,032,391	998,737	3,031,129
3 bedroom bungalow - affordable rent	Inflation Set 1 at 0.500% var.	504,124	247,731	751,855
4 bedroom house - affordable rent	Inflation Set 1 at 0.500% var.	404,388	198,720	603,108
5 bedroom house - affordable rent	Inflation Set 1 at 0.500% var.	836,867	411,245	1,248,112

Appendix 4 (ii)

Base Position Development Appraisal with Sensitivity Analysis

West Winch Urban Extension
Kings Lynn
Scenario 3

Development Appraisal
Gerald Eve LLP
15 August 2018

**West Winch Urban Extension
Kings Lynn
Scenario 3**

Table of Profit Amount and IRR%

Sales: Rate pf ²					
Construction: Rate pf ²	-10.000%	-5.000%	0.000%	+5.000%	+10.000%
-10.000%	£11,749,066	£73,509,427	£119,483,759	£161,632,021	£203,016,227
116.44 pf ²	6.5185%	12.6460%	18.9025%	25.2216%	31.5415%
-5.000%	(£36,399,540)	£35,695,003	£90,366,574	£134,635,188	£176,427,909
122.91 pf ²	2.6247%	8.5032%	14.5402%	20.6892%	26.8868%
0.000%	(£84,606,967)	(£11,644,290)	£57,210,550	£106,499,488	£149,628,578
129.38 pf ²	-1.0248%	4.6157%	10.4165%	16.3640%	22.4073%
+5.000%	(£132,814,394)	(£59,851,716)	£13,044,824	£75,468,805	£122,101,170
135.84 pf ²	-4.4603%	0.9699%	6.5370%	12.2625%	18.1213%
+10.000%	(£181,021,820)	(£108,059,143)	(£35,096,466)	£37,034,684	£92,530,186
142.31 pf ²	-7.7152%	-2.4587%	2.8941%	8.3932%	14.0448%

Sensitivity Analysis : Assumptions for Calculation

Sales: Rate pf²

Original Values are varied by Steps of 5.000%.

Heading	Phase	Rate	No. of Steps
1 bedroom flat - private market sale	1	£190.61	2 Up & Down
2 bedroom flat - private market sale	1	£193.47	2 Up & Down
2 bedroom house - private market sale	1	£238.35	2 Up & Down
3 bedroom house - private market sale	1	£235.65	2 Up & Down
4 bedroom house - private market sale	1	£219.02	2 Up & Down
5 bedroom house - private market sale	1	£204.91	2 Up & Down
1 bedroom flat - private market sale	2	£190.61	2 Up & Down
2 bedroom flat - private market sale	2	£193.47	2 Up & Down
2 bedroom house - private market sale	2	£238.35	2 Up & Down
3 bedroom house - private market sale	2	£235.65	2 Up & Down
4 bedroom house - private market sale	2	£219.02	2 Up & Down
5 bedroom house - private market sale	2	£204.91	2 Up & Down
1 bedroom flat - private market sale	3	£190.61	2 Up & Down
2 bedroom flat - private market sale	3	£193.47	2 Up & Down
2 bedroom house - private market sale	3	£238.35	2 Up & Down
3 bedroom house - private market sale	3	£235.65	2 Up & Down

**West Winch Urban Extension
Kings Lynn
Scenario 3**

4 bedroom house - private market sale	3	£219.02	2 Up & Down
5 bedroom house - private market sale	3	£204.91	2 Up & Down
1 bedroom flat - private market sale	4	£190.61	2 Up & Down
2 bedroom flat - private market sale	4	£193.47	2 Up & Down
2 bedroom house - private market sale	4	£238.35	2 Up & Down
3 bedroom house - private market sale	4	£235.65	2 Up & Down
4 bedroom house - private market sale	4	£219.02	2 Up & Down
5 bedroom house - private market sale	4	£204.91	2 Up & Down
2 bedroom flat - intermediate	1	£117.80	2 Up & Down
2 bedroom house - intermediate	1	£125.10	2 Up & Down
2 bedroom bungalow - intermediate	1	£137.43	2 Up & Down
3 bedroom (5 person) house - intermediate	1	£122.37	2 Up & Down
3 bedroom (6 person) house - intermediate	1	£126.95	2 Up & Down
3 bedroom bungalow - intermediate	1	£127.72	2 Up & Down
4 bedroom house - intermediate	1	£148.42	2 Up & Down
2 bedroom flat - intermediate	2	£117.80	2 Up & Down
2 bedroom house - intermediate	2	£125.10	2 Up & Down
2 bedroom bungalow - intermediate	2	£137.43	2 Up & Down
3 bedroom (5 person) house - intermediate	2	£122.37	2 Up & Down
3 bedroom (6 person) house - intermediate	2	£126.95	2 Up & Down
3 bedroom bungalow - intermediate	2	£127.72	2 Up & Down
4 bedroom house - intermediate	2	£148.42	2 Up & Down
2 bedroom flat - intermediate	3	£117.80	2 Up & Down
2 bedroom house - intermediate	3	£125.10	2 Up & Down
2 bedroom bungalow - intermediate	3	£137.43	2 Up & Down
3 bedroom (5 person) house - intermediate	3	£122.37	2 Up & Down
3 bedroom (6 person) house - intermediate	3	£126.95	2 Up & Down
3 bedroom bungalow - intermediate	3	£127.72	2 Up & Down
4 bedroom house - intermediate	3	£148.42	2 Up & Down
2 bedroom flat - intermediate	4	£117.80	2 Up & Down
2 bedroom house - intermediate	4	£125.10	2 Up & Down
2 bedroom bungalow - intermediate	4	£137.43	2 Up & Down
3 bedroom (5 person) house - intermediate	4	£122.37	2 Up & Down
3 bedroom (6 person) house - intermediate	4	£126.95	2 Up & Down
3 bedroom bungalow - intermediate	4	£127.72	2 Up & Down
4 bedroom house - intermediate	4	£148.42	2 Up & Down

**West Winch Urban Extension
Kings Lynn
Scenario 3**

Construction: Rate pf²

Original Values are varied by Steps of 5.000%.

Heading	Phase	Rate	No. of Steps
1 bedroom flat - private market sale	1	£129.38	2 Up & Down
2 bedroom flat - private market sale	1	£129.38	2 Up & Down
2 bedroom house - private market sale	1	£108.88	2 Up & Down
3 bedroom house - private market sale	1	£108.88	2 Up & Down
4 bedroom house - private market sale	1	£108.88	2 Up & Down
5 bedroom house - private market sale	1	£108.88	2 Up & Down
2 bedroom flat - intermediate	1	£129.38	2 Up & Down
2 bedroom house - intermediate	1	£108.88	2 Up & Down
2 bedroom bungalow - intermediate	1	£108.88	2 Up & Down
3 bedroom (5 person) house - intermediate	1	£108.88	2 Up & Down
3 bedroom (6 person) house - intermediate	1	£108.88	2 Up & Down
3 bedroom bungalow - intermediate	1	£108.88	2 Up & Down
4 bedroom house - intermediate	1	£108.88	2 Up & Down
1 bedroom flat - affordable rent	1	£129.38	2 Up & Down
2 bedroom flat - affordable rent	1	£129.38	2 Up & Down
2 bedroom house - affordable rent	1	£108.88	2 Up & Down
2 bedroom bungalow - affordable rent	1	£108.88	2 Up & Down
3 bedroom house (5 person) - affordable rent	1	£108.88	2 Up & Down
3 bedroom house (6 person) - affordable rent	1	£108.88	2 Up & Down
3 bedroom bungalow - affordable rent	1	£108.88	2 Up & Down
4 bedroom house - affordable rent	1	£108.88	2 Up & Down
5 bedroom house - affordable rent	1	£108.88	2 Up & Down
1 bedroom flat - private market sale	2	£129.38	2 Up & Down
2 bedroom flat - private market sale	2	£129.38	2 Up & Down
2 bedroom house - private market sale	2	£108.88	2 Up & Down
3 bedroom house - private market sale	2	£108.88	2 Up & Down
4 bedroom house - private market sale	2	£108.88	2 Up & Down
5 bedroom house - private market sale	2	£108.88	2 Up & Down
2 bedroom flat - intermediate	2	£129.38	2 Up & Down
2 bedroom house - intermediate	2	£108.88	2 Up & Down
2 bedroom bungalow - intermediate	2	£108.88	2 Up & Down

**West Winch Urban Extension
Kings Lynn
Scenario 3**

3 bedroom (5 person) house - intermediate	2	£108.88	2 Up & Down
3 bedroom (6 person) house - intermediate	2	£108.88	2 Up & Down
3 bedroom bungalow - intermediate	2	£108.88	2 Up & Down
4 bedroom house - intermediate	2	£108.88	2 Up & Down
1 bedroom flat - affordable rent	2	£129.38	2 Up & Down
2 bedroom flat - affordable rent	2	£129.38	2 Up & Down
2 bedroom house - affordable rent	2	£108.88	2 Up & Down
2 bedroom bungalow - affordable rent	2	£108.88	2 Up & Down
3 bedroom house (5 person) - affordable rent	2	£108.88	2 Up & Down
3 bedroom house (6 person) - affordable rent	2	£108.88	2 Up & Down
3 bedroom bungalow - affordable rent	2	£108.88	2 Up & Down
4 bedroom house - affordable rent	2	£108.88	2 Up & Down
5 bedroom house - affordable rent	2	£108.88	2 Up & Down
1 bedroom flat - private market sale	3	£129.38	2 Up & Down
2 bedroom flat - private market sale	3	£129.38	2 Up & Down
2 bedroom house - private market sale	3	£108.88	2 Up & Down
3 bedroom house - private market sale	3	£108.88	2 Up & Down
4 bedroom house - private market sale	3	£108.88	2 Up & Down
5 bedroom house - private market sale	3	£108.88	2 Up & Down
2 bedroom flat - intermediate	3	£129.38	2 Up & Down
2 bedroom house - intermediate	3	£108.88	2 Up & Down
2 bedroom bungalow - intermediate	3	£108.88	2 Up & Down
3 bedroom (5 person) house - intermediate	3	£108.88	2 Up & Down
3 bedroom (6 person) house - intermediate	3	£108.88	2 Up & Down
3 bedroom bungalow - intermediate	3	£108.88	2 Up & Down
4 bedroom house - intermediate	3	£108.88	2 Up & Down
1 bedroom flat - affordable rent	3	£129.38	2 Up & Down
2 bedroom flat - affordable rent	3	£129.38	2 Up & Down
2 bedroom house - affordable rent	3	£108.88	2 Up & Down
2 bedroom bungalow - affordable rent	3	£108.88	2 Up & Down
3 bedroom house (5 person) - affordable rent	3	£108.88	2 Up & Down
3 bedroom house (6 person) - affordable rent	3	£108.88	2 Up & Down
3 bedroom bungalow - affordable rent	3	£108.88	2 Up & Down
4 bedroom house - affordable rent	3	£108.88	2 Up & Down
5 bedroom house - affordable rent	3	£108.88	2 Up & Down
1 bedroom flat - private market sale	4	£129.38	2 Up & Down

**West Winch Urban Extension
Kings Lynn
Scenario 3**

2 bedroom flat - private market sale	4	£129.38	2 Up & Down
2 bedroom house - private market sale	4	£108.88	2 Up & Down
3 bedroom house - private market sale	4	£108.88	2 Up & Down
4 bedroom house - private market sale	4	£108.88	2 Up & Down
5 bedroom house - private market sale	4	£108.88	2 Up & Down
2 bedroom flat - intermediate	4	£129.38	2 Up & Down
2 bedroom house - intermediate	4	£108.88	2 Up & Down
2 bedroom bungalow - intermediate	4	£108.88	2 Up & Down
3 bedroom (5 person) house - intermediate	4	£108.88	2 Up & Down
3 bedroom (6 person) house - intermediate	4	£108.88	2 Up & Down
3 bedroom bungalow - intermediate	4	£108.88	2 Up & Down
4 bedroom house - intermediate	4	£108.88	2 Up & Down
1 bedroom flat - affordable rent	4	£129.38	2 Up & Down
2 bedroom flat - affordable rent	4	£129.38	2 Up & Down
2 bedroom house - affordable rent	4	£108.88	2 Up & Down
2 bedroom bungalow - affordable rent	4	£108.88	2 Up & Down
3 bedroom house (5 person) - affordable rent	4	£108.88	2 Up & Down
3 bedroom house (6 person) - affordable rent	4	£108.88	2 Up & Down
3 bedroom bungalow - affordable rent	4	£108.88	2 Up & Down
4 bedroom house - affordable rent	4	£108.88	2 Up & Down
5 bedroom house - affordable rent	4	£108.88	2 Up & Down

C. Cost Analysis Spreadsheets

C.1 **Costs for 3,500 Homes**

C.2 **Costs for 3,988 Homes**

Appendix C(i)

Mott MacDonald 3500 Unit Scheme Infrastructure Cost and Trigger Point Assessment

Cost Analysis
for
South East Kings Lynn Strategic Growth Area



Project Title: South East Kings Lynn Strategic Growth Area
Project No: 377873
Date: 20/07/2018

Revision: 18:
Base Date: Q3 2018

Introduction

This document is provided with the intent of identifying the potential costs of the infrastructure associated with the South East Kings Lynn Strategic Growth Area. The costs are broken down into the following 3 main sections;

1	Section 106 Costs	Pages:	1 to 5
2	Additional Neighbourhood Plan Requirements	Pages:	6
3	Developer Costs	Pages:	7
4	Other Infrastructure	Pages:	8

Within each of these sections, the costs are further broken down as follows;

- n.1 Access and Transport : Q3 2018
- n.2 Education Costs 2018
- n.3 Green Infrastructure Q3 2018
- n.4 Community Facilities Q3 2018
- n.5 Utilities Q3 2018
- n.6 Other Requirements Q3 2018

An explanation of the contents of the columns which appear in the sheets are as follows;

"Total Cost" - The total calculated cost associated with the item of infrastructure.

"Contributions" - The contribution amount required by developers. This only appears in the Section 106 costs section, all other sections require full contribution. Any blank (£0) values in the column, require no developer contribution.

"Assumptions" - Any assumptions made during the costing exercise.

"Trigger point for delivery/ Assumed Cost Phasing" - How costs are to be apportioned in the growth area.

"Cost Source" - Where the associated costs have been priced from.

NB where Optimism Bias (OB) is included in costs, a rate of 44% has been used.

**Cost Analysis
for
South East Kings Lynn Strategic Growth Area**

**M
M
MOTT
MACDONALD**

Project Title: South East Kings Lynn Strategic Growth Area
Project No: 377873
Date: 20/07/2018

Revision: 18
Base Date: Q3 2018

1.0 Section 106 Costs (3500 homes)

Ref.	Infrastructure Theme	Item	Detail	Total Cost	Contribution	Total Cost Without OB	Contribution Without OB	OB level to be used once forecast	Assumptions	Trigger Point for Delivery/ Assumed Cost Phasing	Costing Source
1.1	Access and Transport										
1.1.1		Minor improvement to Hardwick for A10 arm							- As Hardwick Transport Strategy, but with updated unit costs. - Ref 1.8 will require additional land costs. Which have not been included.		See Appendix A
1.1.1.1		Single lane slip road	£ 547,301.90	£ 547,301.90	£ 380,070.76	£ 380,070.76	44%	To be delivered by 2020 or by 400 dwellings			
1.1.2		A10 West Winch Bypass - Phase 1									
1.1.2.1		Intermediate roundabout	£ 136,162.01	£ 136,162.01	£ 94,556.95	£ 94,556.95	44%	To be delivered by 2020 or by 400 dwellings			
1.1.2.2		200m single carriageway	£ 547,301.90	£ 547,301.90	£ 380,070.76	£ 380,070.76	44%				
1.1.2.3		A47 roundabout	£ 217,859.23	£ 217,859.23	£ 151,291.13	£ 151,291.13	44%				
1.1.3		A10 West Winch Bypass - Phase 2									
1.1.3.1		2no at-grade roundabout on single carriageway	£ 272,324.03	£ 272,324.03	£ 189,113.91	£ 189,113.91	44%	To be delivered by 2026 or by 1600 dwellings			
1.1.3.2		2300m single carriageway	£ 6,293,971.85	£ 6,293,971.85	£ 4,370,813.78	£ 4,370,813.78	44%				
1.1.4		A47 east of Hardwick dualled									
1.1.4.1		800m length widening of existing carriageway	£ 2,189,207.60	£ 2,189,207.60	£ 1,520,283.06	£ 1,520,283.06	44%	To be delivered by 2026			
1.1.5		Hardwick Interchange local widening within junction									
1.1.5.1		Widening parts of hardwick circulatory carriageway and exits	£ 1,368,254.75	£ 1,368,254.75	£ 950,176.91	£ 950,176.91	44%	To be delivered by 2026 or by 1600 dwellings			
1.1.5.2		Upgrade to Traffic Signals	£ 101,680.00	£ 101,680.00	£ 70,611.11	£ 70,611.11	44%				
1.1.6		A47 roundabout retained but expanded									
1.1.6.1		400m length slip road	£ 1,094,603.80	£ 1,094,603.80	£ 760,141.53	£ 760,141.53	44%	To be delivered by 2026			
1.1.6.2		Dual carriageway roundabout	£ 217,859.23	£ 217,859.23	£ 151,291.13	£ 151,291.13	44%				
1.1.7		A47 flyover dualled									
1.1.7.1		1no new viaduct 175m long x 9m wide	£ 8,934,975.00	£ -	£ 6,204,843.75	£ -	44%	To be delivered by 2031/35			
1.1.8		A149 dualled									
1.1.8.1		800m length widening of existing carriageway	£ 2,189,207.60	£ -	£ 1,520,283.06	£ -	44%	To be delivered by 2031/35			
1.1.8.2		Existing roundabout upgraded to dual roundabout	£ 217,859.23	£ -	£ 151,291.13	£ -	44%				
1.1.9		Traffic Calming through West Winch Village									
1.1.9.1		Nominal Sum	£ 538,194.44	£ 538,194.44	£ 538,194.44	£ 538,194.44	0%	- Allowance; Scope of traffic calming to be defined, nominal sum of £0.5m as suggested in NCC Document. Assume safe crossings are allowed for in this figure. (Uplifted to 3Q2018).	To be commenced within 12 months of development	Nominal sum, taken from previous scheme.	
1.1.10	Access and Transport cont...	Bus Strategy									
1.1.10.1		To be confirmed							- Contributions will need to be sought, however bus service improvements are based on business case.		
Access and Transport Total				£ 24,866,762.56	£ 13,524,720.74	£ 17,433,033.42	£ 9,556,615.48				
1.2	Education										
1.2.1		Contributions towards new facilities									
1.2.1.1		West Winch Primary School Capacity Increase						0%	- As advised by NCC - Nursery assumed to be part of primary school provision	• £100,000 on commencement of the development. • £1,000,000 on occupation of 100 new dwellings. (6 months post commencement) • Balance (£1,345,240) on occupation of 500 new dwellings across the overall IDP area (30 months post commencement)	Potential County Council Infrastructure Requirements - Proposed Housing Development Document, dated 12 October 2016.
				£ 2,084,276.00	£ 2,084,276.00	£ 2,084,276.00	£ 2,084,276.00				

**Cost Analysis
for
South East Kings Lynn Strategic Growth Area**

**M
M
MOTT
MACDONALD**

Project Title: South East Kings Lynn Strategic Growth Area
Project No: 377873
Date: 20/07/2018

Revision: 18
Base Date: Q3 2018

1.0 Section 106 Costs (3500 homes)

Ref.	Infrastructure Theme	Item	Detail	Total Cost	Contribution	Total Cost Without OB	Contribution Without OB	OB level to be used once forecast	Assumptions	Trigger Point for Delivery/ Assumed Cost Phasing	Costing Source
1.2.1.2			420 place primary school (2ha)	£ 6,900,000.00	£ 6,900,000.00	£ 6,900,000.00	£ 6,900,000.00	0%		<ul style="list-style-type: none"> • 2ha School site purchased on commencement of the development • Transfer of a fully serviced school site after occupation of the 100th dwelling (6 months post commencement) • £250,000 on transfer of the school site (costs for design and planning) (6 months post commencement) • £1,000,000 on occupation of the 200th dwelling. (12 months post commencement) • £2,400,000 on occupation of the 400th dwelling. (24 months post commencement) • Balance (£3,250,000) on occupation of the 600th dwelling. (36 months after commencement) 	
1.2.1.3	Education cont...	Contributions towards new facilities cont...	315 place primary school (1.5ha, total 2ha safeguarded)	£ 5,150,000.00	£ 5,150,000.00	£ 5,150,000.00	£ 5,150,000.00	0%	- As advised by NCC - Nursery assumed to be part of primary school provision	<ul style="list-style-type: none"> • 2 ha School site to be purchased 3 years prior to the point when 2000 units are estimated to be occupied (ie. 84 months post commencement) • School to be completed by the point when 2000 units are occupied across the wider IDP area and cost apportioned across the previous 3 years (£5,150,000 apportioned between 84 and 120 post commencement) 	Potential County Council Infrastructure Requirements - Proposed Housing Development Document, dated 12 October 2016.
1.2.1.4			Nursery provision	£ -	£ -	£ -	£ -				
1.2.1.5			High School Capacity 606 place Increase	£ 10,632,876.00	£ 10,632,876.00	£ 10,632,876.00	£ 10,632,876.00	0%		<ul style="list-style-type: none"> • To be paid by in four equal instalments on occupation of 400 dwellings of each respective phase. 	
1.2.1.6			Sixth Form Capacity 60 place Increase	£ 1,141,740.00	£ 1,141,740.00	£ 1,141,740.00	£ 1,141,740.00	0%		<ul style="list-style-type: none"> • To be paid by in four equal instalments on occupation of 400 dwellings within each respective phase. 	
Education Total				£ 25,908,892.00	£ 25,908,892.00	£ 25,908,892.00	£ 25,908,892.00				
1.3	Green Infrastructure										
1.3.1		Neighbourhood parks, allotments & open spaces with equipped sports and play facilities. Capital Costs.									
1.3.1.1			Formal recreation facilities such as playing fields (10ha)	£ 5,185,467.56	£ 5,185,467.56	£ 5,185,467.56	£ 5,185,467.56	0%	50% of total open space area. Assume 20ha total		
1.3.1.2			Play Areas (6ha)	£ 12,786,084.40	£ 12,786,084.40	£ 12,786,084.40	£ 12,786,084.40	0%	30% of total open space area from DM 16. Assume 20ha total		
1.3.1.3			Allotments (0.6ha)	£ 104,774.86	£ 104,774.86	£ 104,774.86	£ 104,774.86	0%			
1.3.1.4			Other green spaces (4ha)	£ 355,169.01	£ 355,169.01	£ 355,169.01	£ 355,169.01	0%	20% of total open space area. Assume 20ha total		
1.3.1.5			Natural and semi natural green spaces inc. footpath links and hedgegroves (i.e. landscape buffers) (28ha)	£ 1,988,946.46	£ 1,988,946.46	£ 1,988,946.46	£ 1,988,946.46	0%	Assume landscape buffer zones are approx 700m x 164m and 700m x 236m.		
1.3.2		Neighbourhood parks, allotments & open spaces with equipped									Pro-rata from previous scheme

**Cost Analysis
for
South East Kings Lynn Strategic Growth Area**

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Project Title: South East Kings Lynn Strategic Growth Area
Project No: 377873
Date: 20/07/2018

Revision: 18
Base Date: Q3 2018

1.0 Section 106 Costs (3500 homes)

Ref.	Infrastructure Theme	Item	Detail	Total Cost	Contribution	Total Cost Without OB	Contribution Without OB	OB level to be used once forecast	Assumptions	Trigger Point for Delivery/ Assumed Cost Phasing	Costing Source
1.3.2.1		Open spaces with equipped sports and play facilities. Maintenance Costs.	Formal recreation facilities such as playing fields (10ha)	£ 1,391,446.71	£ 1,391,446.71	£ 1,391,446.71	£ 1,391,446.71	0%			
1.3.2.2	Green Infrastructure cont...	Neighbourhood parks, allotments & open spaces with equipped sports and play facilities. Maintenance Costs cont...	Play Areas (6ha)	£ 4,350,589.52	£ 4,350,589.52	£ 4,350,589.52	£ 4,350,589.52	0%		• Costs to be apportioned and phased across the IDP area on the basis of a cost per residential unit delivered.	Pro-rata from previous scheme
1.3.2.3	Allotments (0.6ha)		£ 20,407.77	£ 20,407.77	£ 20,407.77	£ 20,407.77	0%				
1.3.2.4	Other green spaces (4ha)		£ 636,973.13	£ 636,973.13	£ 636,973.13	£ 636,973.13	0%				
1.3.2.5	Natural and semi natural green spaces inc. footpath links and hedgegroves (i.e. landscape buffers) (28ha)		£ 995,656.24	£ 995,656.24	£ 995,656.24	£ 995,656.24	0%	Assume landscape buffer zones are approx 700m x 164m and 700m x 236m.			
1.3.2.6	Interim Habitat Mitigation Payment		£ 200,641.03	£ 200,641.03	£ 200,641.03	£ 200,641.03	0%	Nominal contribution of £50 per home, as required by SADMP, assume 3500 homes. (Uplifted to 3Q2018).			
Green Infrastructure Total				£ 28,016,156.69	£ 28,016,156.69	£ 28,016,156.69	£ 28,016,156.69				
1.4	Community Facilities	Neighbourhood Centres									
1.4.1											
1.4.1.1			Community Centre 1 (Assumed 1000m ²)	£ 2,447,133.76	£ 2,447,133.76	£ 2,008,841.15	£ 2,008,841.15	24%	- Assumed as one large community centre and 2 smaller community centres. - The costs shown are the estimated physical build costs of the centres.	• Costs to be apportioned and phased across the IDP area on the basis of a cost per residential unit delivered.	F+A Little Black Book (Q1 2011) mid-range at 1277.77/m ²
1.4.1.2			Community Centre 2 (Assumed 500m ²)	£ 1,223,566.88	£ 1,223,566.88	£ 1,004,420.57	£ 1,004,420.57	24%			
1.4.1.3			Community Centre 3 (Assumed 500m ²)	£ 1,223,566.88	£ 1,223,566.88	£ 1,004,420.57	£ 1,004,420.57	24%			
1.4.1.4			Sports Centre (1500m ²)	£ 3,105,575.59	£ 3,105,575.59	£ 2,504,496.44	£ 2,504,496.44	24%	Assumed 1500m ² sports halls (approx. 4 hall). However, this may change in detailed design. - The costs shown are the estimated physical build costs of the centres.	Sport England Facility Costs, April Revision 001, 2016	
1.4.1.5			1no. MUGA Facility (782m ²)	£ 203,299.53	£ 203,299.53	£ 163,951.23	£ 163,951.23	24%	Taken from Sport England Guidance		
1.4.1.6			Health Centre	£ -	£ -	£ -	£ -		- Land to be safeguarded only.	F+A Little Black Book (Q1 2011) mid-range at £1291.66/m ²	
1.4.1.7			3no. Shops (Assumed 280m ²)	£ -	£ -	£ -	£ -		- Land to be safeguarded only.		
1.4.1.8			NLIS library contributions	£ 979,128.21	£ 979,128.21	£ 979,128.21	£ 979,128.21	0%	- Taken as £244 per dwelling (assuming 3500 dwellings) as advised by BCKLWN. (Uplifted to 3Q2018).	Potential County Council Infrastructure Requirements - Proposed Housing Development Document, dated 12 October 2016	
Community Facilities Total				£ 9,182,270.85	£ 9,182,270.85	£ 7,665,258.18	£ 7,665,258.18				
1.5	Utilities										
1.5.1		SADMP Fire Service Requirement									
1.5.1.1		Fire hydrants Contributions	£ 70,167.03	£ 70,167.03	£ 70,167.03	£ 70,167.03	0%	Allowance for 1 hydrant per 50 homes (assuming 3500) and one additional hydrant per school and neighbourhood centre at £816 each. (Uplifted to 3Q2018).	• Costs to be apportioned and phased across the IDP area on the basis of a cost per residential unit delivered.	Potential County Council Infrastructure Requirements - Proposed Housing Development Document, dated 12 October 2016	
1.5.2		Strategic SUDS Infrastructure									

**Cost Analysis
for
South East Kings Lynn Strategic Growth Area**

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Project Title: South East Kings Lynn Strategic Growth Area
Project No: 377873
Date: 20/07/2018

Revision: 18
Base Date: Q3 2018

1.0 Section 106 Costs (3500 homes)

Ref.	Infrastructure Theme	Item	Detail	Total Cost	Contribution	Total Cost Without OB	Contribution Without OB	OB level to be used once forecast	Assumptions	Trigger Point for Delivery/ Assumed Cost Phasing	Costing Source
1.5.2.1			Detention Basins; Capital Cost	£ 6,359,864.96	£ 6,359,864.96	£ 5,128,923.36	£ 5,128,923.36	24%	Allowance for detention basins which are to store a total of 78317.4m3 of water. Works to existing watercourses to be defined. Scope to be defined.	• Costs to be apportioned and phased across the IDP area on the basis of a cost per residential unit delivered.	Cost details taken from Environmental Agency Report SC080039/R9 (March 2015). Required volume of storage taken from: North Runcton and West Winch Surface Water Management Strategy (April 2014).
1.5.2.2			Detention Basins; 15year Maintenance Cost	£ 349,980.88	£ 349,980.88	£ 349,980.88	£ 349,980.88	0%			
Utilities Total				£ 6,780,012.88	£ 6,780,012.88	£ 5,549,071.27	£ 5,549,071.27				
Total Cost of Strategic Infrastructure (Contribution Portion)				£83,412,053.15		£76,695,993.62					
Total Cost of Strategic Infrastructure				£94,754,094.98		£84,572,411.55					

Notes/ Comments

- All cost data has been uplifted to a common base date to 3Q18 using BCIS All-in-Tender Price Indices to arrive at current prices and does not include land costs.
 - Cost data has been sourced from a combination of in-house project data and professional opinion based on past experience.
 - Optimism bias of 44% is taken for all standard civil engineering works and for all standard building costs.
 - Development and Supervision allowance of 10% is assumed for all works.
 - Contributions for section 106 costs have been taken as a 100% contribution for those costs necessary to development and 0% for those as a direct cost to the development. This has been derived with guidance from the Borough Council of King's Lynn and West Norfolk.
 - Potential traffic diversion works are not included in these estimates, it is assumed that these will be defined by the phasing and construction techniques used during construction.
 - Where trigger points for delivery have not been provided to Mott MacDonald by the Borough Council of Kings Lynn and West Norfolk, they have been provided by Gerald Eve and have been included in this schedule in order to provide information on the inputs being used for viability purposes.
- Disclaimer:**
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**Cost Analysis
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South East Kings Lynn Strategic Growth Area**



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Date: 20/07/2018

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2.0 Additional Neighbourhood Plan Requirements

Ref	Infrastructure Theme	Item	Detail	Cost	Cost Without OB	OB level to be used once forecast	Assumptions	Trigger Point for Delivery/ Assumed Cost Phasing	Costing Source
2.1	Access and Transport								
2.1.1		Off-Site Improvements to Road Network							
2.1.1.1			Redevelopment of A10 between Chapel Lane and Long Lane	£ -	£ -		Assume to be included in traffic calming, other upgrades not directly related to development.	In accordance with agreed phasing plan prior to the commencement of development	
2.1.1.2			Provision for future dual use path connection to Bawsey Country Park	£ -	£ -		This will tie into an new development footpath, therefore no contribution related to development.		
2.1.1.3			Dual use path connection to the village of Middleton	£ 519,552.47	£ 519,552.47	0%	Allowance for new 3m pavement on A47 south of New Road (approx. 1.7km)		
2.1.1.4			Safe Cycle and Pedestrian Crossing at Rectory Lane	£ 103,412.81	£ 73,866.29	44%	Allowance for 2 Toucan Crossings		
2.1.1.5			Safe Cycle and Pedestrian Crossing at Chequers Lane	£ 103,412.81	£ 73,866.29	44%	Allowance for 2 Toucan Crossings		
Access and Transport				£726,378.08	£667,285.05				
2.2	Education								
Education				£0.00	£0.00				
2.3	Green Infrastructure								
2.3.1		New nature reserve (5ha)							
2.3.1.1			5ha fenced off nature reserve	£ -			Assumed land take implications only. Scope to be defined		
Green Infrastructure				£0.00	£0.00				
2.4	Community Facilities								
2.4.1		Existing community facilities							
2.4.1.1			Upgrade existing community facilities	£ -			A need for this would need to be assessed. At this point it is assumed that the communities will be serviced by new facilities.		
Community Facilities				£0.00	£0.00				
2.5	Other Requirements								
2.5.1		Allowance for expansion to West Winch Church graveyard							
2.5.1.1			Land safeguarded only	£ -			Assume land take only.		
Other Requirements				£0.00	£0.00				
Total Cost of Neighbourhood Infrastructure				£726,378.08	£667,285.05				

Notes/ Comments

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**Cost Analysis
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Project No: 377873
Date: 20/07/2018

Revision: 18
Base Date: Q3 2018

3.0 Developer Costs

Ref	Infrastructure Theme	Item	Detail	Cost	Cost Without OB	OB level to be used once forecast	Assumptions	Trigger Point for Delivery/ Assumed Cost Phasing	Costing Source
3.1	Access and Transport	On-site road network							
3.1.1.1			Neighbourhood Streets - Site Masterplan	£ 16,284,968.04	£ 16,284,968.04	0%	Estimate from masterplan drawing 1565/01 SK306. Allowance; 5151m neighbourhood streets, 795m village centre streets and 10370m lanes and home roads. These have all been estimated as single carriageway all purpose road, and will be defined in detailed design stage. Scope to be defined.	Costs to be apportioned and phased across the IDP area outside of the Hopkins Homes scheme only, on the basis of a cost per residential unit delivered.	See Appendix A
3.1.1.2		Village Centre Streets - Site Masterplan	£ 2,175,525.06	£ 2,175,525.06	0%				
3.1.1.3		Lanes and Home Roads - Site Masterplan	£ 28,377,603.52	£ 19,706,669.11	44%				
3.1.1.4		East to West Road - Hopkins Homes	£ 3,207,189.13	£ 2,227,214.68	44%				
3.1.1.5		Hopkins Homes - Other Roads	£ 10,896,780.83	£ 7,567,208.91	44%				
3.1.2		On site footpaths							
3.1.2.1			Cycle/ Shared use pathways associated with road network	£ 4,332,938.31	£ 3,094,955.93	44%	Allowance; 10016m estimated from site masterplan drawing 1565/01 SK306. Allowance; 6326m from hopkins homes masterplan. Scope to be defined.	Costs to be apportioned and phased across the whole IDP area on the basis of a cost per residential unit delivered	F+A Little Black Book (Q3 2010) mid-range at £154.17/m2. Pro rata
3.1.2.2			2m footpath associated with road network	£ 4,626,306.14	£ 3,304,504.38	44%	Allowance; 10016m estimated from site masterplan drawing 1565/01 SK306. Allowance; 3982m from hopkins homes masterplan. Scope to be defined		F+A Little Black Book (Q3 2010) mid-range at £87.69/m2. Pro rata
3.1.3		Cycle Routes							
3.1.3.1			Not associated with road network (3m wide)	£ 957,955.34	£ 684,253.81	44%	Allowance; 3613m at 3m wide	In accordance with agreed phasing plan prior to the commencement of development	F+A Little Black Book (Q3 2010) mid-range at £154.17/m2. Pro rata
Access and Transport				£70,859,266.36	£55,045,299.92				
Total Cost of Neighbourhood Infrastructure				£70,859,266.36	£55,045,299.92				

Notes/ Comments

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**Cost Analysis
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3.0 Other Infrastructure

Ref	Infrastructure Theme	Item	Detail	Cost	Assumptions	Trigger Point for Delivery/ Assumed Cost Phasing	Costing Source
3.5	Utilities						
3.5.1		UKPN					
3.5.1.1			Contestable works	£ 1,091,603.05	Figures from UKPN Pre-development Enquiry Budget Estimate	• Costs to be apportioned and phased across the IDP area on the basis of a cost per residential unit delivered.	Pre-development Enquiry
3.5.1.2			Non-contestable works	£ 10,916,030.53			
3.5.2		National Grid					
3.5.2.1			Strategic improvements to gas supply	£ 2,567,097.81	Allowance in lieu of National Grid feasibility study	• Costs to be apportioned and phased across the IDP area on the basis of a cost per residential unit delivered, from the point of 300 units delivered onwards.	Pro-rata from previous scheme
3.5.2.2			Protection works to H/P Line	£ 1,637,404.58	This is a highly conservative estimate based on two crossing points with complex slab protection measures. This assumption does not allow for diversion works at both crossing points.		Due to lack of site information a nominal figure has been used based on diverting the gas main
3.5.2.3			Infrastructure works	£ 574,096.42	Allowance; assume no offsite diversion works.		Pro-rata from previous scheme
3.5.2.4			On-site trenching	£ 898,484.23	Allowance; scope to be defined		Pro-rata from previous scheme
3.5.3		Anglian Water					
3.5.3.1			Mains water distribution	£ 3,820,610.69	Allowance; £1000 per dwelling, assume no upgrades required in lieu of response from Anglian Water. Assume 3500 dwellings. Assume no offsite diversion works. (Uplifted to 3Q2018).	• Costs to be apportioned and phased across the IDP area on the basis of a cost per residential unit delivered.	Pro-rata from previous scheme
3.5.3.2			Foul Sewer Connections	£ 3,109,459.65	Allowance in lieu of response from Anglian Water. Assume no upgrades and no off site diversion works.		Pro-rata from previous scheme
Utilities				£24,614,786.98			
3.6	Other Requirements						
Other Requirements				£0.00			
Total Cost of Neighbourhood Infrastructure				£24,614,786.98			

Notes/ Comments

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 - Optimism bias of 44% is taken for all standard civil engineering works and for all standard building costs.
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Appendix C(ii)

Mott MacDonald 3988 Unit Scheme Infrastructure Cost and Trigger Point Assessment

Cost Analysis
for
South East Kings Lynn Strategic Growth Area



Project Title: South East Kings Lynn Strategic Growth Area
Project No: 377873
Date: 20/07/2018

Revision: 19:
Base Date: Q3 2018

Introduction

This document is provided with the intent of identifying the potential costs of the infrastructure associated with the South East Kings Lynn Strategic Growth Area. The costs are broken down into the following 3 main sections;

1	Section 106 Costs	Pages:	1 to 5
2	Additional Neighbourhood Plan Requirements	Pages:	6
3	Developer Costs	Pages:	7
4	Other Infrastructure	Pages:	8

Within each of these sections, the costs are further broken down as follows;

- n.1 Access and Transport : Q3 2018
- n.2 Education Costs 2018
- n.3 Green Infrastructure Q3 2018
- n.4 Community Facilities Q3 2018
- n.5 Utilities Q3 2018
- n.6 Other Requirements Q3 2018

An explanation of the contents of the columns which appear in the sheets are as follows;

"Total Cost" - The total calculated cost associated with the item of infrastructure.

"Contributions" - The contribution amount required by developers. This only appears in the Section 106 costs section, all other sections require full contribution. Any blank (£0) values in the column, require no developer contribution.

"Assumptions" - Any assumptions made during the costing exercise.

"Trigger point for delivery/ Assumed Cost Phasing" - How costs are to be apportioned in the growth area.

"Cost Source" - Where the associated costs have been priced from.

**Cost Analysis
for
South East Kings Lynn Strategic Growth Area**



Project Title: South East Kings Lynn Strategic Growth Area
Project No: 377873
Date: 20/07/2018

Revision: 19
Base Date: Q3 2018

1.0 Section 106 Costs

Ref.	Infrastructure Theme	Item	Detail	Total Cost	Contribution	Total Cost Without OB	Contribution Without OB	OB level to be used once forecast	Assumptions	Trigger Point for Delivery/ Assumed Cost Phasing	Costing Source
1.1	Access and Transport										
1.1.1		Minor improvement to Hardwick for A10 arm							- As Hardwick Transport Strategy, but with updated unit costs. - Ref 1.8 will require additional land costs. Which have not been included.	To be delivered by 2020 or by 400 dwellings	See Appendix A
1.1.1.1		Single lane slip road		£ 547,301.90	£ 547,301.90	£ 380,070.76	£ 380,070.76	44%			
1.1.2		A10 West Winch Bypass - Phase 1									
1.1.2.1		Intermediate roundabout		£ 136,162.01	£ 136,162.01	£ 94,556.95	£ 94,556.95	44%			
1.1.2.2		200m single carriageway		£ 547,301.90	£ 547,301.90	£ 380,070.76	£ 380,070.76	44%			
1.1.2.3		A47 roundabout		£ 217,859.23	£ 217,859.23	£ 151,291.13	£ 151,291.13	44%			
1.1.3		A10 West Winch Bypass - Phase 2									
1.1.3.1		2no at-grade roundabout on single carriageway		£ 272,324.03	£ 272,324.03	£ 189,113.91	£ 189,113.91	44%			
1.1.3.2		2300m single carriageway		£ 6,293,971.85	£ 6,293,971.85	£ 4,370,813.78	£ 4,370,813.78	44%			
1.1.4		A47 east of Hardwick dualled									
1.1.4.1		800m length widening of existing carriageway		£ 2,189,207.60	£ 2,189,207.60	£ 1,520,283.06	£ 1,520,283.06	44%			
1.1.5		Hardwick Interchange local widening within junction									
1.1.5.1		Widening parts of hardwick circulatory carriageway and exits		£ 1,368,254.75	£ 1,368,254.75	£ 950,176.91	£ 950,176.91	44%			
1.1.5.2		Upgrade to Traffic Signals		£ 101,680.00	£ 101,680.00	£ 70,611.11	£ 70,611.11	44%			
1.1.6		A47 roundabout retained but expanded									
1.1.6.1		400m length slip road		£ 1,094,603.80	£ 1,094,603.80	£ 760,141.53	£ 760,141.53	44%			
1.1.6.2		Dual carriageway roundabout		£ 217,859.23	£ 217,859.23	£ 151,291.13	£ 151,291.13	44%			
1.1.7		A47 flyover dualled									
1.1.7.1		1no new viaduct 175m long x 9m wide		£ 8,934,975.00	£ -	£ 6,204,843.75	£ -	44%			
1.1.8		A149 dualled									
1.1.8.1		800m length widening of existing carriageway		£ 2,189,207.60	£ -	£ 1,520,283.06	£ -	44%			
1.1.8.2		Existing roundabout upgraded to dual roundabout		£ 217,859.23	£ -	£ 151,291.13	£ -	44%			
1.1.9		Traffic Calming through West Winch Village									
1.1.9.1		Nominal Sum		£ 538,194.44	£ 538,194.44	£ 538,194.44	£ 538,194.44	0%	- Allowance; Scope of traffic calming to be defined, nominal sum of £0.5m as suggested in NCC Document. Assume safe crossings are allowed for in this figure. (Uplifted to 3Q2018).	To be commenced within 12 months of development	Nominal sum, taken from previous scheme.
1.1.10	Access and Transport cont...	Bus Strategy									
1.1.10.1		To be confirmed							- Contributions will need to be sought, however bus service improvements are based on business case.		
Access and Transport Total				£ 24,866,762.56	£ 13,524,720.74	£ 17,433,033.42	£ 9,556,615.48				
1.2	Education										
1.2.1		Contributions towards new facilities									
1.2.1.1		West Winch Primary School Capacity Increase		£ 2,445,240.00	£ 2,445,240.00	£ 2,445,240.00	£ 2,445,240.00	0%	- As advised by NCC - Nursery assumed to be part of primary school provision	• £100,000 on commencement of the development. • £1,000,000 on occupation of 100 new dwellings. (6 months post commencement) • Balance (£1,345,240) on occupation of 500 new dwellings across the overall IDP area (30 months post commencement)	Potential County Council Infrastructure Requirements - Proposed Housing Development Document, dated 12 October 2016.

**Cost Analysis
for
South East Kings Lynn Strategic Growth Area**



Project Title: South East Kings Lynn Strategic Growth Area
Project No: 377873
Date: 20/07/2018

Revision: 19
Base Date: Q3 2018

1.0 Section 106 Costs

Ref.	Infrastructure Theme	Item	Detail	Total Cost	Contribution	Total Cost Without OB	Contribution Without OB	OB level to be used once forecast	Assumptions	Trigger Point for Delivery/ Assumed Cost Phasing	Costing Source
1.2.1.2			420 place primary school (2ha)	£ 6,900,000.00	£ 6,900,000.00	£ 6,900,000.00	£ 6,900,000.00	0%		<ul style="list-style-type: none"> • 2ha School site purchased on commencement of the development • Transfer of a fully serviced school site after occupation of the 100th dwelling (6 months post commencement) • £250,000 on transfer of the school site (costs for design and planning) (6 months post commencement) • £1,000,000 on occupation of the 200th dwelling. (12 months post commencement) • £2,400,000 on occupation of the 400th dwelling. (24 months post commencement) • Balance (£3,250,000) on occupation of the 600th dwelling. (36 months after commencement) 	
1.2.1.3	Education cont...	Contributions towards new facilities cont...	315 place primary school (1.5ha, total 2ha safeguarded)	£ 6,900,000.00	£ 6,900,000.00	£ 6,900,000.00	£ 6,900,000.00	0%	- As advised by NCC - Nursery assumed to be part of primary school provision	<ul style="list-style-type: none"> • 2 ha School site to be purchased 3 years prior to the point when 2000 units are estimated to be occupied (ie. 84 months post commencement) • School to be completed by the point when 2000 units are occupied across the wider IDP area and cost apportioned across the previous 3 years (£5,150,000 apportioned between 84 and 120 post commencement) 	Potential County Council Infrastructure Requirements - Proposed Housing Development Document, dated 12 October 2016.
1.2.1.4			Nursery provision	£ -	£ -	£ -	£ -				
1.2.1.5			High School Capacity 640 place Increase	£ 11,229,440.00	£ 11,229,440.00	£ 11,229,440.00	£ 11,229,440.00	0%		<ul style="list-style-type: none"> • To be paid by in four equal instalments on occupation of 400 dwellings of each respective phase. 	
1.2.1.6			Sixth Form Capacity 63 place Increase	£ 1,198,827.00	£ 1,198,827.00	£ 1,198,827.00	£ 1,198,827.00	0%		<ul style="list-style-type: none"> • To be paid by in four equal instalments on occupation of 400 dwellings within each respective phase. 	
Education Total				£ 28,673,507.00	£ 28,673,507.00	£ 28,673,507.00	£ 28,673,507.00				
1.3	Green Infrastructure										
1.3.1		Neighbourhood parks, allotments & open spaces with equipped sports and play facilities. Capital Costs.									
1.3.1.1			Formal recreation facilities such as playing fields (10ha)	£ 5,185,467.56	£ 5,185,467.56	£ 5,185,467.56	£ 5,185,467.56	0%	50% of total open space area. Assume 20ha total	<ul style="list-style-type: none"> • Costs to be apportioned and phased across the IDP area on the basis of a cost per residential unit delivered. 	Pro-rata from previous scheme
1.3.1.2			Play Areas (6ha)	£ 12,786,084.40	£ 12,786,084.40	£ 12,786,084.40	£ 12,786,084.40	0%	30% of total open space area from DM 16. Assume 20ha total		
1.3.1.3			Allotments (0.6ha)	£ 104,774.86	£ 104,774.86	£ 104,774.86	£ 104,774.86	0%			
1.3.1.4			Other green spaces (4ha)	£ 355,169.01	£ 355,169.01	£ 355,169.01	£ 355,169.01	0%	20% of total open space area. Assume 20ha total		
1.3.1.5			Natural and semi natural green spaces inc. footpath links and hedgegrows (i.e. landscape buffers) (28ha)	£ 1,988,946.46	£ 1,988,946.46	£ 1,988,946.46	£ 1,988,946.46	0%	Assume landscape buffer zones are approx 700m x 164m and 700m x 236m.		
1.3.2		Neighbourhood parks, allotments & open spaces with equipped sports and play facilities. Maintenance Costs.									
1.3.2.1			Formal recreation facilities such as playing fields (10ha)	£ 1,391,446.71	£ 1,391,446.71	£ 1,391,446.71	£ 1,391,446.71	0%			

**Cost Analysis
for
South East Kings Lynn Strategic Growth Area**

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MACDONALD**

Project Title: South East Kings Lynn Strategic Growth Area
Project No: 377873
Date: 20/07/2018

Revision: 19
Base Date: Q3 2018

1.0 Section 106 Costs

Ref.	Infrastructure Theme	Item	Detail	Total Cost	Contribution	Total Cost Without OB	Contribution Without OB	OB level to be used once forecast	Assumptions	Trigger Point for Delivery/ Assumed Cost Phasing	Costing Source
1.3.2.2	Green Infrastructure cont...	Neighbourhood parks, allotments & open spaces with equipped sports and play facilities. Maintenance Costs cont...	Play Areas (6ha)	£ 4,350,589.52	£ 4,350,589.52	£ 4,350,589.52	£ 4,350,589.52	0%		• Costs to be apportioned and phased across the IDP area on the basis of a cost per residential unit delivered.	Pro-rata from previous scheme
1.3.2.3			Allotments (0.6ha)	£ 20,407.77	£ 20,407.77	£ 20,407.77	£ 20,407.77	0%			
1.3.2.4			Other green spaces (4ha)	£ 636,973.13	£ 636,973.13	£ 636,973.13	£ 636,973.13	0%			
1.3.2.5			Natural and semi natural green spaces inc. footpath links and hedgerows (i.e. landscape buffers) (28ha)	£ 995,656.24	£ 995,656.24	£ 995,656.24	£ 995,656.24	0%	Assume landscape buffer zones are approx 700m x 164m and 700m x 236m.		
1.3.2.6			Interim Habitat Mitigation Payment	£ 200,641.03	£ 200,641.03	£ 200,641.03	£ 200,641.03	0%	Nominal contribution of £50 per home, as required by SADMP, assume 3988 homes. (Uplifted to 3Q2018).		
Green Infrastructure Total				£ 28,016,156.69	£ 28,016,156.69	£ 28,016,156.69	£ 28,016,156.69				
1.4	Community Facilities										
1.4.1	Neighbourhood Centres									• Costs to be apportioned and phased across the IDP area on the basis of a cost per residential unit delivered.	F+A Little Black Book (Q1 2011) mid-range at 1277.77/m ²
1.4.1.1		Community Centre 1 (Assumed 1000m ²)	£ 2,447,133.76	£ 2,447,133.76	£ 2,008,841.15	£ 2,008,841.15	24%	- Assumed as one large community centre and 2 smaller community centres. - The costs shown are the estimated physical build costs of the centres.			
1.4.1.2		Community Centre 2 (Assumed 500m ²)	£ 1,223,566.88	£ 1,223,566.88	£ 1,004,420.57	£ 1,004,420.57	24%				
1.4.1.3		Community Centre 3 (Assumed 500m ²)	£ 1,223,566.88	£ 1,223,566.88	£ 1,004,420.57	£ 1,004,420.57	24%				
1.4.1.4		Sports Centre (1500m ²)	£ 3,105,575.59	£ 3,105,575.59	£ 2,504,496.44	£ 2,504,496.44	24%	Assumed 1500m ² sports halls (approx. 4 hall). However, this may change in detailed design. - The costs shown are the estimated physical build costs of the centres.			
1.4.1.5		1no. MUGA Facility (782m ²)	£ 203,299.53	£ 203,299.53	£ 163,951.23	£ 163,951.23	24%	Taken from Sport England Guidance			
1.4.1.6		Health Centre	£ -	£ -	£ -	£ -		- Land to be safeguarded only.			
1.4.1.7		3no. Shops (Assumed 280m ²)	£ -	£ -	£ -	£ -		- Land to be safeguarded only.			
1.4.1.8	NLIS library contributions	£ 979,128.21	£ 979,128.21	£ 979,128.21	£ 979,128.21	0%	- Taken as £244 per dwelling (assuming 3988 dwellings) as advised by BCKLWN. (Uplifted to 3Q2018).				
Community Facilities Total				£ 9,182,270.85	£ 9,182,270.85	£ 7,665,258.18	£ 7,665,258.18				
1.5	Utilities										
1.5.1	SADMP Fire Service Requirement									• Costs to be apportioned and phased across the IDP area on the basis of a cost per residential unit delivered.	Potential County Council Infrastructure Requirements - Proposed Housing Development Document, dated 12 October 2016
1.5.1.1		Fire hydrants Contributions	£ 70,167.03	£ 70,167.03	£ 70,167.03	£ 70,167.03	0%	Allowance for 1 hydrant per 50 homes (taken as 4000 (rounded up to the nearest 50)/homes) and one additional hydrant per school and neighbourhood centre at £816 each. (Uplifted to 3Q2018).			
1.5.2	Strategic SUDS Infrastructure									• Costs to be apportioned and phased across the IDP area on the basis of a cost per residential unit delivered.	Cost details taken from Environmental Agency Report SC080039/R9 (March 2015). Required volume of storage taken from: North Runcton and West Winch Surface Water Management Strategy (April 2014).
1.5.2.1		Detention Basins; Capital Cost	£ 6,359,864.96	£ 6,359,864.96	£ 5,128,923.36	£ 5,128,923.36	24%	Allowance for detention basins which are to store a total of 78317.4m ³ of water. Works to existing watercourse to be defined. Scope to be defined.			
1.5.2.2		Detention Basins; 15year Maintenance Cost	£ 349,980.88	£ 349,980.88	£ 349,980.88	£ 349,980.88	24%				

**Cost Analysis
for
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Project Title: South East Kings Lynn Strategic Growth Area
Project No: 377873
Date: 20/07/2018

Revision: 19
Base Date: Q3 2018

1.0 Section 106 Costs

Ref.	Infrastructure Theme	Item	Detail	Total Cost	Contribution	Total Cost Without OB	Contribution Without OB	OB level to be used once forecast	Assumptions	Trigger Point for Delivery/ Assumed Cost Phasing	Costing Source
			Utilities Total	£ 6,780,012.88	£ 6,780,012.88	£ 5,549,071.27	£ 5,549,071.27				
			Total Cost of Strategic Infrastructure (Contribution Portion)	£86,176,668.15		£79,460,608.62					
			Total Cost of Strategic Infrastructure	£97,518,709.98							

Notes/ Comments

- All cost data has been uplifted to a common base date to 3Q18 using BCIS Tender Price Indices to arrive at current prices.
 - Cost data has been sourced from a combination of in-house project data and professional opinion based on past experience.
 - Optimism bias of 44% is taken for all standard civil engineering works and 24% for all standard buildings as recommended by HM Treasury supplementary green book guidance.
 - Development and Supervision allowance of 10% is assumed for all works.
 - Contributions for strategic Hardwick infrastructure improvements its taken as 19% based on the percentage of traffic flow presented in the Hardwick Transport Strategy. This was taken as the maximum between the morning and evening peak flows identified.
 - Potential traffic diversion works are not included in these estimates, it is assumed that these will be defined by the phasing and construction techniques used during construction.
 - Where trigger points for delivery have not been provided to Mott MacDonald by the Borough Council of Kings Lynn and West Norfolk, they have been provided by Gerald Eve and have been included in this schedule in order to provide information on the inputs being used for viability purposes.
- Disclaimer:**
- A project estimate can vary dramatically depending on many factors such as procurement, technology and availability of resources (e.g. materials, labour and plant). These will differ within any individual project, sometimes resulting in a cost that does not reflect the conditions met on site therefore care should be exercised when using an estimate.
 - The high level estimated costs contained within this report are produced as an indication of costs only and it is recommended that a detailed estimate is undertaken to obtain a more accurate picture of any proposed project cost.
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**Cost Analysis
for
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Revision: 19

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2.0 Additional Neighbourhood Plan Requirements

Ref	Infrastructure Theme	Item	Detail	Cost	Cost Without OB	OB level to be used once forecast	Assumptions	Trigger Point for Delivery/ Assumed Cost Phasing	Costing Source
2.1	Access and Transport								
2.1.1		Off-Site Improvements to Road Network							
2.1.1.1			Redevelopment of A10 between Chapel Lane and Long Lane	£ -	£ -		Assume to be included in traffic calming, other upgrades not directly related to development.	In accordance with agreed phasing plan prior to the commencement of development	
2.1.1.2			Provision for future dual use path connection to Bawsey Country Park	£ -	£ -		This will tie into an new development footpath, therefore no contribution related to development.		
2.1.1.3			Dual use path connection to the village of Middleton	£ 519,552.47	£ 519,552.47	0%	Allowance for new 3m pavement on A47 south of New Road (approx. 1.7km)		
2.1.1.4			Safe Cycle and Pedestrian Crossing at Rectory Lane	£ 103,412.81	£ 73,866.29	44%	Allowance for 2 Toucan Crossings		
2.1.1.5			Safe Cycle and Pedestrian Crossing at Chequers Lane	£ 103,412.81	£ 73,866.29	44%	Allowance for 2 Toucan Crossings		
Access and Transport				£726,378.08	£667,285.05				
2.2	Education								
Education				£0.00	£0.00				
2.3	Green Infrastructure								
2.3.1		New nature reserve (5ha)							
2.3.1.1			5ha fenced off nature reserve	£ -	£ -		Assumed land take implications only. Scope to be defined		
Green Infrastructure				£0.00	£0.00				
2.4	Community Facilities								
2.4.1		Existing community facilities							
2.4.1.1			Upgrade existing community facilities	£ -	£ -		A need for this would need to be assessed. At this point it is assumed that the communities will be serviced by new facilities.		
Community Facilities				£0.00	£0.00				
2.5	Other Requirements								
2.5.1		Allowance for expansion to West Winch Church graveyard							
2.5.1.1			Land safeguarded only	£ -	£ -		Assume land take only.		
Other Requirements				£0.00	£0.00				
Total Cost of Neighbourhood Infrastructure				£726,378.08	£667,285.05				

Notes/ Comments

- All cost data has been uplifted to a common base date to 3018 using BCIS Tender Price Indices to arrive at current prices.
- Cost data has been sourced from a combination of in-house project data and professional opinion based on past experience.
- Optimism bias of 44% is taken for all standard civil engineering works and 24% for all standard buildings as recommended by HM Treasury supplementary green book guidance.
- Development and Supervision allowance of 10% is assumed for all works.
- Contributions for section 106 costs have been taken as a 100% contribution for those costs necessary to development and 0% for those as a direct cost to the development. This has been derived with guidance from the Borough Council of King's Lynn and West Norfolk.
- Potential traffic diversion works are not included in these estimates, it is assumed that these will be defined by the phasing and construction techniques used during construction.
- Where trigger points for delivery have not been provided to Mott MacDonald by the Borough Council of Kings Lynn and West Norfolk, they have been provided by Gerald Eve and have been included in this schedule in order to provide information on the inputs being used for viability purposes.

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**Cost Analysis
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3.0 Developer Costs

Ref	Infrastructure Theme	Item	Detail	Cost	Cost Without OB	OB level to be used once forecast	Assumptions	Trigger Point for Delivery/ Assumed Cost Phasing	Costing Source
3.1	Access and Transport	On-site road network							
3.1.1.1			Neighbourhood Streets - Site Masterplan	£ 16,284,968.04	£ 16,284,968.04	0%	Estimate from masterplan drawing 1565/01 SK306. Allowance; 5151m neighbourhood streets, 795m village centre streets and 10370m lanes and home roads. These have all been estimated as single carriageway all purpose road, and will be defined in detailed design stage. Scope to be defined.	Costs to be apportioned and phased across the IDP area outside of the Hopkins Homes scheme only, on the basis of a cost per residential unit delivered.	See Appendix A
3.1.1.2		Village Centre Streets - Site Masterplan	£ 2,175,525.06	£ 2,175,525.06	0%				
3.1.1.3		Lanes and Home Roads - Site Masterplan	£ 28,377,603.52	£ 19,706,669.11	44%				
3.1.1.4		East to West Road - Hopkins Homes	£ 3,207,189.13	£ 2,227,214.68	44%				
3.1.1.5		Hopkins Homes - Other Roads	£ 10,896,780.83	£ 7,567,208.91	44%				
3.1.2		On site footpaths							
3.1.2.1			Cycle/ Shared use pathways associated with road network	£ 4,332,938.31	£ 3,094,955.93	44%	Allowance; 10016m estimated from site masterplan drawing 1565/01 SK306. Allowance; 6326m from hopkins homes masterplan Scope to be defined.	Costs to be apportioned and phased across the whole IDP area on the basis of a cost per residential unit delivered	F+A Little Black Book (Q3 2010) mid-range at £154.17/m2. Pro rata
3.1.2.2			2m footpath associated with road network	£ 4,626,306.14	£ 3,304,504.38	44%	Allowance; 10016m estimated from site masterplan drawing 1565/01 SK306. Allowance; 3982m from hopkins homes masterplan. Scope to be defined		F+A Little Black Book (Q3 2010) mid-range at £87.69/m2. Pro rata
3.1.3		Cycle Routes							
3.1.3.1			Not associated with road network (3m wide)	£ 957,955.34	£ 684,253.81	44%	Allowance; 3613m at 3m wide	In accordance with agreed phasing plan prior to the commencement of development	F+A Little Black Book (Q3 2010) mid-range at £154.17/m2. Pro rata
Access and Transport				£70,859,266.36	£55,045,299.92				
Total Cost of Neighbourhood Infrastructure				£70,859,266.36	£55,045,299.92				

Notes/ Comments

- All cost data has been uplifted to a common base date to 3Q18 using BCIS Tender Price Indices to arrive at current prices.
- Cost data has been sourced from a combination of in-house project data and professional opinion based on past experience.
- Optimism bias of 44% is taken for all standard civil engineering works and 24% for all standard buildings as recommended by HM Treasury supplementary green book guidance.
- Development and Supervision allowance of 10% is assumed for all works.
- Contributions for section 106 costs have been taken as a 100% contribution for those costs necessary to development and 0% for those as a direct cost to the development. This has been derived with guidance from the Borough Council of King's Lynn and West Norfolk.
- Potential traffic diversion works are not included in these estimates, it is assumed that these will be defined by the phasing and construction techniques used during construction.
- Where trigger points for delivery have not been provided to Mott MacDonald by the Borough Council of Kings Lynn and West Norfolk, they have been provided by Gerald Eve and have been included in this schedule in order to provide information on the inputs being used for viability purposes.

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**D. Potential County Council Education
Infrastructure Requirements – Proposed
Housing Development – South East King's
Lynn Strategic Growth Area**

Potential County Council infrastructure Requirements - Proposed Housing Development

Address: West Winch Growth Area (3,500 Dwellings)

Date: 10th January 2018

Preface

The requirements below would need to be addressed in order to make the development acceptable in sustainable terms through the delivery of necessary infrastructure. The funding of this infrastructure would be through Planning obligations / condition.

Education

- 1.1 It is understood that the proposed development comprises 3,500 multi-bed houses. The County Council does not seek education contributions associated with 1-bed units and only seeks 50% contributions for multi-bed flats. Therefore in net education terms this represents the equivalent of 3,500 dwellings, which will generate:
1. Early Education – 3,500 dwellings x 0.096 children = 336 children (2-4);
 2. Primary School – 3,500 dwellings x 0.261 children = 914 children (5 – 11);
 3. High School – 3,500 dwellings x 0.173 children = 606 children (11 – 16);
 4. College/6th Form - 3,500 dwellings x 0.017 children = 60 children (16-18).
- 1.2 The Department for Education (DfE) provide a range of “basic need multipliers” (2008) which take into account the different school age ranges (see below).

Table 1 Cost per Place

Sector	Basic Need Multiplier Cost Per Place (2008)
Early Education (2-4)	11,644
Primary (4-11)	11,644
High School (11-16)	17,546
Sixth Form (16-18)	19,029

- 1.3 Based on the above demographic and DfE cost multipliers, the following standard education charges arise per dwelling, if there is insufficient capacity at local schools:

Table 2 Cost per Dwelling

(Age Range)	Cost per dwelling (£)		
	House (Multi-bed)	Flat (Multi – bed)	1-Bed Unit
Nursery	1,118	559	0
Primary	3,039	1,520	0
High	3,035	1,518	0
Sixth Form	323	162	0
Total	7,515	3,759	0

1.4

Table 3 The current situation at local schools is as follows:

School	Capacity	Numbers on Roll (May 2017)	Spare Capacity
Early Education Sector (2-4)	556	456	+100
Middleton Church of England Primary Academy (4-11) (excluding mobile)	120	73	+47
West Winch Primary School (4-11)	210	209	+1
King's Lynn Academy (11-16)	900	644	+256
King Edward VII Academy (11-16) (excluding mobiles)	1100	1035	+65
King Edward VII Academy (16-18) (excluding mobiles)	218	202	+16
Springwood High School (11-16)	1350	1356	-6

Springwood High School (16-18)	354	344	+10
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1.5 Claim

Early Education:

From September 2017 additional places have been needed due to the introduction of 30 Hours Free Entitlement for eligible families.

Primary School:

3,500 dwellings – To accommodate the numbers of primary age children likely to be generated from a development of 3,500 dwellings the County Council would wish to increase the capacity of West Winch Primary school and plan for 2 new primary phase schools as follows:

From a development of 3,500 dwellings 914 pupils will arise in the primary age range (4-11). West Winch Primary school currently has a capacity of 210 (1FE). If this is increased to 2FE to make a 420 place primary school (i.e. an additional 210 places) and another 2FE new primary school is built (420 places), and a 1.5 form entry (315 places) primary school is also built, including nursery provision for both these schools, the number of children generated by the proposed new development would be able to be accommodated.

The additional places generated from the proposals above equates to 945 but as outlined above a development of 3,500 dwellings will generate 914 pupils. Therefore of the 210 places required to expand the existing primary school to 2FE only 179 places will be sought (210-31).

Therefore the following would be requested:

- Contributions of 179 (210-31) x £11,644 = **£2,084,276** in order to double the capacity of West Winch Primary School.
- 2.0 ha of land free of charge, to accommodate a 2FE school.
- Centrally located within the development.
- The cost of building a new 420 place primary school is in the region of **£6.9 million**.
- 1.5 ha of land free of charge, to accommodate a 1.5FE school but 2 ha safeguarded to allow for expansion to a 2FE school.
- Centrally located within the development.
- The cost of building a new 315 place primary school is in the region of **£5.15 million**.

High School:

A total of 3,500 dwellings and other permitted in the area will mean that there will be no spare capacity in the High school sector.

Although there is currently spare capacity at King's Lynn Academy and King Edward VII Academy, numbers of children already in the primary system (YGR-

Y6) feeding into the King's Lynn High Schools will take all the capacity at these schools without the impact of additional housing.

3,500 dwellings - Contributions would therefore be sought for High School places: $606 \times \text{£}17,546 = \text{£}10,632,876$.

The contributions will be used to increase capacity within the King's Lynn high schools.

Sixth Form

A total of 3,500 dwellings and other permitted in the area will mean that there will be no spare capacity in the sixth form sector.

3,500 dwellings – contributions as follows: $60 \times \text{£}19,029 = \text{£}1,141,740$.

The contributions will be used to increase capacity within the King's Lynn high schools.

- 1.6 Should you have any queries with the above figures or comments please call Peter Dawes (Children's Services Department) on 01603 222356 or email him at peter.dawes@norfolk.gov.uk

Fire Service

- 2.1 **Residential:** Norfolk Fire Services have indicated that the proposed development will require 1 hydrant per 50 dwellings (on a minimum 90-mm main) for the residential development at a cost of £815 per hydrant. The number of hydrants will be rounded to the nearest 50th dwelling where necessary.

School and Local Centre:

An additional two hydrants at a cost of £815 each will be required to serve the School and Local Centre and should provide a minimum sustained outlet discharge in line with the National guidance document on the provision of firefighting water, and meet the requirements of Building Regulations Approved Document B volume 2 sections 15 & 16 (Fire Hydrants / water supplies and Vehicle access).

- 2.2 Please note that the onus will be on the developer to install the hydrants during construction to the satisfaction of Norfolk Fire Service and at no cost. Given that the works involved will be on-site, it is felt that the hydrants could be delivered through a planning condition.
- 2.3 Should you have any queries please call Trish Bond (Norfolk Fire Service) on 01603 819714 or email on patricia.bond@fire.norfolk.gov.uk

Library Provision

- 3.1 In order to cater for the additional library service usage resulting from the increased population from the development, Norfolk Library and Information

Service (NLIS) would need to increase the size of the existing library in Kings Lynn or provide a sub-library linked to some other community facility within the new development, if there is such provision in the development plan. This could be a community hall, retail area or even a doctor's surgery for instance.

NLIS would be seeking £244 per dwelling to increase the lending capacity of Kings Lynn library or to provide a sub-library on the development site. If a new library is located on the whole (3500 dwelling) new development then a contribution towards a suitable site would be required. In the event that NLIS were unable to extend the existing library or provide a new facility we would seek a fall back contribution of £75 per dwelling to improve the existing facility.

3.2 Should you have any queries with the above comments please call Ian McCann (Cultural Services) on 01603 638117 or email on ian.mccann@norfolk.gov.uk

Environment

4.1 **General Comments:** As outlined in the Norfolk County Council Planning Obligations Standards (April 2016), the scope of the County Council's green infrastructure responsibilities include:

- Public Rights of Way
- Norfolk Trails
- Ecological Networks

Green infrastructure should be included within the proposed site in line with local policy. Connections into the local Green Infrastructure (GI) network, including Public Rights of Way (PRoW) and ecological features, should be considered alongside the potential impacts of development. We would advise the Local Planning Authority that a maintenance/mitigation contribution or commuted sum for new and existing GI features may be required in addition to the County response, in order comply with local policy. Thus allowing the local GI network to facilitate the development without receiving negative impact and equally, allow the development to integrate and enhance the existing network.

Specific comments:

This large development site has a number of elements of existing green infrastructure (GI) within or adjacent to it. These include:

- Registered common land (Hardwick Narrows, West Winch Common, North Runcton Common and Setchy Common) with open access under the CROW Act;
- Numerous Public Rights of Way (including North Runcton RB3, RB4, RB6, BR4; West Winch FP1, FP2, RB1, and RB2);
- Several County Wildlife Sites (including CWS390: West Winch Common; CWS399: Meadow Adj. to A10; and CWS2079: Brook Meadow);
- The River Nar SSSI to the south of the development site; alongside which on the northern bank is the Nar Valley Way, a major trail in the Norfolk

Trails family. In this area the trail uses existing rights of way.

Mitigation should be provided by the developer for direct impacts on existing GI elements. Open access commons, PRow and the Nar Valley Way are likely to receive far greater footfall as a result of development than they do currently, this means that it is very likely that both new access infrastructure and resilience measures will need to be put in place.

An appropriate assessment will need to be made in order to establish whether the existing commons are suitable for greater scale of public access, or whether it is of benefit to biodiversity for them to remain relatively undisturbed as at present. In either case mitigation and/or other suitable alternatives will be required.

Norfolk County Council will require these works to ensure that no long-term increased management costs are incurred as a direct result of the development. It is likely that some of these measures can be delivered by way of Highway Condition, particularly where Public Rights of Way are to be affected, and where new highway infrastructure is required. Other works and infrastructure provision for common land will require a financial contribution through s106 agreement. These works will ensure that no long-term increased management costs are incurred to the landowner or Norfolk County Council as a direct result of the development.

Local GI Network

The local GI network in this location is very much on a north-south orientation, with commons and footpath(s) to the east of the Masterplan boundary and others in the west. There are clear opportunities to create a number of east – west links from the development to these PRow and access areas, as outlined in the emerging West Winch and North Runcton Neighborhood Plan (Figure 7, Settlement Concept, pp.36).

Consideration should be given to the use of detached footways and the formalising of footpaths through greenspace by dedication. The creation of new footpaths in areas of open space would enhance and integrate the local GI network and create positive additions to the local PRow network.

A new link from the development area to the long-distant path, the Nar Valley Way, would also be very beneficial and should also be explored. In this respect we understand that a permissive path already exists from Setchy Road to the north bank of the Nar and consideration should be given to formally registering this as PRow.

A clear requirement in terms of growth in this sector is the provision of non-motorised access to Kings Lynn. This should be a major consideration in planning of GI in the Masterplan. There is an opportunity to create a link on the disused railway between the proposed development and the existing/proposed recreation facility at Bawsey Pits. This route still mostly exists but there would need to be some works including a pedestrian bridge across the railway. It is recommended that a Landscape and Green Infrastructure Management Plan or suitable alternative be required for this, and the wider area to enable the timely integration, delivery and management of the Local GI Network. The requirements of the emerging policies of the West Winch and North Runcton Neighborhood Plan should also be considered in the development of the wider

masterplan.

The comments made previously by the Natural Environment Team with regards to obligations for Application 13/10615/OM still apply in the northern section (Land west of Constitution Hill, North Runcton/West Winch), namely:

- To the west - instate a link Footpath to North Runcton RB2; - this links to West Winch (3km) and the Nar Valley Way at Setchey (5km)
- To the south east - instate a link Bridleway/Cycle route to North Runcton RB3 (Illington Lane) :- this gives the potential to create a circular cycle/walk route around North Runcton (inc N. Runcton RB3/BR4/RB6 & some quiet roads)
- Circular walk around the parameter of the development including small circular link for school & landscape area to the south.

4.2 Should you have any queries with the above comments please call David White on 01603 222058 or email on david.white.etd@norfolk.gov.uk

Highways and Transport Provision

5.1 I understand that you have contacted the County Council's Highways Development Control Manager separately on this proposal.

Lead Local Flood Authority

6.1 If you have consulted Norfolk County Council as Lead Local Flood Authority and statutory consultee for surface water drainage, they will be responding separately.

E. Consultation Responses

Comments received from Hopkins Homes and GVA in 2017 during Consultation. It should be noted that all costs commented upon have been revised to Third Quarter 2018 (3Q2018)				
	Relevant Section	Responses to IDP Report Relevant Sub section	Comments	Specific Comments
GVA on behalf of Northern Trust	Strategic Infrastructure: Transport	Table 3: Infrastructure Costs Highways	Table 3 of the IDP sets out some major (mainly off-site) transport costs associated with the SEKLSGA, including the costs for the relief road. This is somewhat of a surprise as it was our client's implicit understanding, as stated when we met on 3rd November, the development itself would not be liable for the full funding of the road infrastructure. This was discussed with the Chief Executive of BCKLWN on 3rd September 2015 in which a firm commitment to seek external funding for the relief road and other infrastructure was given to ensure the viability of the overall project. Please refer to the minutes of the meeting and covering email attached herewith.	Funding is being sought.
GVA on behalf of Northern Trust	Strategic Infrastructure: Transport	Table 3: Infrastructure Costs Highways	Turning our attention to the costs within Table 3 (including the calculations within the IDP Appendices that support the figures presented in Table 3) we note the addition of optimism bias and allowances for design and supervision. Curtin's have undertaken a review of the information and raised doubts on some of the costs included within the IDP, can we provide further evidence for items: 2. A10 West Winch Bypass Phase 1 4. A47 east Hardwick dualling 6. A47 roundabout retained but expanded 7. A47 flyover 8. A149 dualling	Further evidence of costs has been provided and updated to reflect 3Q2018 values
GVA on behalf of Northern Trust	Strategic Infrastructure: Education	Table 3 Appendix D	Although the IDP sets out at Table 3 of Appendix D the current situation on space capacity at a number of local schools in the area, there are several which the IDP does not account for within its assessment. We have attached a map which identifies the schools within the local area and those which have not been included in the IDP's assessment of capacity. We do accept that the majority of schools not included appear to primary and this could be due to their distance from the site (primary generally required to be closer). However, there does appear to be at least one primary school (St Michael's) which should have been included in the assessment.	The NCC Education department provided the capacity report and developer requirements.
GVA on behalf of Northern Trust	Strategic Infrastructure: Transport	N/A	Primary: The IDP has included a cost of £14,495,240 for primary education which is based on doubling the expansion of West Winch Primary School, thereby adding 210 places, and providing a new 420 and 315 place primary school. In total the IDP includes provision for 945 places which is more than the net child yield (893 places) generated by a scheme of 3,500 units. Based on the basic need multiplier for primary education the total cost based on a net child yield of 893 places would be £10,398,092. This is £4,097,148 less than the primary education cost included within the IDP.	The NCC Education department provided the capacity report and developer requirements.
GVA on behalf of Northern Trust	Strategic Infrastructure: Transport	N/A	High School: The IDP also calculates the high school and college contributions on the basis of the total number of pupils to be generated rather than the additional capacity required. Therefore, the costs within the IDP are significantly inflated. For example the education contribution for high school places (based on the basic need multiplier of £17,546) would be £4,877,788 which is £5,754,998 less than the high school contribution within the IDP.	The NCC Education department provided the capacity report and developer requirements.
GVA on behalf of Northern Trust	Strategic Infrastructure: Transport	N/A	Sixth Form Provision: The education contribution for sixth form provision would be £228,348 rather than the cost of £1,141,740, which is included in the IDP.	The NCC Education department provided the capacity report and developer requirements.
GVA on behalf of Northern Trust	Green Infrastructure	N/A	Formal Playing Fields and Maintenance: The formal recreation areas (playing fields) extend to 10ha and equate to circa 14 adult/senior football pitches. The average cost for a natural turf senior football pitch (based on Facility Costs from Sport England Q2 2016) is £85,000. This would result in a total cost of £1,190,000 and whilst it is accepted that other sports may be accommodated within the recreation area the total cost included within the IDP at £4,522,788 appears high. To put this into context: ⊗ A natural turf rugby union pitch costs £100,000 and circa 11 pitches could be accommodated within the total area resulting in a total cost of £1,100,000. ⊗ A natural turf cricket pitch (with 8 pitch square and 2 winter sport pitches) costs £265,000. For comparison purposes circa 5 natural cricket pitches could be accommodated with the total recreation area at a total cost of £1,325,000. Even if the costs include for changing rooms/club house/pavilion this would only add £240,000 for a 2 team changing room or £630,000 for a 4 team changing room, So on the assumption that the recreational area comprises 11 football pitches this would result in a need for three x 4 team changing rooms at a total cost of £1,890,000, which when added to the cost of the pitches (£1,100,000) would give a total cost of £2,990,000. It would be useful to understand what is included within the cost for formal recreation areas.	Maintenance costs are subject to yearly variation and the costs included have taken that into account
GVA on behalf of Northern Trust	Community Facilities	N/A	Our only comments on the community facilities relates to the number of community centres and why three are included / proposed within the IDP. This seems excessive especially as a sports centre is also proposed which could be dual purpose and also serve as a community centre.	This can be considered

*all costs have been updated to 3rd quarter 18.

GVA on behalf of Northern Trust	Utilities		<p>Detention Basins: The costs within Table 7 of the IDP are based on the Environment Agency report ref SC080039/R9. The max unit rate in this is £55/cubic metre for a dry detention basin but the data source for that rate is 2007. Assuming 2007 was the peak for construction costs we think 10% inflation from 2007-2017 would be reasonable. Therefore 60 per cubic metre would be defensible. We note that an optimism bias of 44% has also been applied in the IDP. The total cost of £6.96m is based on 78,317 cubic metres of storage. This works out a unit rate of £88 per cubic metre with inflation and optimism bias).</p> <p>We also note that Allan Baxter in some of their initial calculations for the development suggested that the volume of retention required is around 64,000 cubic metres. Therefore the IDP seems to be overestimating the amount of retention and costs of providing the site retention. If we adopt the Allan Baxter estimate of 64,000 cubic metre of retention required on site and use the MM Unit rate of £88/cubic metre the cost is £5.632m. This compares to the IDP costs of £6.96m giving a saving of £1.3m.</p> <p>However, whilst we accept that for the development to function a network of detention basins will be required as part of a comprehensive Sustainable Urban Drainage system these will be delivered as part of the overall masterplan proposals being brought forward by the respective landowners/developers. Therefore, we believe that this item of infrastructure should not be included within the IDP (and ultimately be included within the roof tax charge'), as they are not S106 or Strategic Infrastructure Costs.</p>	Costs have been revised for 3Q2018
GVA on behalf of Northern Trust	Neighbourhood Plan Requirements		Curtins have reviewed the costs set out within Table 8 and consider that the IDP slightly over-estimates the costs of providing the measures requested in the Neighbourhood Plan. Curtins estimate the overall cost to be £495,000, a saving of just over £200,000 on the cost included in the IDP (£697,995).	Costs have been revised to reflect 3Q2018
GVA on behalf of Northern Trust	Other Required Infrastructure		<p>The IDP (Table 9) identifies circa £67m of additional transport and access requirements. It is acknowledged within the IDP that these have been derived from the masterplan layouts drawn up by potential developers. Indeed some of the items within Table 9 are specifically linked to the scheme being proposed by Hopkins Homes.</p> <p>Whilst we accept that for the development to function a network of roads, streets and paths within the development, as per the respective masterplans, are required we strongly believe that these items of infrastructure should not be included within the IDP (and ultimately be included within the roof tax charge'), as they are not S106 or Strategic Infrastructure Costs.</p>	These costs will not be included within the Section 106 agreements but are used to assess viability
GVA on behalf of Northern Trust	Statutory Utilities		<p>At this stage we are not able to provide detailed comments as the advice we have received on utilities only relates to our initial phase 1 development of 500 units. We note that the costs for electricity are based on figures from UKPN pre development enquiry budget – could this be shared?</p> <p>The other costs appear to be based on 'allowances'. Could you provide further evidence which supports / justifies these allowances?</p>	
Hopkins Homes	Table 3: Infrastructure Costs Highways	Minor improvements to Hardwick for A10 arm	No Comment	
Hopkins Homes	Table 3: Infrastructure Costs Highways	A10 West Winch Bypass - Phase 1	No Comment	
Hopkins Homes	Table 3: Infrastructure Costs Highways	A10 West Winch Bypass - Phase 2	No Comment	
Hopkins Homes	Table 3: Infrastructure Costs Highways	A47 east of Hardwick dualling	No Comment	
Hopkins Homes	Table 3: Infrastructure Costs Highways	Hardwick Interchange local widening within junction	No Comment	
Hopkins Homes	Table 3: Infrastructure Costs Highways	A47 roundabout retained but expanded	No Comment	
Hopkins Homes	Table 3: Infrastructure Costs Highways	A47 Flyover dualled	No Comment	
Hopkins Homes	Table 3: Infrastructure Costs Highways	A149 Dualled	No Comment	
Hopkins Homes	Table 3: Infrastructure Costs Highways	Traffic Calming through West Winch Village	Nominal summ but the access on A10 could contribute to this cost.	
Hopkins Homes	Table 3: Infrastructure Costs Highways	Total	doesn't include cost of land to deliver dualling and sustainable transport contribution. But overall costs more advanced than previously so can work with this	£10.7m for road is appropriate but should include cost of land for dualling which would be additional c£700K

Hopkins Homes	Table 4: Education Contributions	N/A	NCC consider the development will generate 336 children (2-4), 914 children (5-11), 606 children (11-16) and 60 children (16-18) - a total of 1,916 children. This is equivalent to household size of 2.55 children across the development (compared to an average household size of 2.3 recorded in the 2011 census). We appreciate that the size of households may be greater in new build properties - however it fails to recognise that families moving into the development may be displaced by smaller households moving into their old homes. The overall average household sizes of areas does not tend to change recognisably. Further, it fails to recognise that some children will enter alternative forms of education (private, home schooling, special needs, or out of catchment).	The NCC Education department provided the capacity report and developer requirements.
Hopkins Homes	Table 4: Education Contributions	West Winch Primary School Capacity Increase to become 420 pupil school i.e. +210 * £11,644	Altogether funding and land is being provided for 945 pupils (compared to requirement of 914 primary pupils) https://www.norfolk.gov.uk/rubbish-recycling-and-planning/planning-applications/planning-obligations	The NCC Education department provided the capacity report and developer requirements.
Hopkins Homes	Table 4: Education Contributions	Primary School 1 - a 2FE school (420 pupils)	420*11644 = £4.89m	The NCC Education department provided the capacity report and developer requirements.
Hopkins Homes	Table 4: Education Contributions	Primary School 2 - a 1.5FE school (315 pupils)	315*11644 = £3.67m	The NCC Education department provided the capacity report and developer requirements.
Hopkins Homes	Table 4: Education Contributions	High School increase - 606 pupils generated * 17,546	Capacity exists for 326 high school places (identified in Appendix D) leaving a requirement of 280*17546 = £4.91m	The NCC Education department provided the capacity report and developer requirements.
Hopkins Homes	Table 4: Education Contributions	6th Form capacity increase - 60 children	Capacity exists for 50 sixth form school places (identified in Appendix D) leaving a requirement of 10*19029 = £0.19m	The NCC Education department provided the capacity report and developer requirements.
Hopkins Homes	Table 5: Green Infrastructure	Formal recreation facilities such as playing fields (10ha)	Needs reconciling with NP requirements for MUGA, Sports Hall. LEAPS and NEAPs would be included in development costs so should be removed. Only abnormal cost would be playing fields and Hopkins generally work on basis of £100,000 per acre	
Hopkins Homes	Table 5: Green Infrastructure	Maintenance of playing fields		
Hopkins Homes	Table 5: Green Infrastructure	Play areas (6ha)	Included within development cost	
Hopkins Homes	Table 5: Green Infrastructure	Play areas maintenance	Maintenance company	
Hopkins Homes	Table 5: Green Infrastructure	Allotments (0.6ha)	Included within development cost	
Hopkins Homes	Table 5: Green Infrastructure	Allotment maintenance	Maintenance Company	
Hopkins Homes	Table 5: Green Infrastructure	other green spaces (4ha)	Included within development cost	
Hopkins Homes	Table 5: Green Infrastructure	green space maintenance	Maintenance company	
Hopkins Homes	Table 5: Green Infrastructure	natural and semi natural green spaces (28ha) (landscape buffers)	This is likely to be included in development costs.	
Hopkins Homes	Table 5: Green Infrastructure	maintenance of landscape buffers	This is not shown in table 5 included within development cost.	
Hopkins Homes	Table 5: Green Infrastructure	interim habitat mitigation payment (£50 per home)	Inputted incorrectly as 199400 in Table 5	Corrected
Hopkins Homes	Table 6: Community Facilities	Community Centre 1 (1000sq m)	This could be the sports hall (used for community events when necessary) community centre buildings cost £1500 per sq m - but this could be sports facility.	
Hopkins Homes	Table 6: Community Facilities	Community Centre 2 (500 sq m)	Community centre buildings cost £1500 per sq m	
Hopkins Homes	Table 6: Community Facilities	Community Centre 3 (500 sqm)	Community centre buildings cost £1500 per sq m seems expensive	
Hopkins Homes	Table 6: Community Facilities	Sports Centre (1,500 sq m)	Should form part of NPFA standard playing fields, MUGA and sports hall facility would normally be included in Formal playing fields contribution of £100K per acre	
Hopkins Homes	Table 6: Community Facilities	MUGA facility (782 sq m)	Should form part of NPFA standard playing fields, MUGA and sports hall facility would normally be included in Formal playing fields contribution of £100K per acre	

Hopkins Homes	Table 6: Community Facilities	Health Centre	Part of community facilities and included in those costs	
Hopkins Homes	Table 6: Community Facilities	3 Shops, expansion of graveyard, new nature reserve	Land take only	Maintenace would be required
Hopkins Homes	Table 6: Community Facilities	NLIS Library Contributions (£244 per home)	No Comment	
Hopkins Homes	Table 6: Community Facilities	Total	Costs different to Table 6	Corrected
Hopkins Homes	Table 7: Utilities Requirements	Fire Hydrants - 1 per 50 homes or school/centre (£816 each)	74 hydrants	
Hopkins Homes	Table 7: Utilities Requirements	Detention Basins	Atkins estimated £1.05m for earthworks (£50 per cubic meeting) + outfall channels, attenuation basin structures and outfall pipes and connections on Hopkins site - would suggest overall cost c£3.5m. This would be included within development costs.	
Hopkins Homes	Table 7: Utilities Requirements	Detention Basins maintenance	Private maintenance company	Costs must be estimated for maintenance to demonstarte they are affordable
Hopkins Homes	Table 8: Neighbourhood Plan Additional Access & Transport Requirements	Redevelopment of A10 between Chapel Lane and Long Lane	Assumed to be included in traffic calming measures	To be confirmed
Hopkins Homes	Table 8: Neighbourhood Plan Additional Access & Transport Requirements	Provision for future dual use path connection to Bawsey Country Park		
Hopkins Homes	Table 8: Neighbourhood Plan Additional Access & Transport Requirements	Dual use path connection to the village of middleton (3m footpath for 1.7km)	Is a 3m wide footpath necessary?	3m is the standard minimum for multiuse.
Hopkins Homes	Table 8: Neighbourhood Plan Additional Access & Transport Requirements	safe cycle and pedestrian crossing at Rectory Lane (2 toucan crossings)	No Comment	
Hopkins Homes	Table 8: Neighbourhood Plan Additional Access & Transport Requirements	safe cycle and pedestrian crossing at Chequers Lane (2 toucan crossings)	No Comment	
Hopkins Homes	Table 9: Additional Access and Transport Requirements	Neighbourhood Streets - Site Masterplan (5151m of neighbourhood streets taken from 1565/01 SK306)	All included within development costs	
Hopkins Homes	Table 9: Additional Access and Transport Requirements	Village Centre Streets - Site Masterplan (795m of streets)	No Comment	
Hopkins Homes	Table 9: Additional Access and Transport Requirements	Lanes and Home Roads - Site Masterplan (10370m of lanes)	this is different to Table 9	Corrected
Hopkins Homes	Table 9: Additional Access and Transport Requirements	East of West Road - Hopkins (1172m)	This is different to Table 9	Corrected
Hopkins Homes	Table 9: Additional Access and Transport Requirements	Other Roads - Hopkins (3982m)	This is different to Table 9	Corrected
Hopkins Homes	Table 9: Additional Access and Transport Requirements	Cycle/shared use pathways associated with road network (10016m from SK306 and 6326m from HH masterplan)	No Comment	

Hopkins Homes	Table 9: Additional Access and Transport Requirements	2m footpath associated with road network (10016m from SK306 and 3982m from HH Masterplan)	Why is this more than cycle lanes	This may increase
Hopkins Homes	Table 9: Additional Access and Transport Requirements	cycle routes not associated with road network (3613m)	No Comment	
Hopkins Homes	Table 10: Required Utilities	Electricity - contestable	No Comment	
Hopkins Homes	Table 10: Required Utilities	Electricity - non contestable	Atkins calculate c£1.8m for Hopkins site based on £1,200 per plot and reinforcements of £500K only re-inforcements would be an abnormal cost.	
Hopkins Homes	Table 10: Required Utilities	Gas - strategic improvements	Atkins consider c£800 per unit plus reinforcements leading to c£1.3m for Hopkins Site - would suggest overall budget of c£4.5m for full site	
Hopkins Homes	Table 10: Required Utilities	Gas - protection works to H/P line	May not be necessary if development not proposed within hazardous area	Road are potentially crossing gas mains.
Hopkins Homes	Table 10: Required Utilities	Gas - infrastructure works	No Comment	
Hopkins Homes	Table 10: Required Utilities	Gas - on site trenching	No Comment	
Hopkins Homes	Table 10: Required Utilities	Water - Mains water distribution	Atkins consider £0.5m for off site connections and reinforcements + £354 per unit for connection. It would suggest c£3m for whole site so £3.5m realistic.	
Hopkins Homes	Table 10: Required Utilities	Water - foul sewer connections	Atkins suggest £0.7m which suggests c£2.5m so this cost appears reasonable.	

