

An aerial rendering of a proposed new garden city. The city is built on a riverbank, featuring a mix of residential housing, commercial buildings, and green spaces. A river winds through the city, and a bridge crosses it. The surrounding landscape is a mix of fields and forests. The sky is filled with soft, white clouds, and the sun is low on the horizon, creating a warm, golden light.

Wolfson
Economics Prize
MMXIV

How would you deliver
a new garden city which is
visionary, economically viable,
and popular?

Shelter



Our Team

Shelter

Shelter's submission for the Wolfson Economics Prize 2014 has been prepared in collaboration with PRP and during the preparation Shelter worked with KPMG LLP, Laing O'Rourke Plc and Legal and General.



PRP has worked in partnership with Shelter throughout the process, providing expertise in site analysis, master-planning, urbanism, social and environmental sustainability and transport planning, as well as image and document production. Their support has been invaluable and without it a Shelter submission would not have been possible.



KPMG LLP provided financial and major projects advice in the areas of housing, construction, investment and transport infrastructure and provided a secondeé to Shelter to assist with the initial and final submissions.



Laing O'Rourke Plc has shared their vision and information in respect of their future offsite construction plans and what this could mean for Stoke Harbour in terms of build out rates/delivery and also in respect of long term local employment in this industry.



Legal & General has provided investment expertise from its Legal & General Capital and Legal & General Property businesses including the role that long term institutional investors could play in the project and the structures, tenure models and approach to risk that would facilitate this. They have also provided direct financial support to allow Shelter to carry out a community consultation on the project including polling, focus groups and a citizens' jury. Legal & General is looking to understand whether organisations like Shelter get more engagement and ideas from communities than property developers themselves when regenerating communities.

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Please note that Shelter, as author and entrant, is solely responsible for the proposals and opinions contained within this document.

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Introduction: Our Approach

The Wolfson Economics Prize 2014 has offered a fantastic opportunity to demonstrate how the new homes we desperately need can be built. The Prize question cuts to the heart of why we've failed to build enough new homes, and it rightly demands of entrants:

- An ambitious vision for a garden city that is modern, environmentally sustainable and which provides homes affordable to those on a range of incomes.
- A robust and credible private financing model, which would be a serious proposition to real investors.
- Proof that local popular support can be achieved and an intelligent strategy to realise it.

To respond, we have taken a bold and robust approach: selecting a real site and therefore being in a position to show that our model is deliverable in practice, not just in theory.

Our proposal is for Stoke Harbour Garden City on the Hoo Peninsula in Kent: a city of 30,000 to 40,000 people, which can be built in 15 years and could grow beyond then to a city of 100,000 or more. What makes our proposition unique is that it has been rigorously strengthened by the views of those who matter most: the people who would actually live there.

To rise to the challenge of this Prize, no single organisation can bring all the expertise needed. So we have drawn on the practical experience and knowledge of a market-leading team:

- Our model for housebuilding and infrastructure has been developed with advice from experts at KPMG and Laing O'Rourke.
- Our masterplan and design has been led by visionary architects at PRP.
- Our investment proposition has been developed with practical expertise from large scale investors Legal & General.
- Our approach to securing local popular support is evidenced by new primary research led by independent research agency BritainThinks and polling by YouGov. Their research informs our strategy to translate support in principle to support in practice, by offering the right sorts of incentives, based on robust insight into what local people want.

Our plan is not just theoretical: it is a model that is ready to go. Our new model for a garden city combines an ambitious vision, a credible investment model and an intelligent, insight-based strategy to gain local popular support. We hope that the Wolfson Economics Prize 2014 is the catalyst that sees new garden cities move from concept to reality.



Medway residents vote overwhelmingly for our proposals at a full day 'Citizens Jury' event, run by an independent research agency



In **Part 1** we discuss the principles that inform our model. We look at housing demand and local consent, economic rationale, models to co-ordinate investment and the options to pay for major infrastructure without public subsidy

In **Part 2**, we set out the vision for our proposal: Stoke Harbour Garden City. We introduce the design, infrastructure, environmental credentials, homes and governance.

In **Part 3**, we lay out in detail how the theory from Part 1 can be applied to realise our vision for Stoke Harbour. We show Stoke Harbour Garden City growing year by year and explain how investors will have the confidence to make our proposal viable.

Finally, in **Part 4** we explain our approach to popular support. We present brand new research into the attitudes of people in Medway, which has informed both the design of our garden city and the campaign we would run in order to win a local referendum.

Executive Summary

After decades of under-supply, we urgently need to build more homes. Shelter and KPMG recently set out a comprehensive plan to get us building the homes we need.¹ A new generation of garden cities is a key part of that programme - so we are delighted to enter the Wolfson Economics Prize 2014. Our proposal has been developed by Shelter and PRP with advice from KPMG, Legal & General and Laing O'Rourke.

At the heart of our proposal is the simple concept of 'the city that built itself'. By structuring incentives correctly we show how we can mobilise resources from investors, land-owners, advanced construction firms, self-builders, small businesses, local authorities and local residents themselves – without the need for public subsidy, and without stinting on infrastructure, affordability or quality.

By identifying a genuine site in Medway for our garden city, called Stoke Harbour, we have put our ideas to the test, and addressed the challenges any theoretical proposal must face. We have spoken in depth to the people of Medway, and adapted our proposals to reflect what they told us.

PART I : FOUNDATIONS

Before setting out our vision for Stoke Harbour itself we explore the core economic and delivery principles behind our proposal.

Any new garden city must be founded on economic demand and local consent, and moderated by environmental constraints. The chosen location must reflect a balance of these three factors:

- There must be effective demand for new homes in the functional economic area, which is closely linked to jobs. The proposed garden city must generate a critical mass of employment opportunities itself, but also connect to existing centres of employment via transport links.
- While responding to regional and national demand, a new garden city must also be wanted by local people and consented to by the local authority. It must include real benefits for local people, over and above compensation, such as additional infrastructure up-front or financial incentives, and must be sufficiently popular to win a local referendum.
- Any new garden city must respect environmental constraints. Much of England's land is rightly protected and cannot be developed, and minimising energy use and flood risk should be key considerations in designing a new garden city.

To be self-financing, the development model must capture some of the increase in land value created by the new city.

- The original garden cities of Letchworth and Welwyn achieved this through philanthropic donation of the land, while the post-war new towns did so via compulsory purchase at agricultural prices. Today we need an approach that incentivises land owners to participate voluntarily.
- We advocate a development model in which major landowners co-invest their land into a development partnership, yielding attractive medium to long term returns. The real value of a new garden city will be realised over time and at scale, making co-investment a rational business strategy for large landowners seeking to maximise their asset value.

To deliver a new garden city without public subsidy, substantial private investment must be secured.

- With advice from Legal & General and KPMG we have developed an 'investment waterfall' model, in which each stage of development and population growth triggers the next round of investment, so that social infrastructure stays a step ahead of demand.

¹ KPMG and Shelter, *Building the homes we need*, 2014

PART II : VISION

Based on these foundations, we set out our proposal for Stoke Harbour, a polycentric garden city for which we have modelled the main city in detail.

Location

Applying our location criteria led us to the Hoo Peninsula in Medway. Part of the Thames Gateway regeneration area in the wider South East, the Hoo is currently poorly served by transport, but is ear-marked for improvements and is close to well-connected zones. Relatively easy upgrading would place it 45 minutes from King's Cross and link it naturally to Ebbsfleet Garden City, creating a new regional centre of employment and growth.

While there are environmental constraints on developing the Hoo, our proposed sites avoid protected areas and maximise use of brownfield land around existing power stations and industrial estates. Existing land values are low relative to the South East, and there is a high level of local and regional demand for homes, jobs and infrastructure.



Design

Designed on a human scale, Stoke Harbour will be built to the density of a typical mixed-use European city centre or Victorian English town, with 15,000 homes built over 15 years. With future urban extensions and orbital settlements it will grow to a polycentric garden city of some 60,000 homes.

Key features such as valley water-courses, hedgerows and shelterbelts will be used to create linear parks that link public green spaces: 40% of the total area will be green space.

A tidal harbour will be built out of low-lying brownfield land at the south of the site - avoiding the ecologically sensitive and protected wetlands entirely. Vibrant local neighbourhoods will be built around shops, services and open spaces, clustered in local centres within a short distance of people's homes.

Transport

Our comprehensive transport strategy will produce a step-change in connectivity quickly:

- A shuttle train to Gravesend on the existing freight line.
- A subsidised bus link to Medway.
- Upfront upgrades to Four Elms roundabout that is currently a rushhour bottleneck.

As Stoke Harbour grows, the rail line will be twin-tracked and a new relief road built in the same corridor, linking to the proposed new Lower Thames Crossing.



Homes

The people of Medway told us that they want new homes to be affordable to local people on normal wages. So 37.5% of the homes will be in affordable tenures including shared ownership, and the homes for sale will be priced competitively for Medway. To encourage early movers and foster character, self-build will be a real option for people from across the income spectrum. Specially designed homes for older people will be linked to local services.

Economy

Stoke Harbour will support a thriving new local economy, during construction and beyond. Housing and infrastructure will employ upwards of 1,000 in construction, 150 apprentices and 1,500 in the supply chain. Laing O'Rourke will set up an off-site manufacturing factory employing 350 people and 50 apprentices.

We estimate that Stoke Harbour will generate at least 2,000 permanent jobs in retail, hospitality, communications, real estate and financial services, and an additional 1,000 jobs in public services and related sectors.

Environment

Our proposals seek to reduce the impact of human populations on sensitive areas by incorporating environmental enhancements recommended by the RSPB. Stoke Harbour will minimise flood risk and energy efficiency, making best use of waterways and the existing power stations. A new community energy cooperative will use bulk purchasing power to reduce energy bills for new and existing residents.

PART III : VIABILITY

We achieve economic viability through a partnership model, and the careful phasing of investment and delivery under a detailed business plan.

Development partnership

A partnership structure aligns multiple stakeholders' interests and capabilities:

- Shelter will be the initial promoter of the partnership, identifying and negotiating with potential partners, appointing advisers and raising initial funding.
- We will approach potential co-promoters willing to invest in our vision and provide expertise in the early stages. Reflecting the development cycle, risk preferences and time horizons, the co-promoter's interest will be sold to a core development investor for the construction phase, and then to a long term investor for the post-construction estate management phase.

- We will approach the Church Commissioners (the major land owner on the site) giving them the opportunity to co-invest their land in the partnership, with a call option ensuring they take no planning risk.
- We will engage with Medway Council from the outset. Our proposals create significant benefits to Medway's people and economy including delivering much of the Council's existing capital investment programme for social infrastructure.

Business plan

Rapid build out is central to the growth plans for Stoke Harbour, which averages 1,250 homes per year (4-5 times the current UK average). Balanced phasing is vital to securing investment, while growing a sense of place quickly and avoiding outpacing demand:

- Construction will be in three phases of four years, with regular milestone reviews and constant market absorption monitoring. We will achieve these accelerated build-out rates through careful market segmentation, improved connectivity, place-making and a model for offsite manufacture developed with Laing O'Rourke.

- Social infrastructure and homes will be delivered under a detailed year-by-year growth plan, supported by an 'investment waterfall' that releases investment as it is needed.
- Transport infrastructure is funded upfront by a hybrid debt solution and repaid by commercial rents, business rates from a new Enterprise Zone, some rail-user tolling, and carparking income.

PART IV : POPULARITY

With the agreement of the local authority we will hold a local referendum on our proposal, as the true test of its popularity. Understanding local people's hopes and concerns is vital to winning a referendum, so with kind sponsorship from Legal & General we conducted new primary research with YouGov and BritainThinks:

- Polling, focus groups and a full day 'Citizens Jury' with people in Medway confirmed that there is already majority backing for a garden city on the Hoo Peninsula (54% support/33% oppose).²
- Local people feel that the Hoo is under-utilised and under-served, and would benefit from new homes, jobs and services.
- People in Medway have concerns about flood risk and the direct benefits to them and their family.

Using Shelter's unique insight tool,³ we identify distinct demographic groups and their attitudes, to tailor our communications. This yields a triage strategy:

- Compensate generously the 35 homeowners on the site, paying 150% of the value of their home for people who want to leave, or £100,000 plus expenses for those that want to stay.

- Contain die-hard opponents by addressing legitimate concerns.
- Channel the existing support of the majority and motivate them to vote.
- Convince waverers, by appealing to their aspirations.

Focusing on the tactics best suited to convincing waverers and win a referendum, we tested financial and non-financial incentives on local people in Medway:

- Cash incentives were very unpopular, being perceived as bribes. Even £5,000 per household had a strong negative effect on support. Investment opportunities were not well received either.
- Reductions in energy bills or council tax rebates were popular if perceived as compensation, not bribes. We therefore offer council tax rebates to nearby residents and an energy bill discount scheme throughout Medway.
- The most popular incentives were non-financial, particularly local jobs and locally affordable homes.

To secure long term support, we will work with local people to masterplan Stoke Harbour, and give them a stake in a Community Trust with its own income and assets.

- We will engage with existing residents in the surrounding area via focus groups, social media, events and ongoing working groups, to ensure genuine local input to the design of Stoke Harbour.
- An asset-owning Community Trust will be created, run by Stoke Harbour's residents themselves, with annual income growing into the millions as the city develops. This will support the community's own priorities, such as additional services or educational grants.

Engaging positively with local people has confirmed aspects of our original proposition, and transformed others. We believe the resulting plan offers an exciting and credible vision that can take a new generation of garden cities from concept to reality.

² YouGov for Shelter, 2014

³ Shelter Housing Insights for Communities, 2011



The background of the slide is a composite of three aerial photographs. The top half shows a wide, flat landscape with a winding river or road. The bottom left shows a coastal area with a large body of water, a bridge, and some industrial or commercial structures. The bottom right shows a dense urban area with many buildings and a large body of water. The text "PART I : FOUNDATIONS" is overlaid on a teal rectangular background in the center of the slide.

PART I : FOUNDATIONS

Before outlining our specific proposal for a garden city, we explore some of the most important questions that would face any garden city and we outline our economic and development models.

a) Demand and Consent

Like any development proposal, a new garden city must respond to effective demand for homes, jobs, infrastructure and services. As well as economic demand, there must be popular demand for a garden city to succeed. While popular demand can be a catalyst for local authority consent, the two are not synonymous.

Demand for homes

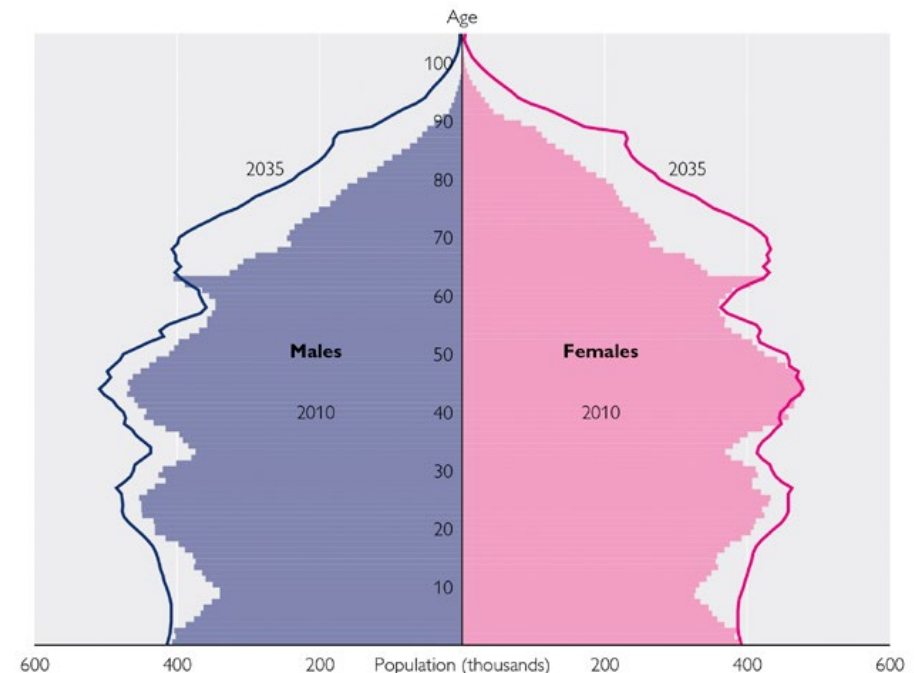
Evidence of the demand for new homes is everywhere – from the price of private homes to the length of waiting lists for affordable housing and the rising numbers of people turning to their council for help with housing. Precise estimates are impossible, but studies identify a need for between 230,000 and 300,000 homes per year in England – while supply is running at well under 150,000.

Of course, demand is not evenly spread across regions. House prices in London and the South East have risen higher and faster than anywhere else over the last two years.

As demographic profiles change, particularly as society ages rapidly, demand for homes suited to smaller households rises. There are already almost nine million people over the age of 65 in England,¹ and households headed by someone over 65 are projected to account for 59% of household growth.²

Ninety per cent of older people in need of care and support are in mainstream housing, rather than specialist housing, and 75% of these are owner occupiers. Coupled with a more affluent generation of retirees with greater aspirations for their retirement, these changes define a new market for homes that are age friendly, but a long way from the institutional environments that have become synonymous with older people's housing.³

Figure 1: Estimated and projected age structure of the UK population (thousands), mid-2010 and mid-2035. Source: Office for National Statistics



¹ 2011 Census - Population and Household Estimates for England and Wales, March 2011

² Household Interim Projections, 2011 to 2021, England, DCLG, 9 April 2013

³ Integrated by Design – housing and care for older people in the UK, current provision and emerging trends, PRP, April 2014

Economic rationale

Effective demand for homes is also closely related to access to employment. This means that the success of any garden city will depend largely on its ability to connect to wider regional, national and international economic geographies.

In England, this means being connected via transport links to the major employment centres – primarily London. But to be a sustainable and thriving place, a new garden city must also provide a critical mass of employment opportunities itself if it is to avoid becoming a ‘dormitory’ town for commuters.

In particular, where a new garden city is located in the same sub-region as existing large settlements the additional population and skills should make the area a more attractive destination for larger businesses and employers, and increase their potential output.

Popular support

The existence of economic demand alone is not sufficient to create a new garden city. The consent of local people and the active support of the local authority will also be needed.

A garden city needs the support of local people, and its promoters should seek to achieve this by demonstrating that it offers them real benefits, and that they have a real voice in its development and a stake in its success. The acid test of local consent is a referendum, which if won would provide a strong local mandate for the garden city to be built.

Evidence from the British Social Attitudes Survey 2013 showed that employment opportunities were by far the biggest factor in increasing support for new development, followed by hospitals, low cost homeowners, transport and schools.⁴

While everyone has a theoretical ‘price’ at which they become willing to accept a new development, there is academic evidence to show the framing of financial incentives is critical to their success.⁵ Framing incentives effectively is therefore imperative for any garden city if financial incentives are to be cost effective. Evidence suggests that the most effective compensation strategies to secure public support for garden cities are financial rewards framed as reductions to existing costs of living, such as council tax rebates or energy bills.⁶

Those whose homes are directly affected deserve to be well compensated, and where possible should be given choices as to whether they want to leave, in which case a generous cash payment should be available, or whether they want to stay and be part of the garden city, in which case a generous cash payment to compensate for the short-term loss in house price and in-kind compensation for inconvenience during construction should be offered.

A referendum would demonstrate a clear mandate from local residents for the construction of the new garden city, outside of the normal plan making process. The design and planning process enabled by the referendum must be transparent and participatory in order to maintain the support of local people, and a co-production strategy for engaging local people in the design of the garden city should be produced during pre-planning.

⁴ DCLG, *Public Attitudes to New House Building: Findings from the 2013 British Social Attitudes Survey, 2014*

⁵ *We present some of this evidence in Part IV and Appendix II*

⁶ *Polling conducted by the Wolfson Economics Prize by Populus, May 2014*



Local authority consent

Local authorities will have many reasons to support the construction of a new garden city in their area. Building a new garden city will increase the economic viability of the whole area, exceed their 5 year land supply and bring forward and fund some of their future planned capital expenditure. However, they will also have concerns.

The promoter of a new garden city should secure the local authority's consent for a local referendum to be held, by showing that there is enough support for a referendum to be won. The legitimate concerns of the local authority should be reflected in the promoter's initial plans before a referendum is held.

Agreement must be achieved in advance between the local authority and the promoter that winning the referendum would trigger a solid planning outcome, so as to avoid further doubt about whether the garden city will be built. This then allows confidence and time for the promoter to co-produce the final masterplan with residents, investors and partners before final approval from the local authority.

b) Development Model

For a garden city to be viable, land must be brought into the development phase without prohibitive upfront cost, so that the additional value created by development can be utilised to pay for social and transport infrastructure as well as returns for investors.

The economic principle underpinning our preferred garden city model is simple: the uplift in land value that comes from the creation of successful places should support the investment required to create it.

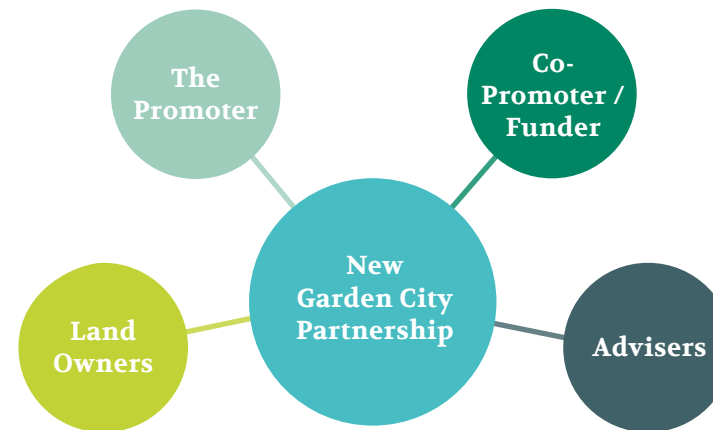
Instead of relying upon coercion or donation, our preferred model seeks to capture land value voluntarily through a partnership model, in which landowners will be able to realise strong returns over the medium to long term by investing their assets in a development partnership, under the principle of co-investment.

The development partnership

The development partnership would take the form of a Limited Liability Partnership (LLP), which allows flexibility with profit sharing and other terms of the contract between the partners in the Partnership Agreement.

New Garden City Investment Model⁷

Promotion Phase

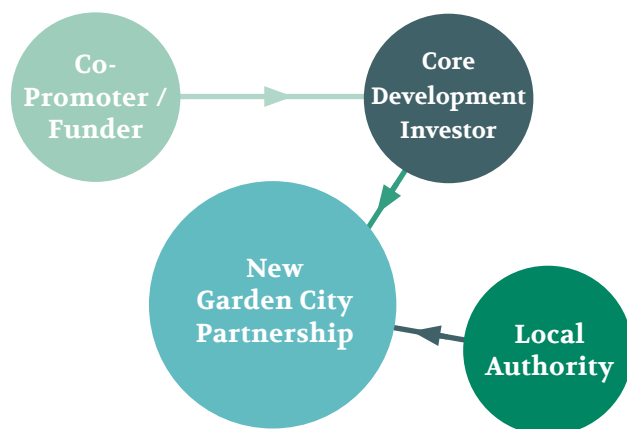


Potential investors are real estate opportunity funds, speculative land buyers and promoters.

⁷ "Building Sustainable Urbanism, A Strategic Land Investment Model", The Prince's Foundation for the Built Environment, 2010, Beacon Press

New Garden City Investment Model

Infrastructure and Construction Phase



Steady State Land Management Phase

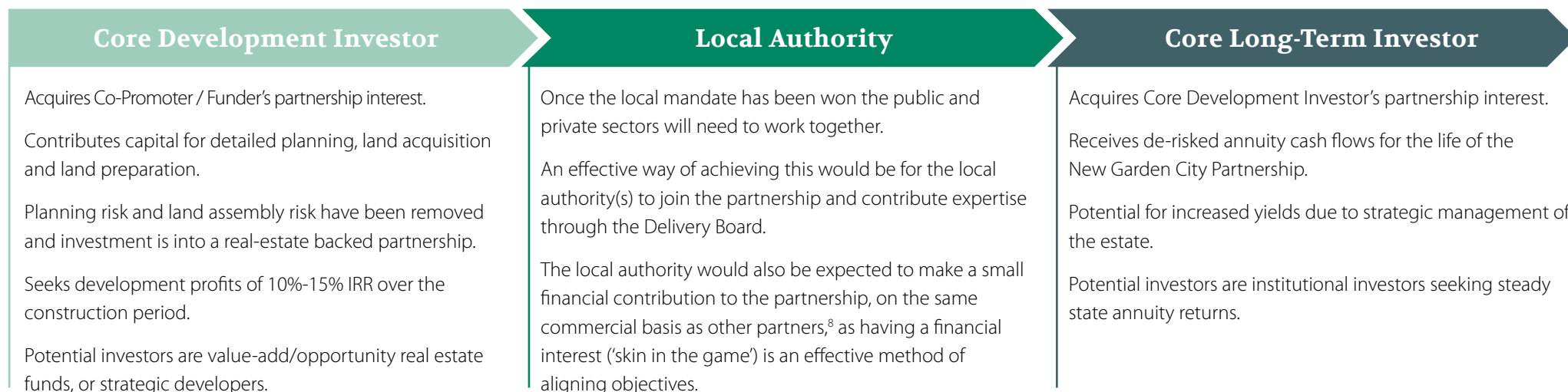
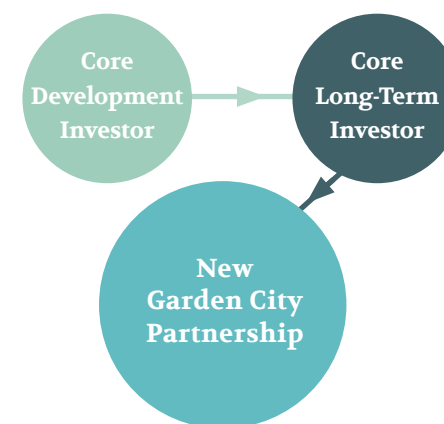


Figure 2: New garden city investment model

⁸ This is normal in public/private projects such as NHS LIFT, Building Schools for the Future and the proposed PF2 models.

Major landowners as co-investors

Co-investment means that landowners contribute land as equity into a partnership, at an agreed valuation expressed as a multiple of existing use value. As co-investors in the partnership, landowners would retain control over the development, take on some of the risk (which can exclude planning risk), and take a proportion of the development gain. Co-investor landowners would negotiate the returns profile with the other members of the partnership through either long term annuity income or medium term capital gain.

Co-investment contrasts with the speculative sale strategy adopted by many land owners, under which land is sold 'on spec' to developers (either directly or under option agreements) before planning permission is granted. The land price under the speculative strategy therefore reflects both the hope value of the land and the significant risks that the developer takes in acquiring it.⁹

The speculative strategy suits landowners in many circumstances, as it allows them to pass risk to the developer and gives them a clear, upfront cash price for their land. However, for precisely the same reasons it also delivers a lower share of development value to

the landowner. By contrast, co-investment shares a greater degree of both risk and reward between the landowner and other investors.

While this may not appeal to all holders of land assets, it is a rational business strategy for landowners to adopt under several conditions (which are not mutually exclusive):

1. Where the landowner has a general strategy of long term asset ownership, and/or commitments to specific locations.

This is likely to be the case for endowed landowners with legacy commitments to certain places or asset types.

2. Where the landowner requires long term income streams to match liabilities such as pension annuities.

This typically applies to pension funds, but also to endowment funds set up to provide long term income for beneficiaries.

3. Where a landowner lacks the capital or debt to fund development, but does not want to forego the development gain.

This may well apply to smaller landowners.

4. Where a major development cannot proceed without the involvement of several landowners' assets, and other development options are far less attractive.

In these circumstances, the hope value of each landowner's holdings alone may be minimal, as the potential can only be realised through the marriage value of them all.

5. Where a landowner controls sufficient land to proceed with a major development alone, but where the net present value of a long term investment is higher than the speculative sale price.

This is highly likely to apply to new garden cities, where returns will rise over time as risk decreases.

6. Where political and policy considerations make it unlikely that a landowner will be able to realise maximum value from a site acting alone, but may be able to do so in partnership with others.

This may apply to places where a history of undesirable or poorly delivered development has left local communities and public authorities mistrustful of existing developers and landowners.

⁹ Callcutt Review of Housebuilding Delivery, DCLG, 2007

Conditions 1 to 3 refer to the nature and business strategy of the landowner; it should be easier to make the case for co-investment to these landowners. Conditions 4 to 6 refer to the location of the land and its suitability for development: under these conditions, a rational landowner of any type will regard hope value as relatively low, as there is little chance of the only high value scheme being delivered without the co-investment of land assets.

Many, if not all, of these conditions may apply to the most appropriate sites for new garden cities. A garden city development is particularly suited to a co-investment strategy, because the optimum value of the development is only realised over time and at scale. A single development of, say, 100 homes in an isolated rural location is unlikely to yield the best returns to the landowner, whereas the creation of an entire new place offers the potential to turn rural and brownfield land holdings into far higher value residential assets once the necessary infrastructure has been supplied.



Smaller landowners

With the bulk of the land secured, smaller landowners and homeowners will be offered the choice of co-investing themselves, or taking an upfront payment of above existing use value. Both options will give property owners substantially more than the land would otherwise be worth, with additional incentives for swift settlement. The partnership may also consider acquiring land via options

subject to planning permission from the smallest landowners without it impacting on viability.

Each of these options will be backed by the credible threat of losing land value via planning designation of part or all of their land as permanent Local Green Space within the garden city. As a last resort, where land critical to the scheme cannot be acquired voluntarily, Compulsory Purchase Orders¹⁰ should be used. Having the local authority as part of the partnership would help with this process, or failing this, the Homes and Communities Agency (HCA) could assist.

Existing homeowners

Due consideration should be given to retaining homes currently in the new settlement, as existing buildings and residents will help to provide character and links to the settlement's history.

Homeowners should be given a choice of selling their property at above existing market value, or remaining in their home and receiving a substantial compensatory payment, recognising a potential short term loss in value and also disruption during the construction period.

Community ownership

Finally, the community of garden city residents should be treated as a key stakeholder. One of the key features of the original garden city movement was its commitment to community ownership of assets, to retain value added within the garden city itself.¹¹ A century after its founding, Letchworth Garden City's Heritage Foundation today owns some £127m of assets, giving it a rental income of £7.5m per year.¹² Progressive transfer of assets to a community trust, once their investment cost has been paid down, will endow the garden city with a portfolio of income yielding property to support community benefit in perpetuity.

¹⁰ Discussed in more detail at Appendix I

¹¹ *21st Century Garden Cities of To-morrow: a manifesto*, Yves Cabannes, Philip Ross, NGCM, 2014

¹² *Letchworth Garden city Heritage Foundation, 2013 Corporate Plan*

c) Delivery Model

Key Principles of a New Garden City Growth Plan

The following principles should form the basis of the growth plan for a privately funded garden city.

1. Confidence in the planning of the new garden city's financing and construction is critical.

The new garden city partnership and its advisers should talk to all stakeholders to agree an investment waterfall (see Business Plan, below). This is a phased plan for the release of capital based on a number of contingencies, such that the required funding and public sector support is in place prior to the granting of planning permission.

2. Form the Community Trust during the planning process so that it is visible and active to existing residents and stakeholders from day one.

The Community Trust is an important and unique pull factor for the settlement and will help foster community spirit and create the character of the new city during its formative years.

3. Utilise existing demand for social infrastructure and existing transport infrastructure to start building.

4. Prioritise building the first social infrastructure and use small amounts of targeted borrowing to achieve this without taking on large amounts of risk.

Providing this social infrastructure will also show follow-through on the measures that people voted for in the referendum.

5. Let self-build give the settlement a kick-start.

Don't restrain self-builders (other than within the master-plan). Accelerate and meet demand by allocating land, using a light touch approach to planning control and facilitating a range of self-build models.

6. Where transport infrastructure is scaleable prioritise any amounts that create a step change in connectivity.

The larger projects may need to wait until a little later in the settlement's development, in order to balance the desire to create the best conditions for growth and the short run financial implications of pre-loading infrastructure costs, but these projects should be undertaken as soon as the economics are feasible.

7. The settlement's character will come from its urban core. Start the development of the areas that will provide the new city with its identity as soon as possible.

Including the town centre and any special/unique areas, such as waterfront or other topological features.

8. Maximise market absorption by segmenting construction across a range of different tenures, designs and price points.

Build starter homes for sale, larger family homes, social rented homes and intermediate options. Below-average sale prices will attract early buyers, while alternative provision such as self-build plots and house boat moorings will bring in pioneers.

9. Encourage competition and innovation to get to scale quickly.

Garden cities need to grow quickly, in order to create the land value uplift to fund infrastructure, and to reach a 'critical mass' of population to sustain services and create economic opportunity. Use structured incentives designed to foster competition between suppliers on volume, build out rate and price, rather than targeting margins.

10. Utilise offsite manufacturing (see Part III, Section (b)).

There is a real question whether the skills and labour are available in the UK supply chain to build using traditional construction techniques at c.1,000 units a year on one site, without a large increase in construction cost.

11. Agree milestones, continuously monitor market absorption and adjust strategy accordingly.

The first milestone should be late enough so that a delaying of future phases would not be fatal to existence, but early enough that further construction and investment is not committed without sufficient demand.

Business plan

It is unlikely that the partnership alone will fund the development, so it should bring in external capital. This could be either through setting up sub-partnerships to which they contribute land and the developer/investor contributes cash and expertise, or via the sale of leaseholds to developers/investors with a mixture of upfront premiums and profit sharing rent clauses.

Using a business plan that allows individual investors to develop specific parcels of land or buildings (according to the masterplan) means that developers/investors can sign up to opportunities that correspond best with their risk profiles and expertise.¹³

The effect of this is twofold: first, it will open up development/investment opportunities to the greatest competition, and second, developers/investors should be willing to take returns commensurate with their risk profiles (i.e. without additional risk premiums), thus retaining value within the partnership and the new garden city.

Whichever method is chosen, the partnership will look to share in both the short-term profits of developers constructing and selling, and the long term profits of investors constructing and holding for rental income.

From a strategic/control perspective, the setting up of sub-partnerships offers the development partners more control. However, the governance requirements could become unwieldy. Sufficient retention of control should also be achievable via the granting of leaseholds and by charging a head rent and service charge for the estate management.

All construction will take place according to the agreed masterplan with house builders required to adhere to material, form and quality guidelines decided in conjunction with the community and the local authority during the planning stage.

¹³ We have discussed this model with Legal & General and it is clear that a 'parcelling approach' would have a greater chance of attracting investment for a development on this scale, as it is unlikely that one partner would be willing to be the sole funder due to the risk profile.



Investment waterfall – creating the confidence to invest

The partnership needs to create an environment whereby investors are confident enough in the outlook for their garden city to commit their capital.

In order to achieve this confidence, during the pre-planning stage the partnership will enter into discussions with all relevant stakeholders. For example, the partnership would negotiate with the Department for Education (DfE) to agree that they would pre-let a primary school for every 2,000 homes that are constructed and with developers that, once a regional foodstore has committed to open, they will start constructing 500 homes.

The aim is to then have a series of agreements with public sector bodies, developers and construction partners (including the offsite manufacture provider), tied to agreed construction and population/market absorption

milestones that contractually require them to invest or occupy a building once these milestones have been met.

These would be agreements in principle prior to the result of the referendum, and then the partnership would work with all parties to make these agreed contracts during the post-referendum planning stage. This investment waterfall should allow the new garden city's growth to be well-planned but will also build in natural safeguards to committing capital before the city is ready for it, and therefore help to protect investors and the public sector from over-reaching if market absorption is lower than projected.

d) Transport Infrastructure Financing

Constructing and financing transport infrastructure brings its own set of challenges, and therefore delivering this requires a specific set of expertise. The transport solutions are likely to run across local authority boundaries and involve a number of public sector stakeholders such as Network Rail and the Highways Agency, as well as Infrastructure UK.

To recognise the additional stakeholders, expertise and financing requirements, a separate entity would be set up, which should also allow the project risk for these assets to be ring-fenced. We consider that a suitable form for this entity would be a further Limited Liability Partnership ("Infrastructure Partnership"); however, a company could also be used.

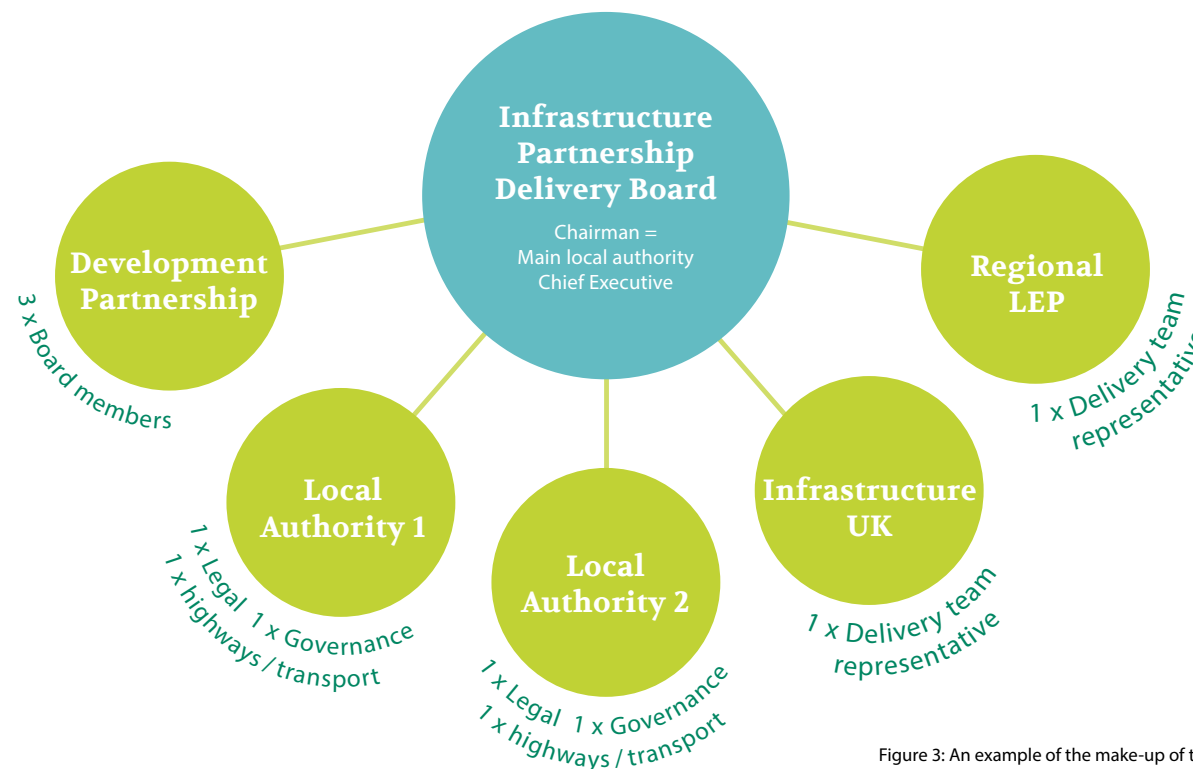


Figure 3: An example of the make-up of the Delivery Board

Infrastructure Partnership should be a joint venture between the new Garden City Partnership and the affected local authorities, so that all the important decision makers are brought together in order to get buy-in from all parties at

the outset and for there to be an agreed common set of objectives for Infrastructure Partnership. Infrastructure Partnership's Delivery Board should reflect the partnership's members, but also the wider relationships/experience

required for success. Network Rail and the Highways Agency, as project specific stakeholders with national agendas, would be asked to contribute to strategy/planning as required.

The main local authority's Council Leader will be invited to the role of Chairman, recognising that the bulk of the transport projects will take place within their authority's boundaries. A representative from Infrastructure UK's delivery team will bring valuable major projects experience and the LEP Chairman will be invited to recognise the wider private sector interface.

The local authorities would also be asked to provide a small amount of initial equity to help align financial interests.

The development partnership should provide the bulk of the equity, but due to the high cost of transport infrastructure (often estimated as £200m+), it is expected that most of the construction costs will be funded by debt.

The development partnership therefore needs to consider what assets from the garden city it should contribute in order to produce cash flows to meet the interest servicing requirements of the debt and to repay principal. Given the long-term nature of transport infrastructure assets, a repayment period of 60-75 years is appropriate. Where the business model for the development partnership involves selling small parcels of land to developers/investors, then part of the sale price should include a transport infrastructure levy, which can be contributed to Infrastructure Partnership.

One recognised method for this is for Infrastructure Partnership, in conjunction with the main local authority, to request of HM Treasury that the new garden city is made an enterprise zone prior to the commencement of construction, and that the main local authority be permitted to keep all business rates for a period of 35 years.¹⁴

Detailed projections and analysis would need to be done to demonstrate, but there is a strong argument that the very large fiscal stimulus provided through construction would produce mainly net national growth (albeit that there would inevitably be some amount of relocation) and therefore the local retention of business rates would, to a large extent, not result in a reduction in Treasury's income.

User tolling is another method that aligns economic growth with paying for the infrastructure. While potentially unpopular if it is disproportionate, methods such as tolling, car-parking fees and very small surcharges on rail tickets are potentially effective ways of using the assets to generate revenue and fund themselves.

¹⁴ We also feel that there is a strong case to be made for local retention of SDLT receipts, as the significant increase in housing supply creates new transactions based on newly created land value, which by its very nature should be net national. Again, a persuasive analysis would need to be undertaken at the time and presented to Treasury with the enterprise zone request. However, despite the very strong prima facie case in the context of a new garden city we have assumed that this will be unsuccessful, and have modelled accordingly in respect of Stoke Harbour

When deciding what debt would be appropriate to finance Infrastructure Partnership, we need to consider the following factors based on the project's risk profile:

a. Cost of debt
(with/without guarantee, index-linking?)

b. Flexibility of debt
(are there penalties for early repayment?)

c. Length of term
(will refinancing be required?)

d. How it matches the assets' projected useful life and Infrastructure Partnership's revenue streams

The normal debt financing options and their characteristics are as follows:

a. Bond financing (lower cost, long term financing available, but relatively inflexible high cost of early exit)

b. Institutional financing (low cost, long term but high break costs)

c. Bank loans (higher cost, shorter term but flexible and early repayment at lower cost)

The choice of preferred debt solution is therefore complex. The cheapest, longest forms of debt would normally be the most attractive. However, depending on the profile of expenditure, it may be that some flexibility is welcome to allow for short term borrowing fluctuations and early repayment of capital, which will save interest costs in the long term.

In order to minimise the cost of borrowing, HM Treasury will be asked to provide a legal guarantee for the payment of interest and principal on any bonds issued or institutional borrowing by Infrastructure Partnership.¹⁵ In order for HM Treasury to be able to provide this guarantee without breaching EU State Aid rules it will charge an annual fee to Infrastructure Partnership.

To determine this, Infrastructure UK would apply a shadow credit rating to Infrastructure Partnership.¹⁵ This will be helped by Infrastructure UK's seat on the Delivery Board which should allow it to make an informed decision on project risk and apply the appropriate shadow credit rating.¹⁶

HM Treasury would prefer not to recognise the project as a contingent liability on its balance sheet. To achieve this the guaranteed debt should therefore not exceed 49% of the total debt. Infrastructure Partnership should discuss this with HM Treasury to

see how important this is to them, and therefore whether there is flexibility, particularly as it may be difficult to avoid this ratio being breached during periods when bank debt is being repaid.

Infrastructure Partnership should undertake periodic reviews of the financing structure to ensure it is optimal. As an example, any Government guarantee would last for the whole term of the bonds but with the expectation that when the bedding in period is over and there is a history of rental income then the guarantee might not be needed, in which case Infrastructure Partnership would be able to save the premium.

¹⁵ Under the UK Guarantees scheme administered by Infrastructure UK

¹⁶ The credit rating will take into account factors such as the projected debt: equity ratio in Infrastructure Partnership, the strength of construction support package offered (for example, if there are unexpected construction difficulties), the underlying covenant strength of the borrowers, whether parent guarantees are available, whether any losses or penalties are capped, whether inflation risk is properly hedged in the cash flows and the level of debt cover ratios.

e) Land Search

Finding the most appropriate site for a garden city begins by identifying areas with the ability to accommodate 25,000-50,000 dwellings and all the additional uses necessary for a thriving settlement (meaning around up to 2,000 hectares of developable land), while meeting the economic, environmental and social criteria considered essential for the success of such a development:

Economic

High level of housing demand relative to existing development pipeline

Proximity to economic activity and sources of employment

Ability to be linked to the major road network and public transport links

Land values low enough to generate uplift

Environmental

Outside sensitive or protected areas

Manageable levels of flood risk

Attractive areas with natural appeal

Social

Currently sparsely populated

Existing need for investment

These criteria should then be applied to the national, regional and local context in order to produce a shortlist of potential suitable garden city sites.

Identifying potential sites

Using these criteria the project team conducted a national search for potential sites based on:

Future housing demand: Figure 4 shows projections for household growth to 2021. The South East and London are likely to experience the highest level of new demand for homes over the next decade.

Environmental protections: Figure 5 shows all areas with protections that prevent development, which can be excluded from our site search.

Connectivity: Figure 6 shows major transport infrastructure on a national level. Figure 7 identifies potential sites within the South East taking into account transport links and areas that are unsuitable due to environmental protection or existing urbanisation. These sites are our short-list for development.

Proximity to centres of employment: closely linked to demand for homes. We show travel times to the major employment centre of the South East, London, in Figure 8. Potential connectivity can be seen by sites that are close geographically to centres of employment, but not currently well connected.

Viability: Figure 9 shows land values. Our model depends on land value uplift, so the sites with the lowest land values are most suitable.

Figure 4: Household Interim Projections, 2011-2021, England:
DCLG, 9 April 2013

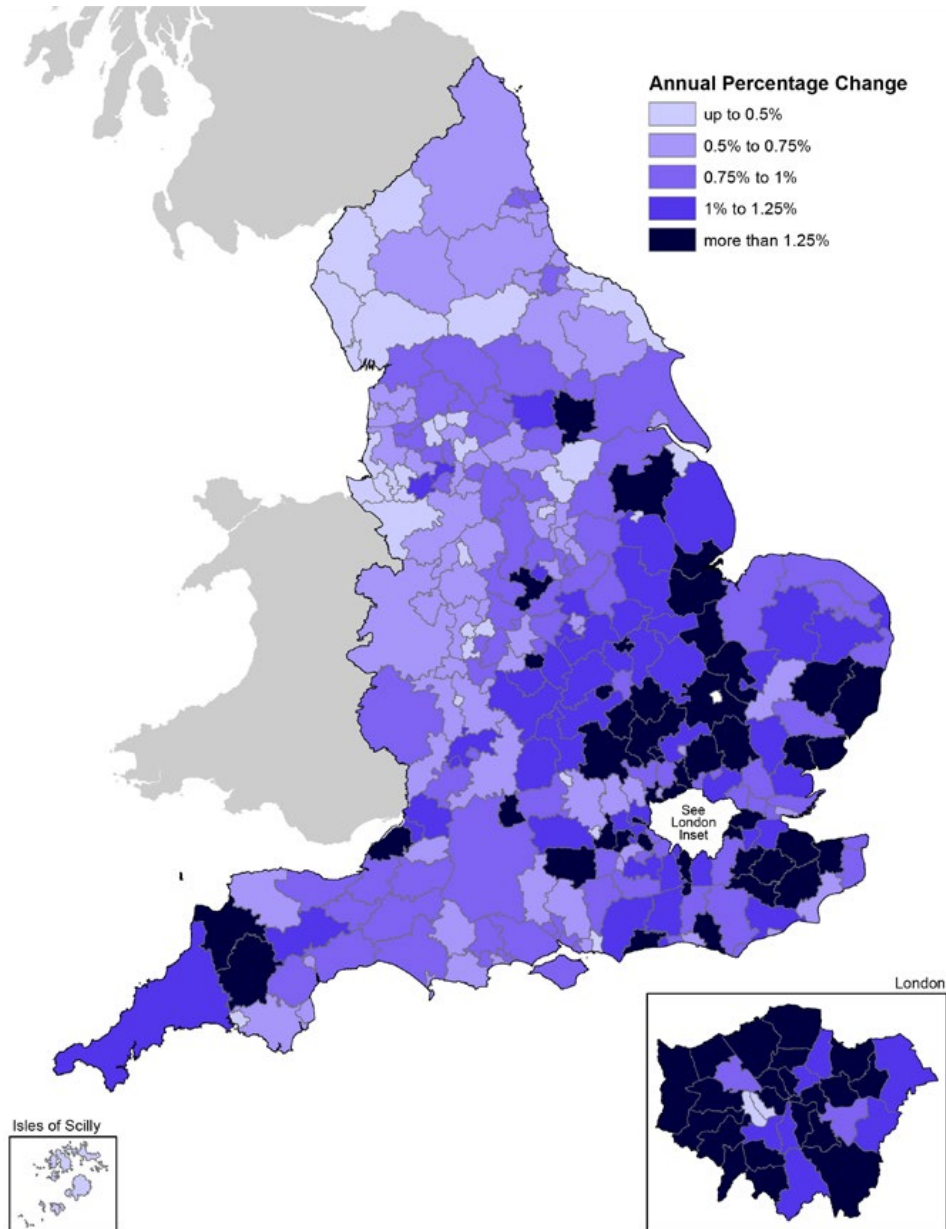


Figure 5: Environmental designations

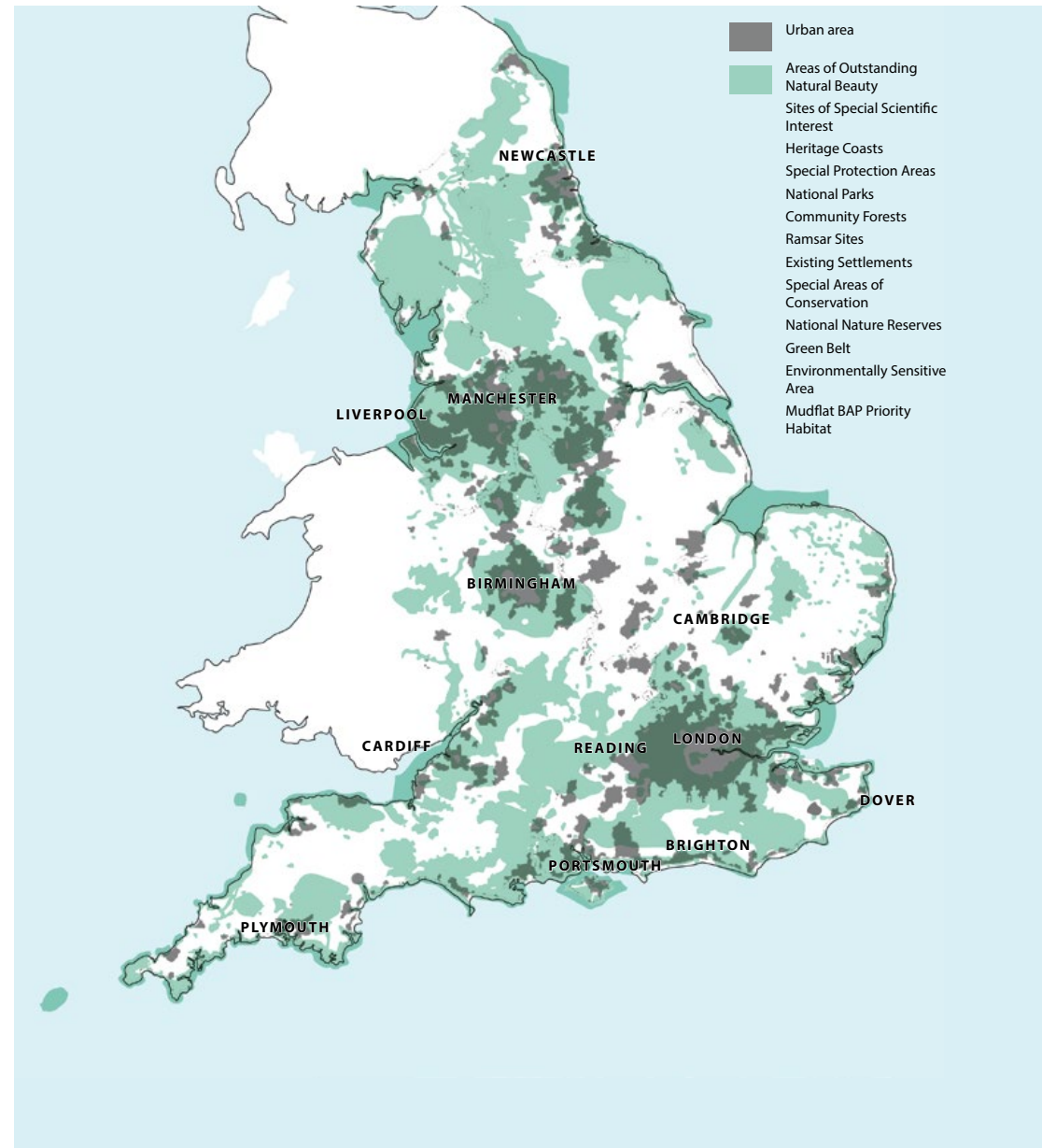


Figure 6: National major transport links



Figure 7: Transport links, environmental protections and potential sites, South East

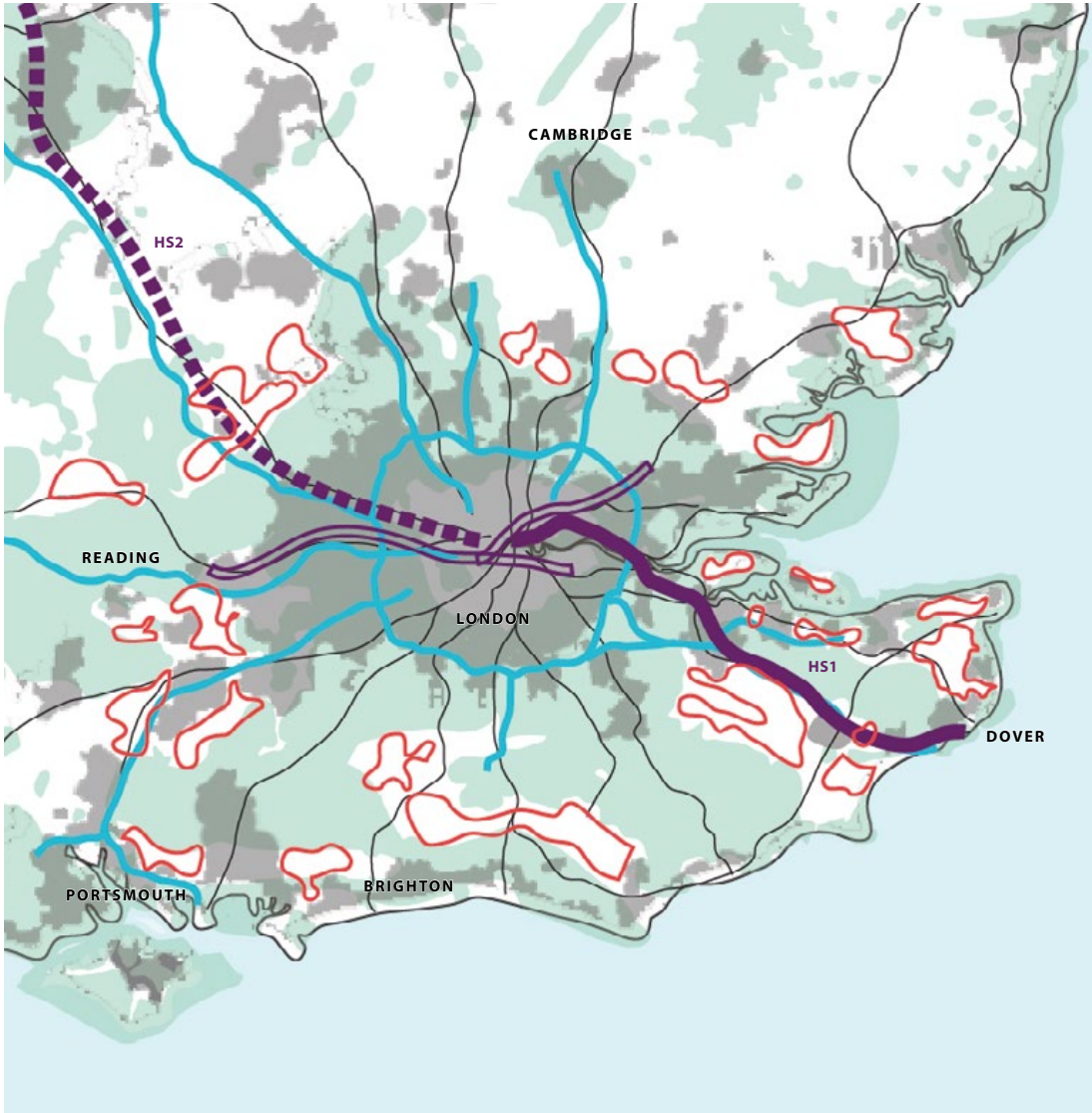


Figure 8: Travel times to central London and Sites, South East

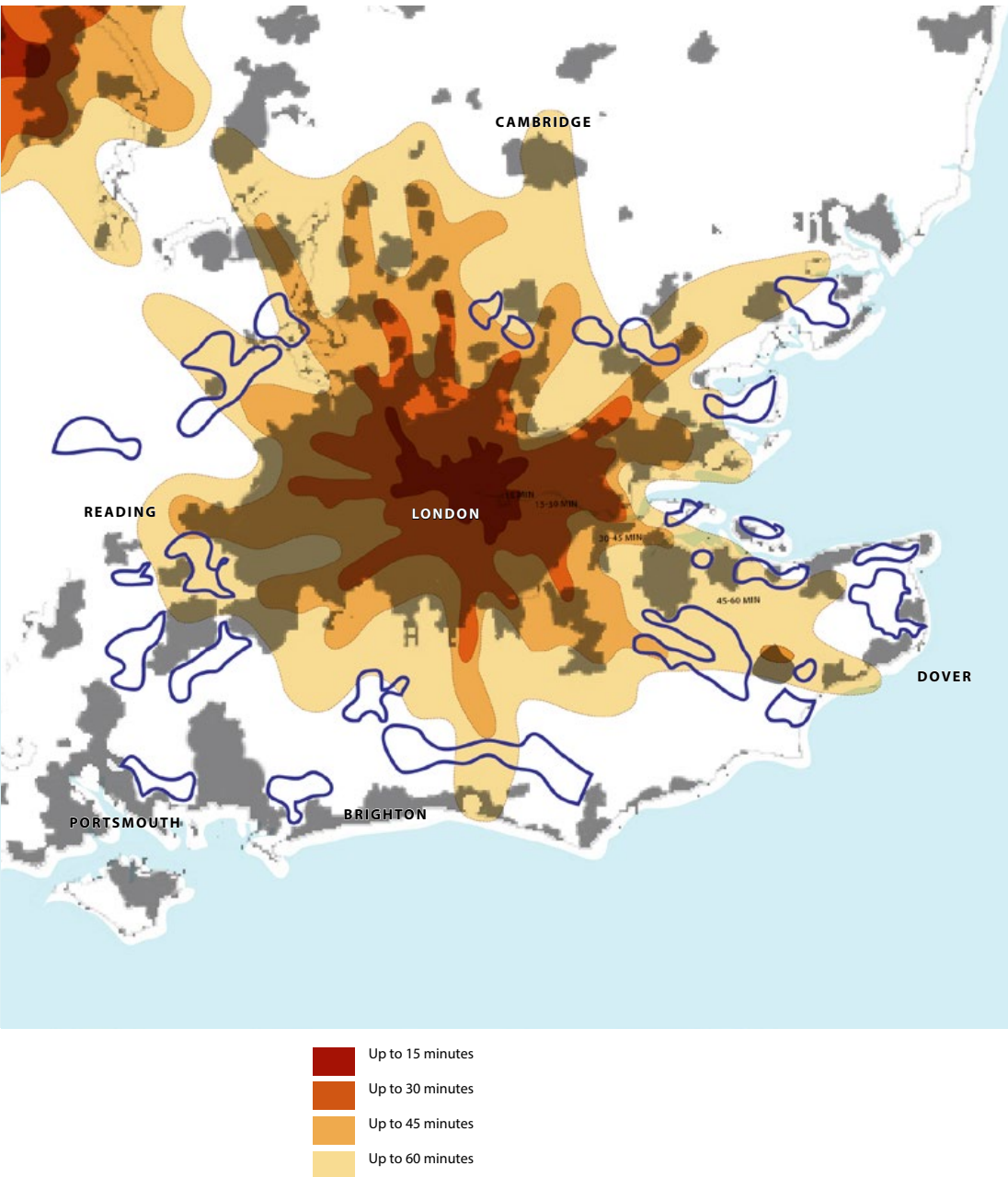
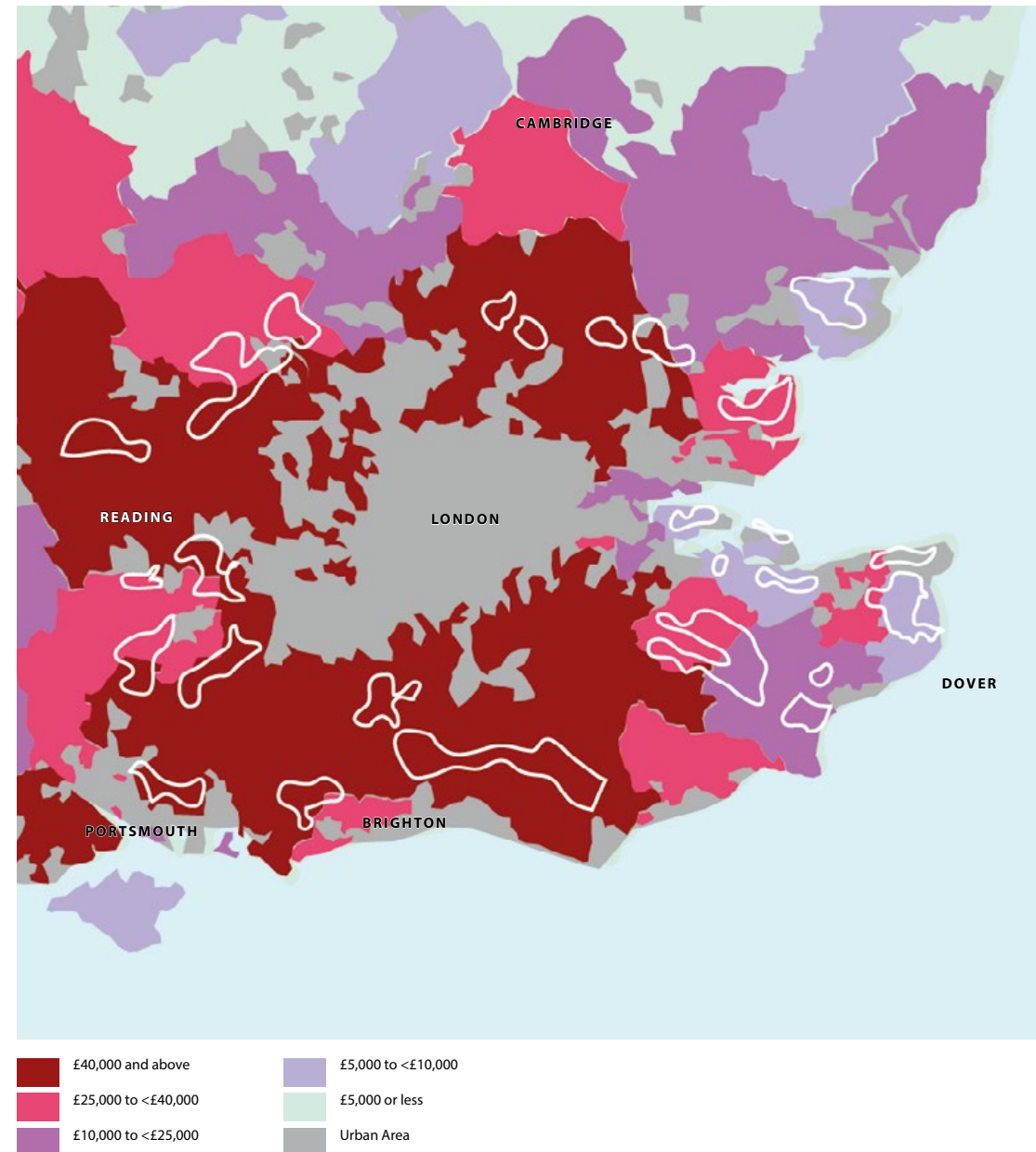


Figure 9: Land values (unserviced land, greenfield, £ per plot blended) and potential sites, South East





PART II : VISION

In Part I, we have explored the principles and challenges of designing a new garden city and begun to sketch a model to overcome those challenges. In the next three Parts, we propose a specific garden city taking account of those principles and challenges.

a) Selecting Our Site

From the mapping exercises conducted, it was clear that there were several potential sites in the South East. The Hoo Peninsula in Kent was geographically among the closest suitable sites to the centre of London, met the criteria of proximity to rail and road infrastructure, was outside of planning restrictions and had low existing land values.

The Thames Gateway

The Thames Gateway sub-region has long been identified as a location for regeneration and growth and will see continued investment in infrastructure, employment and homes for decades to come. Existing developments and commitment to the sub-region include:

Strengthening links to London via commuter rail and HS1 to Stratford and Kings Cross, and to the continent via Eurostar stations at Ashford and Ebbsfleet.

A government commitment to a Lower Thames Crossing by road, with two options now shortlisted by government including one linking in to the M2

Other large scale developments including Ebbsfleet Garden City and Paramount Theme Park.



Figure 10: South East Infrastructure links

The Hoo Peninsula

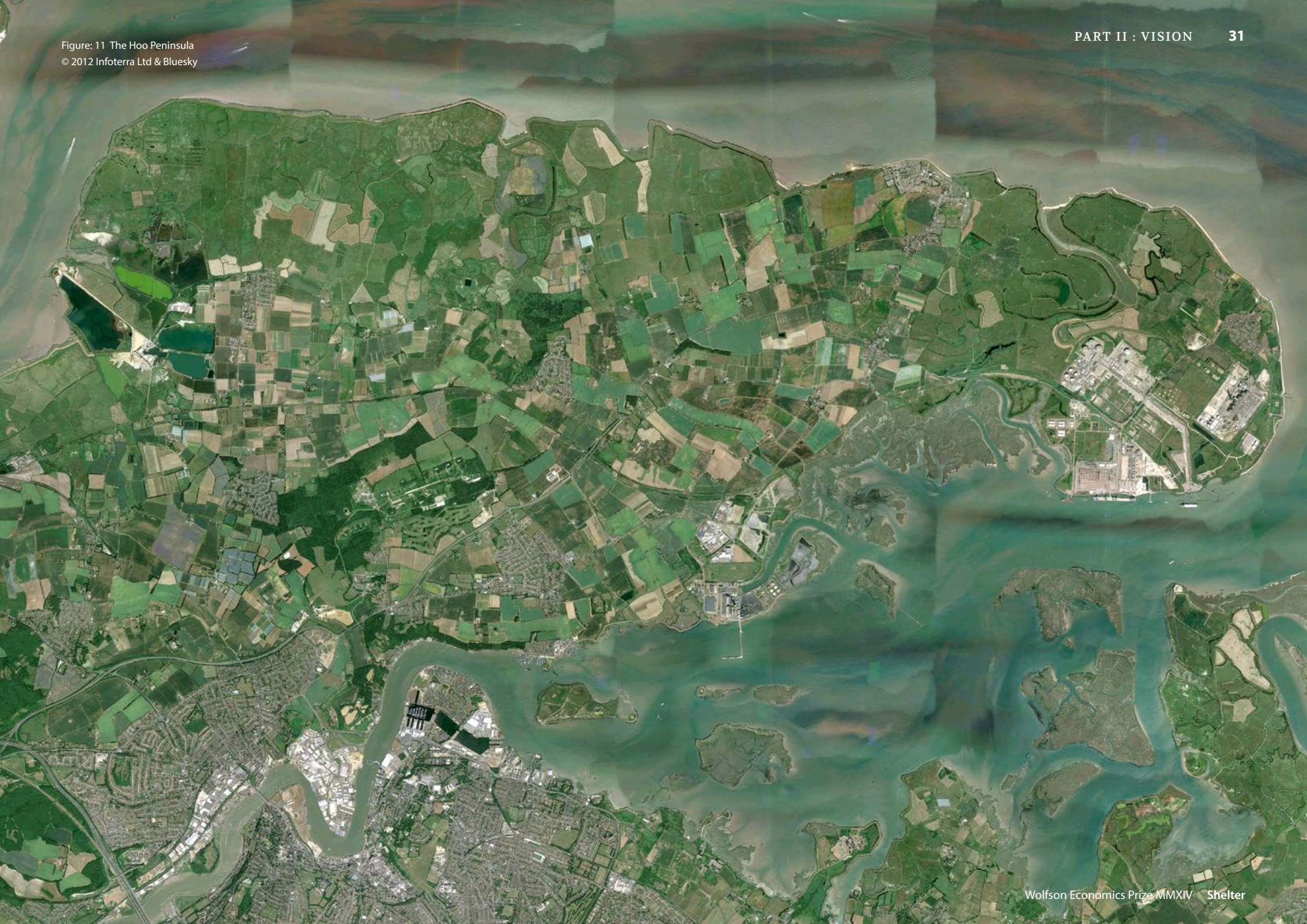
The Hoo Peninsula lies between the Thames and Medway estuaries, with a backbone of wooded hills reaching down as a spur from the North Downs. The land is largely agricultural, but also retains a strong history of industry and national defence. It is part of Medway Council – the unitary authority covering Strood, Rochester, Gillingham, Chatham and Rainham.

The criteria for site location discussed in Part I reveal the Hoo Peninsula to be a strong potential location for a garden city.

Table 1: Assessment of the Hoo Peninsula against our land search criteria

Criteria	Initial assessment of Hoo Peninsula
Economic	
Housing demand relative to pipeline	Regional demand: very high Local demand: moderately high
Proximity to economic and employment centres	Close to Medway, Dartford, Gravesend, Ebbsfleet Garden City, Accessible from Kent towns, London, Essex
Proximity to transport network	Road: close to M2, A2, planned new Thames crossing Rail: freight line only, but close to HS1 Kings Cross- Ebbsfleet- Ashford-Paris, Mainline: London-Gravesend-Medway
Land values low enough to generate uplift	Agricultural land values are low for the South East (£5,000 to £10,000)
Environmental	
Sensitive or protected areas	Adjacent to offshore areas that are heavily protected, and adjacent to some protected areas onshore
Manageable flood risk	Small areas of flood risk
Social	
Currently sparsely populated	Very low: Hoo = 1.8 people per hectare (London = 52, South East = 4.5, Medway = 13.7) ¹⁷
Existing need for investment	High: poor service provision, large areas of brownfield land

¹⁷ Census 2011, <http://www.ukcensusdata.com>



It is currently poorly served by transport into London, yet is close enough to well-connected zones for relatively easy upgrading. While much of the Hoo is rural, it also contains extensive brownfield and industrial land, including three power stations (one operating and two closed), and is marred by two lines of electricity pylons reaching across it.

An initial study of house price values, land values and rental yield maps suggested that the Hoo would be able to generate the required land value uplift to make the business model viable.

Furthermore, it has an existing freight railway that offers the potential for creating a good public transport link to London, and via Ebbsfleet to the international high speed rail network (HS1).

Figure 12: Images of the Hoo Peninsula





The Stoke Harbour site

Within the Hoo, we identified the best site for the first settlement of a garden city as the area north of the Kingsnorth industrial estate and power station, and south of the A228. This area is currently a mixture of industrial and agricultural land, bounded by the coast and the main road. The site is bisected by the railway and two lines of electricity pylons. It has many benefits, including:

Proximity to the A228 highway and the existing rail line

Significant brownfield at the recently demolished Kingsnorth power station. Grain power station is also a significant brownfield site opportunity.

Employment opportunity from the existing Damhead Creek power station, Kingsnorth Industrial Estate and proposed new Damhead Creek II power station, all adjacent to our proposed site.

Exclusion from high-value ecological areas such as protected SSSI and Ramsar sites, and from areas of Local Landscape Importance.

Low flooding risk, thanks to the elevated ridge and attenuating effects of surrounding wetlands.

Predominance of lower-value agricultural land, providing better land value uplift through development.

Extremely low population density, meaning less impact on existing local communities.

Stoke Harbour Garden City

Medway is already a conjunction of five mid sized towns that together make a city: our proposal for the Hoo Peninsula takes this concept further by planning Stoke Harbour Garden City with future urban extensions and orbital settlements to the East and West, an aggregate of 60,000 new homes for around 144,000 people.

For the purposes of this submission we have modelled the first city of 15,000 homes at Stoke Harbour in detail. The transport infrastructure upgrades we propose will enable Stoke Harbour to grow to 25,000 homes, and will also support towns at Higham and Grain.¹⁸ We have provisionally included the proposed development of 5,000 homes at Lodge Hill in our vision as well, although this is currently subject to planning, and is not critical to our proposal. Incorporation of Lodge Hill would be subject to the outcome of the current planning process.

¹⁸ As shown in Figure 19, page 47

Figure 13: Landscape and environmental sensitivity

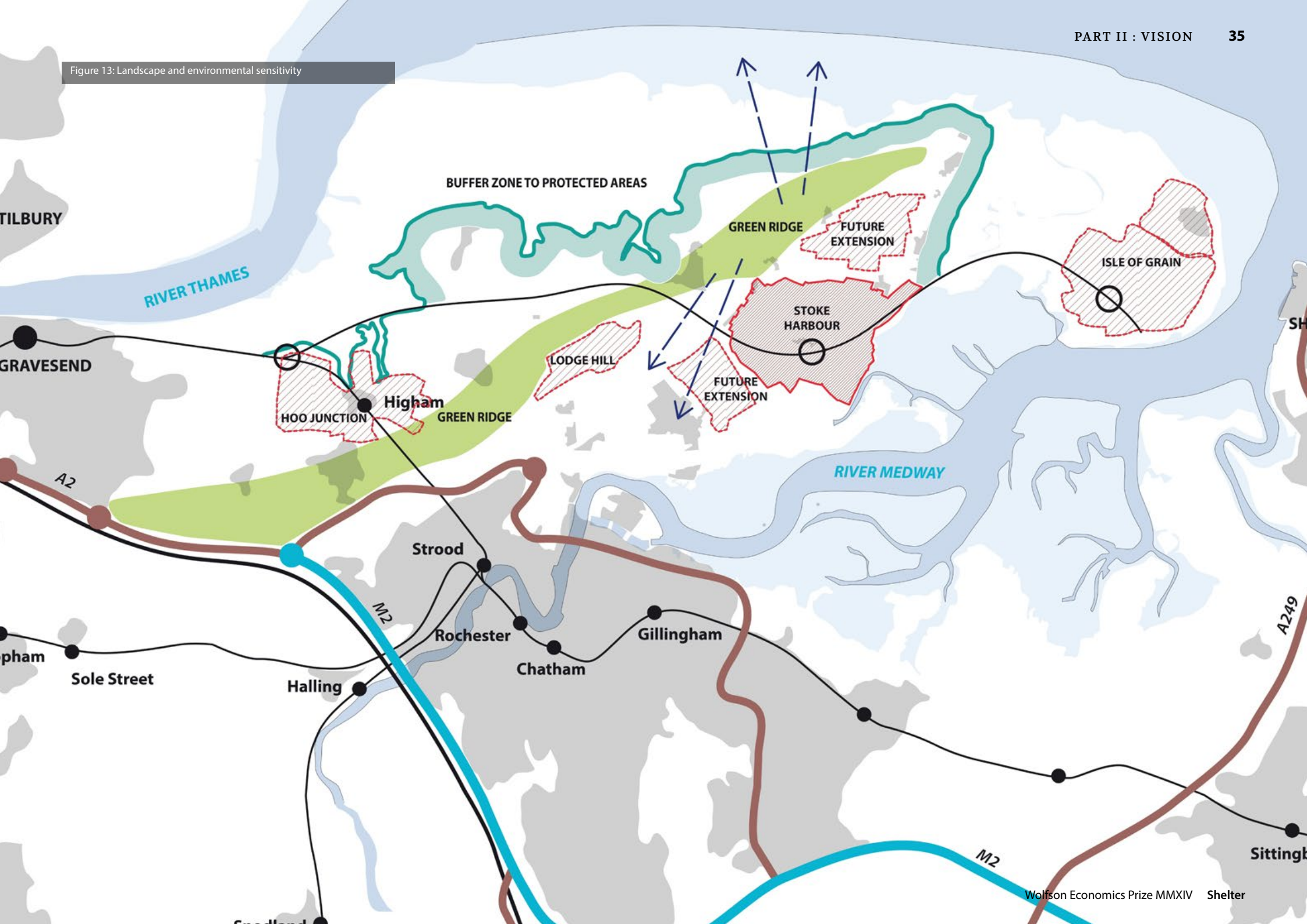
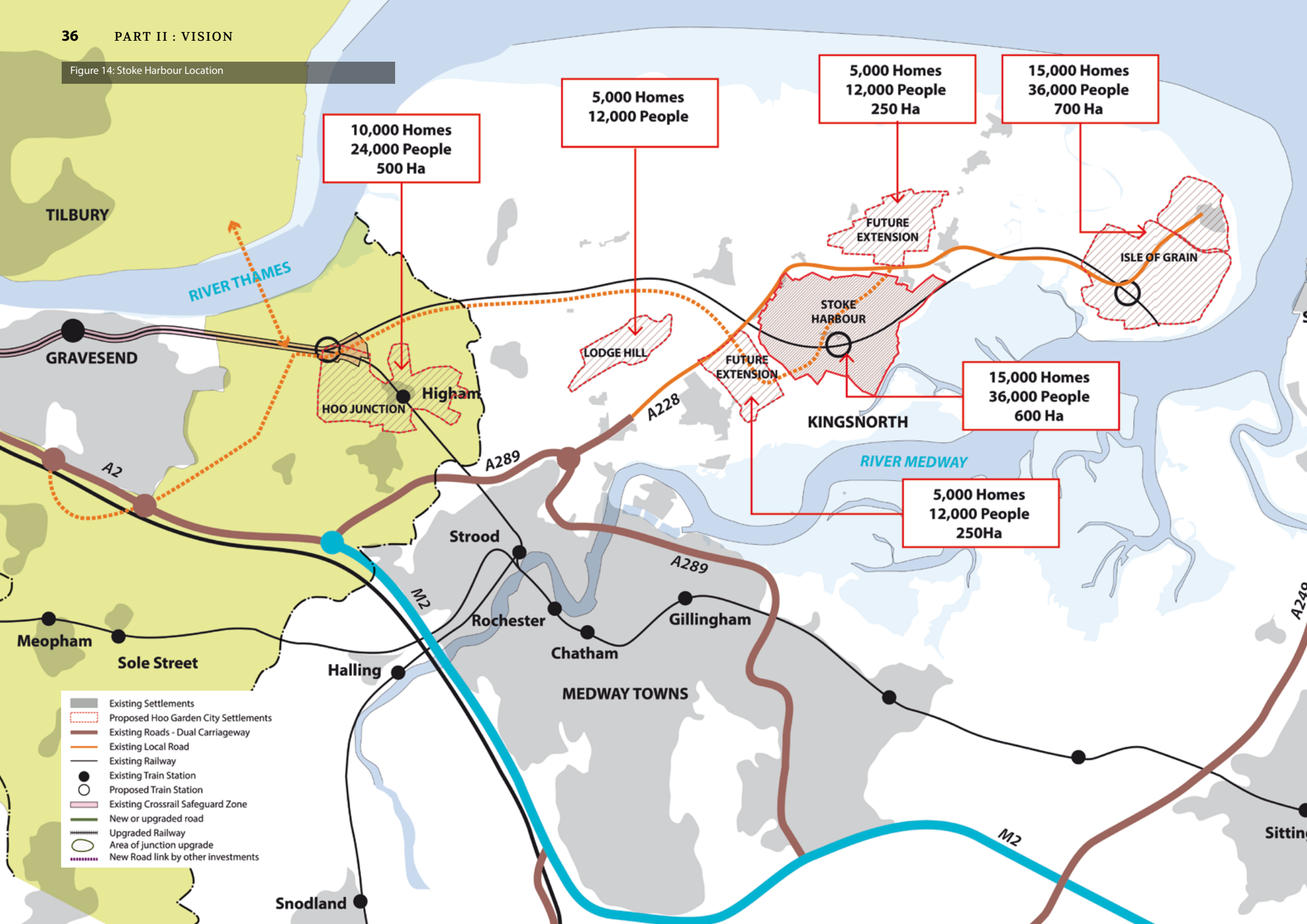


Figure 14: Stoke Harbour Location



b) Design

Stoke Harbour development concept

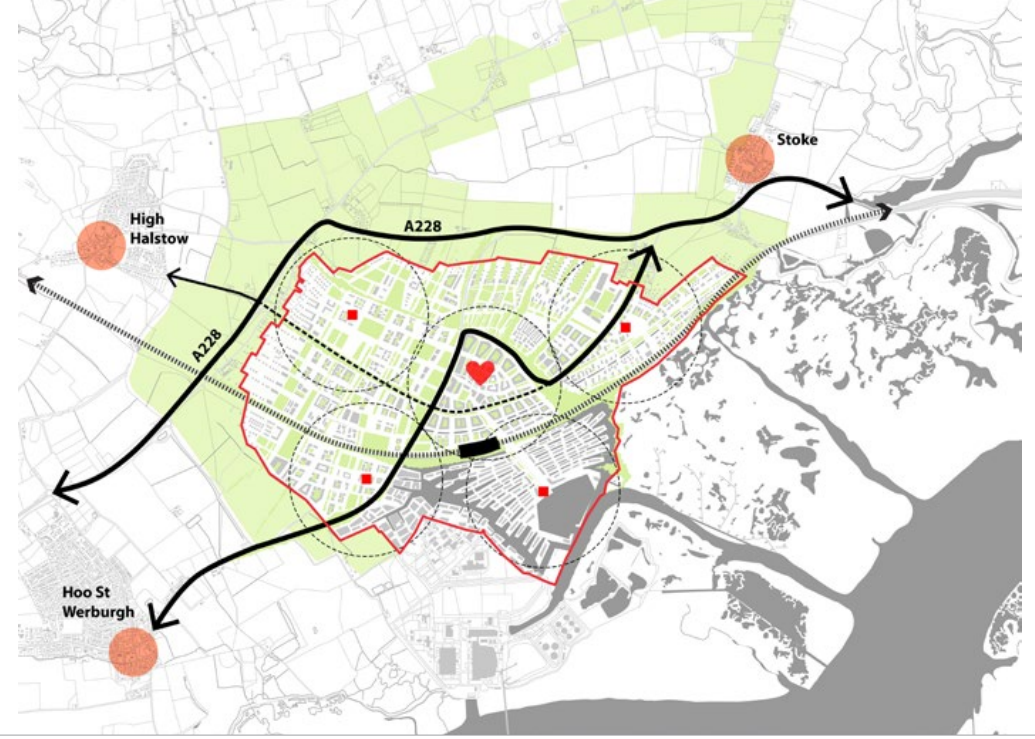
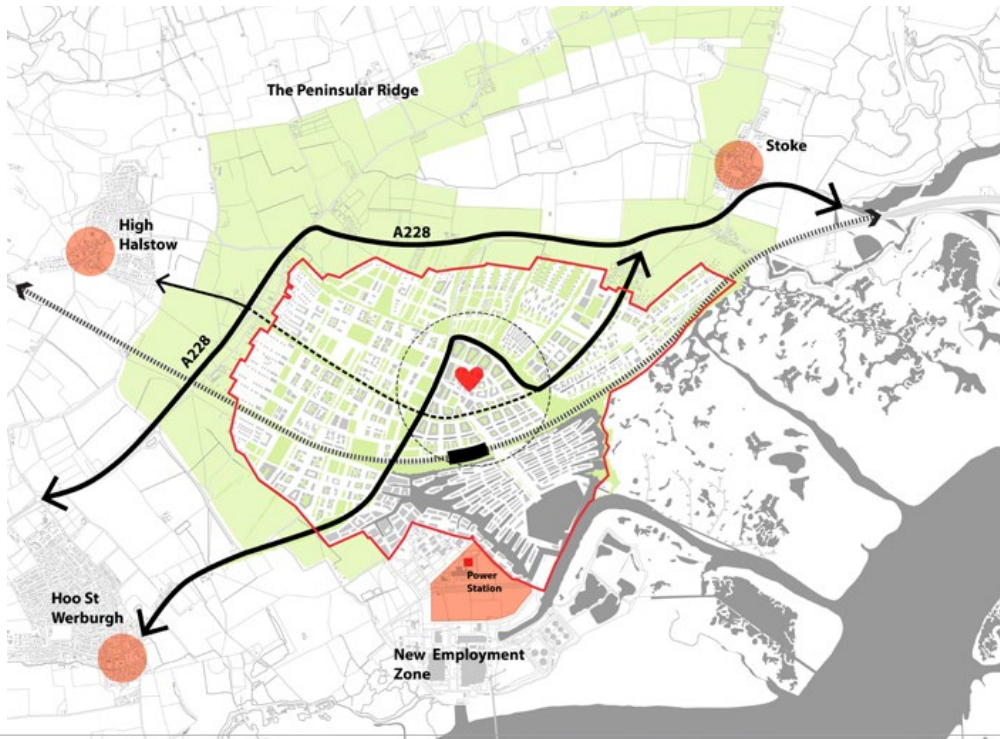
Scale and density

Consisting of multiple small to medium sized settlements, Stoke Harbour responds on a human scale to the need to build more houses in the South East. The first proposed settlement will be designed to a population of around 36,000 living in 15,000 homes.¹⁹ This scale provides sufficient critical mass to make a broad range of homes, jobs and community services viable, while retaining a level of intimacy that will help create character and foster community.

Stoke Harbour will be built to the density of a typical mixed-use European city centre or a UK town of the Victorian period – a higher density than the earliest Garden Cities. Where Letchworth was built at up to 30 dwellings per hectare, Stoke Harbour will average 60 dwellings per hectare. Recent successful new settlements across Europe have provided a similar density, proving that this remains both a viable and popular approach to the built environment for the 21st century. This density not only improves the financial feasibility of new settlements, it also provides much more vibrant and viable mixed-use centres, supported by a larger population within easy reach.

¹⁹ Making it similar to the scale of the original Garden City of Letchworth, with capacity to expand to over 20,000 homes - the size of Welwyn Garden City

Figure 15: Development of Stoke Harbour Concept



1. Identifying the heart

- Between the ridge and the water
- Between existing settlements
- At the Cross Roads
- Close to railway
- Close to water's edge
- Close to employment zone

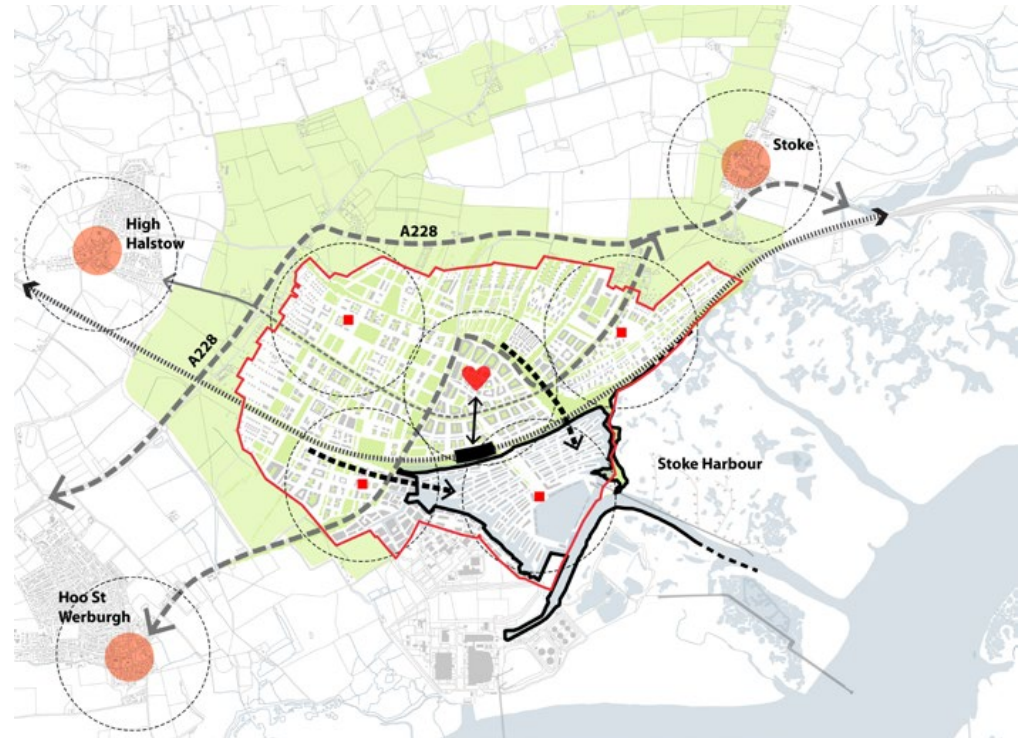
2. Walkable neighbourhoods

- Identify neighbourhood centres
- Each with 800m walkable district



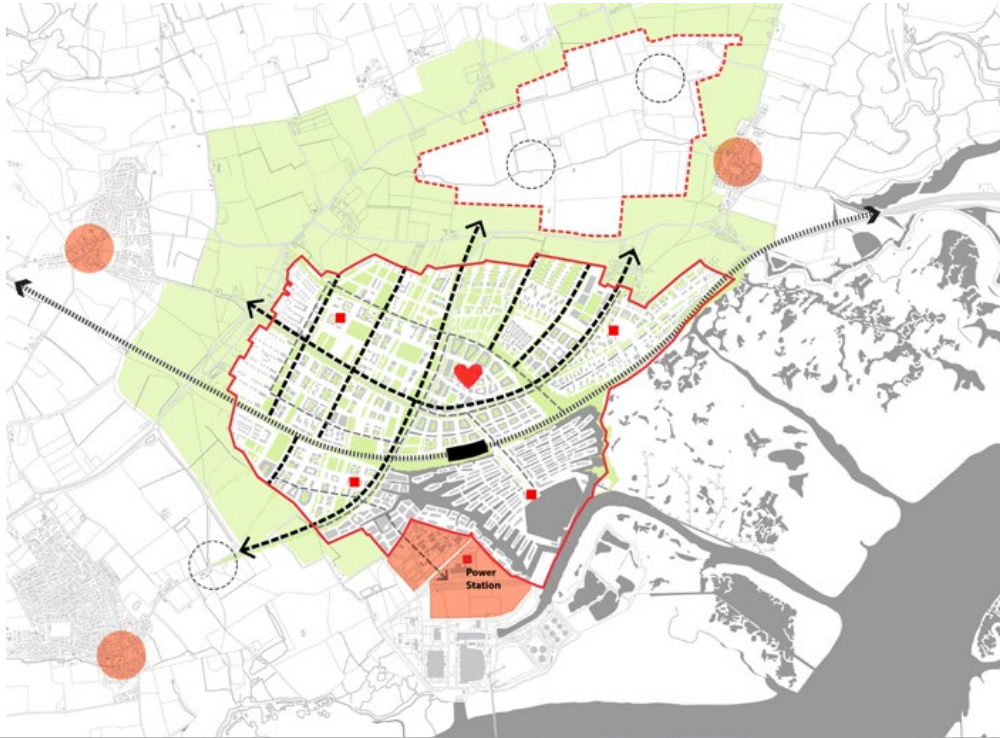
3. The lie of the land

- Map the flood zone and the protected areas
- The heart occupies higher ground



4. Working with the water

- Establish the harbour:
 - (i) as a unique feature
 - (ii) as a buffer to the sensitive areas
 - (iii) as a flood defence mechanism
- Locate the station
- Use natural watercourses



5. The structure of the settlement

- Movement Grid
- Green Grid
- Blue Grid
- Energy Grid
- Dedicated employment zone next to harbour
- Future town extensions



6. Green throughout

- Tree lined avenues
- Linear parks and a network of green spaces
- Green streets connect and reach out to the countryside
- Adding the greenbelt
- Fraying the fringes



Streets, squares and parks

At the heart of the masterplan is a grid of streets designed for vehicles, pedestrians and cyclists to share equitably. Traffic will be naturally calmed. Footpaths will be wider and will have tree planting for shelter and rain gardens that will attenuate water in specially designed plant beds and water features. The street pattern will respond to its context and follow the natural grain of the landscape. Key features such as valley watercourses, hedgerows and shelterbelts will be used to create linear parks that link public green spaces – which will make up 20% of the total area of our town, with a further 20% private gardens (giving 40% total green space).

This approach ensures that the character of the surrounding area is brought into the heart of the town and can be easily accessed by all. The street pattern will intensify towards the centre of the city, creating a finer grained, intricate pattern of streets and lanes. These will lead to the central square at the heart of the town, hosting a wide variety of activities, with markets and events through the year.







The harbour, canals and the river

Water is the defining feature of the Hoo Peninsula, and will be central to the character created by the masterplan for Stoke Harbour. A tidal harbour will

be built out of the existing low-lying land at the south of the site – avoiding the ecologically sensitive and protected wetlands entirely. Canals will link the heart of the town to the harbour, creating a living and leisure space

that makes the most of Stoke Harbour's natural surroundings and provides the town with the opportunity to interact with the River Medway. The harbour district will be centred on a

mixed-use square, and will provide space for business, houseboats and homes – including up-market waterfront properties.

Figure 17: Neighbourhood concept



Universally accessible communities and social infrastructure

Vibrant local neighbourhoods are built around shops, services and open spaces, clustered in local centres within a short distance of people's homes. Neighbourhood services at local centres include eight primary schools with associated nurseries and community hall facilities – which is ample for the projected population.

Town-wide community services include two secondary schools, a campus for further and higher education, a town hall civic centre, GP surgeries and NHS polyclinics with dentists, opticians and pharmacies and a community hospital to serve the wider Hoo area. Similarly, an emergency services hub providing police, fire and ambulance serves both the town and wider area.

We have spoken to leading disability charities in putting together our design and we would aim for universal design of all spaces, so that they work for everyone in the community. All homes in Stoke Harbour will meet the lifetime homes standard and 10% will be fully wheelchair accessible. To ensure that this is built into the master-plan we will ensure that there is full representation for disabled people in our participatory planning approach (see Part IV).

c) Transport

Unlocking the Hoo Peninsula for the building of new homes will require a number of phased transport infrastructure upgrades.²⁰ New residents must be able to commute to their existing jobs while Stoke Harbour's economy and jobs market develop, and in the long term transport connectivity will be the key to providing access to a mix of employment sectors and centres, including higher earning jobs in London.

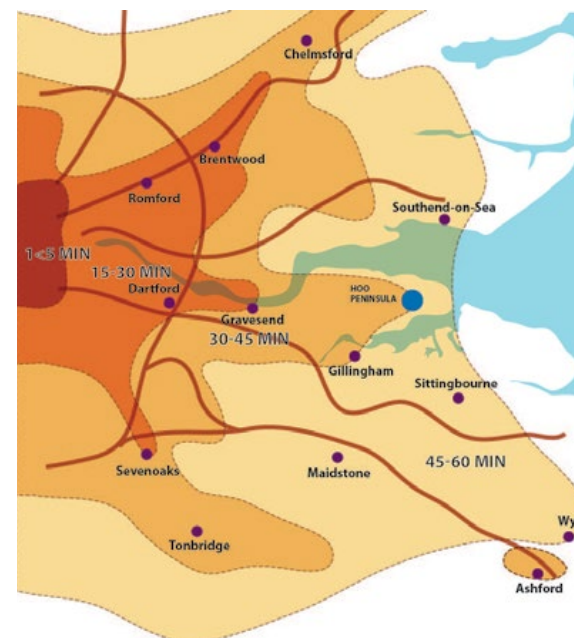
The current access road (the A228) is close to capacity during rush hour at the Four Elms roundabout at its western end. The impact on traffic is the most important concern for existing Hoo Peninsula residents.²¹ There is an existing rail line connecting the Hoo Peninsula to Gravesend and on to London, which currently carries only freight.

Our plan prioritises upfront upgrades to the Four Elms roundabout and A228 approach, doubling its capacity (estimated cost: £20m-£25m), providing a subsidised bus link to Strood (estimated cost: £100,000 pa, growing to £250,000 pa), and to get a shuttle passenger train running on the route from Gravesend to Stoke Harbour (estimated cost: £15m). These

measures are critical to winning support from local people (see Part IV) and will produce a step change in connectivity and head off a potential restrictor to the city's growth (the Four Elms roundabout), while avoiding debt-hungry capital investment in entirely new infrastructure during the early years of the development.

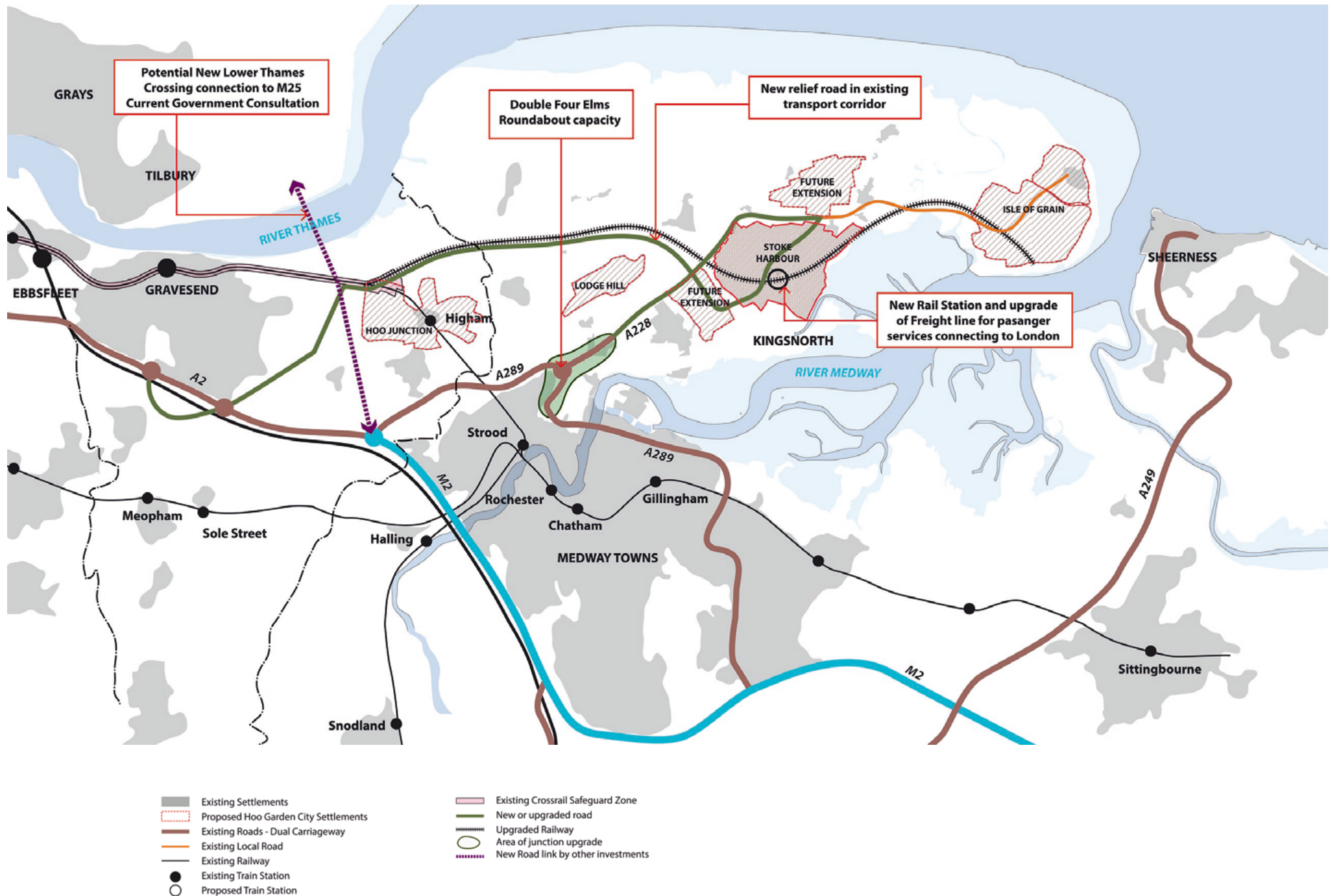
Once Stoke Harbour's population has grown to 18,000, work would begin on the high cost new infrastructure: the twin tracking of the train line and the building of a new relief road along side it, connecting Stoke Harbour directly to the A2 and the proposed Lower Thames Crossing.

Figure 18: Proposed travel times



²⁰ For full details of transport strategy and investment see Part III on Viability.

²¹ Medway Council (2011), *Schedule of responses to public consultation for the Lodge Hill Development Brief*.



d) Homes

The tenure mix and dwelling types employed at Stoke Harbour reflect the social and economic ambitions of Medway's residents. They also reflect the demand for family homes within commuting distance of London. We prioritise the need for homes that are affordable to local people on ordinary incomes, which market analysis and our own consultation with local people identify as critical to meeting need and winning support. We also recognise that Stoke Harbour will also contribute to meeting housing need in the wider South East region, including the capital.

To maximise the appeal of our town a full range of dwelling types is represented, from small and large apartments to detached houses on large plots, self-build plots and houseboats. Medway's recent Housing Needs Position Statement highlighted the need for:

Smaller units suitable for single person households

Family housing, including detached properties

Flatted schemes of a standard that will encourage cohesive communities and can be adequately maintained.²²

²² Housing Needs Position Statement, Medway Council, June 2104

Our full tenure and size mix and affordability analysis for homes for sale can be seen in the tables below.

Affordable homes

We are determined that homes in Stoke Harbour will be affordable to local people on normal (median) wages to buy, but we will also prioritise affordable homes to rent.

37.5% of homes will be in affordable tenures with 30% at social rent and 7.5% shared ownership.

Shared ownership properties only make up 7.5% of our tenure mix because of the high level of affordability of our private sale properties, which are expected to absorb most of the first time buyer demand.

We have discussed the demand for shared ownership with housing associations active in the Thames Gateway and have based our offer around two product types: apartments close to Stoke Harbour station suitable for commuters and starter family homes as there is a market for those who have bought a first flat but have been unable to take the next step on the ladder.

Self-build

In Stoke Harbour, self-build will be a real option for people from across the income spectrum. Our model

addresses the barriers of land supply and planning obstructions that currently impede the delivery and scaling up of self-build models.

We will develop a range of self-build models from house builders providing 'shell and core' so that purchasers can customise their homes; a contractor-led pattern book approach for purchasers to select designs; and disposal of serviced plots with design codes to enable individuals to define the design by direct appointment of architects.

We will actively promote opportunities to acquire plots for a variety of self-build models, including community-led/collective schemes, and offer a range of financial options to assist with this. We'll do so via regional media and the extensive network of aspiring self-build and community-led housing schemes. Our town will harness this huge pent up demand and allow thousands of young families to create affordable homes for themselves.

Even if the demand from people actually ready to "press the button" is only a fraction of the estimated six million nationwide, selling c.2,000 plots to self-builders is not a challenging target. If take up is lower than expected the plots can easily be integrated into the other delivery models, so our aspirations for self-build create little additional risk.



Table 2: Tenure, type and size of homes in Stoke Harbour

Dwelling Type	Tenure, Type and Size of Homes																				
	Social Housing			Social - Senior			Shared Ownership			Market Rent			Private Sale - Self-build			Private Sale - General			Private Sale - Senior		
% Total No. Dwellings	27.5%			2.5%			7.5%			10.0%			12.5%			35.0%			5.0%		
Flats	%	No.	Size (m2)	%	No.	Size (m2)	%	No.	Size (m2)	%	No.	Size (m2)	%	No.	Size (m2)	%	No.	Size (m2)	%	No.	Size (m2)
1 Bed	30%	1,238	50	45%	169	50	18%	197	50	25%	368	50	0%	-	-	14%	735	50	40%	300	50
2 Bed	24%	990	70	35%	131	70	15%	169	70	24%	360	70	0%	-	-	6%	315	70	25%	188	70
3 Bed	8%	330	86	20%	75	86	5%	51	86	8%	120	86	0%	-	-	3%	157.5	86	35%	263	86
3 Bed Duplex	3%	124	96	0%	-	-	3%	34	96	4%	60	96	0%	-	-	2%	105.0	96	0%	-	-
Total/ Average	65%	2,681		100	375		40%	450		61%	908		0%	-	-	25%	1,313		100	750	
Houses	%	No.	Size (m2)	%	No.	Size (m2)	%	No.	Size (m2)	%	No.	Size (m2)	%	No.	Size (m2)	%	No.	Size (m2)	%	No.	Size (m2)
2B Terrace	12%	495	83	0%	-	-	25%	281	83	16%	233	83	23%	431	83	12%	604	83	0%	-	-
3B Terrace	13%	536	102	0%	-	-	27%	304	102	16%	240	102	33%	609	102	12%	630	102	0%	-	-
4B Terrace	7%	289	113	0%	-	-	5%	56	113	5%	75	113	12%	225	113	2%	105	113	0%	-	-
3B Semi-d	2%	83	105	0%	-	-	3%	34	105	1%	15	105	0%	-	-	13%	683	105	0%	-	-
4B 6 people Semi-d	1%	41	112	0%	-	-	0%	-	-	1%	15	112	0%	-	-	14%	735	112	0%	-	-
4B 6 people Detached	0%	-	-	0%	-	-	0%	-	-	1%	15	135	12%	225	135	8%	394	135	0%	-	-
4B 7 people Detached	0%	-	-	0%	-	-	0%	-	-	0%	-	-	12%	225	180	8%	394	180	0%	-	-
5B 7 people Detached	0%	-	-	0%	-	-	0%	-	-	0%	-	-	8%	150	220	8%	394	220	0%	-	-
Total/ Average	35%	1,444		0%	-	-	60%	675		40%	593		100	1,866		75%	3,938		0%	-	-
Dwellings Total	100	4,125		100	375		100	1		100	1,500		100	1,866		100	5,250		100	750	

Table 3: Anticipated home sales values, Stoke Harbour

	Market value Medway equivalents (£)		Anticipated Stoke Harbour sales values (£)					
	Low	High	Low	Low + 10%	Low + 20%	Median	Median + 10%	High
<i>Apartments</i>								
1 x Bedroom 2 x People	£73,000	£175,000	£80,000	£88,000	£96,000	£110,000	£121,000	£140,000
2B4P	£90,000	£215,000	£100,000	£110,000	£120,000	£136,000	£149,600	£172,000
3B4P	£130,000	£280,000	£130,000	£143,000	£156,000	£177,000	£194,700	£224,000
3B5P Duplex	£180,000	£300,000	£150,000	£165,000	£180,000	£195,000	£214,500	£240,000
<i>Houses</i>								
2B4P Terrace	£100,000	£230,000	£118,000	£129,800	£141,600	£151,000	£166,100	£184,000
3B5P Terrace	£110,000	£275,000	£145,000	£159,500	£174,000	£182,500	£200,750	£220,000
4B6P Terrace	£160,000	£285,000	£170,000	£187,000	£193,000*	£199,000	£218,900	£228,000
3B5P Semi-d	£160,000	£325,000	£175,000	£192,500	£205,000*	£217,500	£239,250	£260,000
4B6P Semi-d	£200,000	£350,000	£200,000	£220,000	£230,000*	£240,000	£264,000	£280,000
4B6P Detached	£230,000	£450,000	£230,000	£253,000	£276,000	£295,000	£324,500	£360,000
4B7P Detached	£270,000	£620,000	£280,000	£308,000	£336,000	£388,000	£426,800	£496,000
5B7P Detached	£290,000	£700,000	£350,000	£385,000	£420,000	£455,000	£500,500	£560,000
<i>Notes</i> *These sales values have been adjusted to reflect a value in between the "Low+10%" sales price and the "Median" sales price								

Table 4: Affordability analysis, Stoke Harbour

Dwelling type	Median Medway wage			Single earner			1.5 earners			Dual earner		
	Mortgage 90%			£23,113			£34,670			£46,226		
	Anticipated sales price			Single earner			Multiples of median wage			Dual earners		
	Low	Low +10%	Median	Low	Low +10%	Median	Low	Low +10%	Median	Low	Low +10%	Median
<i>Apartments</i>												
1 x Bedroom 2 x People	£88,000	£110,000	£88,000	3.12	3.43	4.28	2.08	2.28	2.86	1.56	1.71	2.14
2B4P	£110,000	£136,000	£110,000	3.89	4.28	5.30	2.60	2.86	3.53	1.95	2.14	2.65
3B4P	£143,000	£177,000	£143,000	5.06	5.57	6.89	3.37	3.71	4.59	2.53	2.78	3.45
3B5P Duplex	£165,000	£195,000	£165,000	5.84	6.42	7.59	3.89	4.28	5.06	2.92	3.21	3.80
<i>Houses</i>												
2B4P Terrace	£129,800	£151,000	£129,800	4.59	5.05	5.88	3.06	3.37	3.92	2.30	2.53	2.94
3B5P Terrace	£159,500	£182,500	£159,500	5.65	6.21	7.11	3.76	4.14	4.74	2.82	3.11	3.55
4B6P Terrace	£187,000	£199,000	£187,000	6.62	7.28	7.75	4.41	4.85	5.17	3.31	3.64	3.87
3B5P Semi-d	£192,500	£217,500	£192,500	6.81	7.50	8.47	4.54	5.00	5.65	3.41	3.75	4.23
4B6P Semi-d	£220,000	£240,000	£220,000	7.79	8.57	9.35	5.19	5.71	6.23	3.89	4.28	4.67
4B6P Detached	£253,000	£295,000	£253,000	8.96	9.85	11.49	5.97	6.57	7.66	4.48	4.93	5.74
4B7P Detached	£308,000	£388,000	£308,000	10.90	11.99	15.11	7.27	8.00	10.07	5.45	6.00	7.55
5B7P Detached	£385,000	£455,000	£385,000	13.63	14.99	17.72	9.09	9.99	11.81	6.81	7.50	8.86

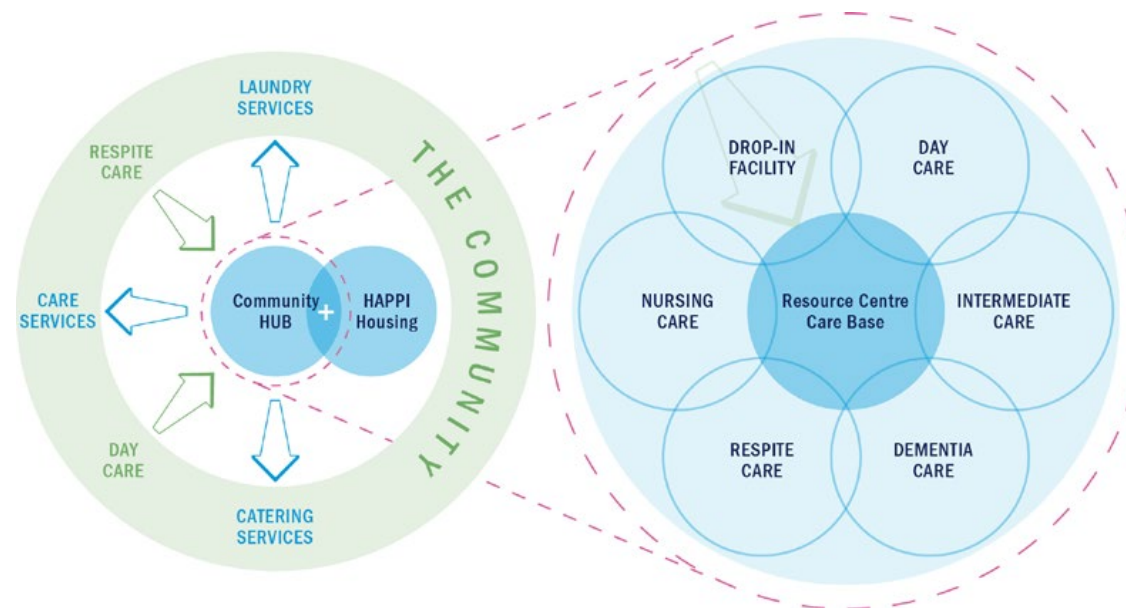


Figure 20: Community care diagram

Older people

Medway's most recent assessment forecasts an increase of 71.71% in the size of the over 65 population by 2035, stating that it is critical that these future needs are met.

Stoke Harbour is designed to meet these demands, and the requirements of investors with different development parameters, by providing an above average proportion of apartments, including larger family-size units. By locating even more residents within a walkable distance of services, this higher density brings benefits and efficiencies to the broader masterplan. Homes designed with older people's needs in mind will be integrated into all of its apartment buildings, in line with emerging best practice.²³

If more of the 'elderly' home owners, currently living in inappropriate, often expensive to run, under occupied, older houses, were attracted by better built, well lit, well insulated contemporary housing which offered alternative lifestyles and potential for extra care through their extended facilities, they would be encouraged to release their equity and move into more appropriate housing models. This would not only unblock a huge number of homes across the south east and address the housing shortage, but also provide that age group with the prospect of an enriched and fulfilling retirement.

The elements for our integrated approach are:

- A range of housing types where not only provision of care in the future, but other amenities such as sport, cultural and social amenity is all integrated or close by.
- All housing to follow the 10 recommendations set out in the HAPPI report, a government sponsored document looking at the future shape of housing and care for older people.
- The community care hub: the support provided for the elderly such as doctors, chemist, further learning through resource centre, shop, exercise facilities and catering can all be in one physical centre or close by and linked through a digital network to personalise the service. These hubs are open to the wider community and form the nucleus of a neighbourhood centre.

²³ Housing Needs Position Statement, Medway Council, June 2104



Freeholds and Leaseholds

In order that the community should continue to benefit from future land value uplift, the freehold and leasehold agreements will include covenants requiring the seller to pay 5% of any capital gain realised to the Community Trust. There will also be a head rent charge of £100-£500 payable annually depending on the size of the house. This will initially be payable to SHLLP, but in future will be part of the transition plan for the Community Trust becoming a partner in SHLLP.

Our building under license model, will specify strict marketing requirements to minimise initial sales of private homes to buy-to-let investors, and all owner occupier leases will require the owner to notify the Community Trust (the freeholder) if they intend to sublet their property.

They will be required to register as a landlord with the Community Trust, and demonstrate that their property meets highest standards currently available (currently the Decent Homes Standard), and to offer longer tenancies.²⁴

²⁴ For example, Shelter's 'Stable Rental Contract' (http://england.shelter.org.uk/professional_resources/policy_and_research/policy_library/policy_library_folder/report_a_better_deal_-_towards_more_stable_private_renting)

e) Environment

Landscape

The landscape approach at Stoke Harbour is driven by the principle of integration with the existing topography, watercourses, agricultural patterns and movement networks. This acknowledges and works with the complexity of both man-made and natural systems. Land surrounding the town is designated as

Local Green Space, ensuring access to open country and preventing our town merging with neighbouring villages. The goal is to bring people close to the abundant presence of nature and water on the Hoo Peninsula.

Figure 21: Green concept

Blue infrastructure
Swale and rain gardens

Green spaces
Linear parks and greens

Green street
Planting to streets and routes

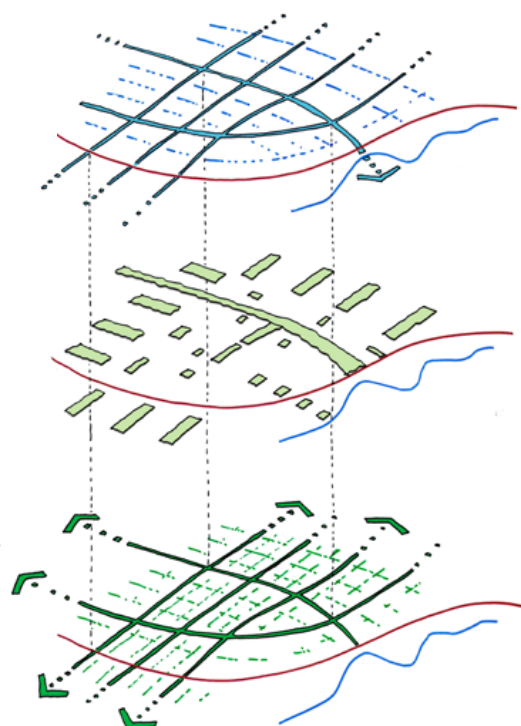


Figure 22: Green framework: movement networks and Local Green Space





Sustainability and Protecting Wildlife

Our Garden City will develop a bespoke code to set standards for site sensitive aspects of environmental protection and enhancement. It would draw on national guidance such as that of Natural England, and draw on the best of the following existing codes in respect of high quality, sustainable development for reference and be balanced against viability.

- 40% of the land area will be green open space
- Walkable neighbourhoods will reduce car dependency (eg 400m to a bus stop, 800m to a primary school etc)
- Sustainable urban drainage systems will increase efficiency and flood protection
- Connection to combined heat and power (CHP)
- Homes to achieve Code for Sustainable Homes level 5 (energy equivalent), though this will be redefined in the zero carbon standard

While the Stoke Harbour site avoids any sensitive or protected areas, it is close to important wildlife habitats on the Medway tidal reaches. Our proposals seek to reduce the impact of human populations on these areas by incorporating environmental enhancements recommended by the RSPB into the detailed design of the garden city.

RSPB recommendations that will be included

Zero carbon housing.

Use of locally generated Combined Heat and Power

Water saving and water efficiency measures should be used on all new housing.

Emphasis on the use of public transport, walking and cycling as the main form of transport.

High-quality green infrastructure

Masterplan and design green infrastructure from the outset.

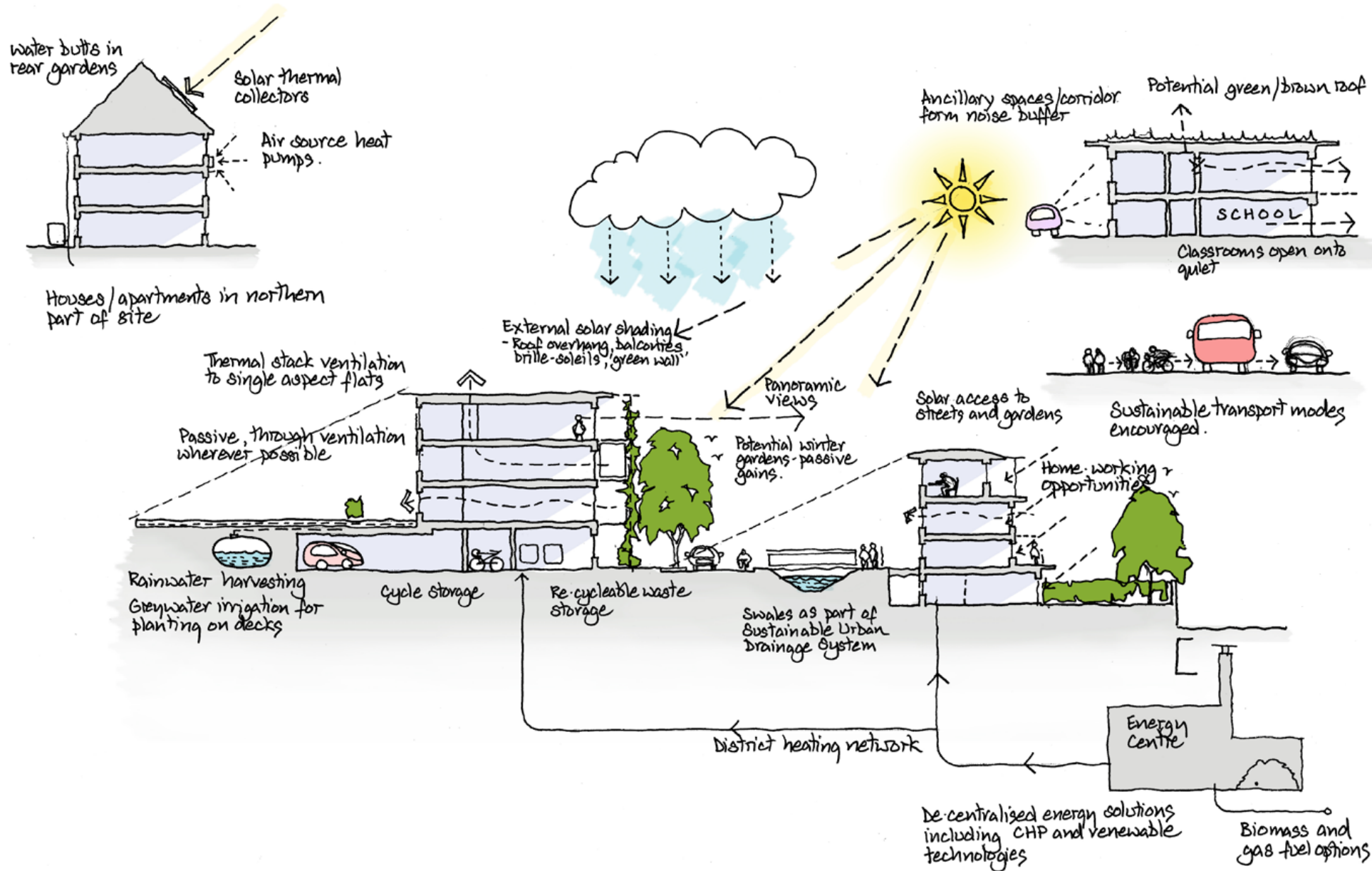
Protection of biodiversity currently on site to provide the basis of the green infrastructure network, so that it will be in keeping with the local landscape and uniqueness of the area.

Create green infrastructure before residents move in. Make it accessible to all and see it as a community resource.

Ensure that gardens and communal spaces add to the overall green infrastructure network.

Integrate nest and roost bricks for swifts and bats, and where appropriate, external nest cups for house martins.

Figure 23: Sustainability Strategies



Energy Strategy

The principle for designing the energy strategy for the garden city will be similar to that set out in the London Plan:

Lean : buildings should be designed to require less energy

Clean: Energy should be supplied efficiently

Green : using renewable energy as technology advances

In terms of low energy building, legislation already requires all new homes to be 'Zero Carbon' by 2016, with set minimum Energy Efficiency standards.

The current definition allows relaxation of best practice in fabric energy efficiency at the carbon compliance stage with a cash payout or equivalent valued carbon offset called allowable solutions to make up the 100% reduction. This payment could go into a Medway low carbon infrastructure fund, and help pay for energy efficient upgrades to existing homes in the area.



Figure X District heating distribution from Damcreek power station

For those developers or self-builders offering best practice in energy efficiency standards, such as passivhaus or energy plus housing, there will be a lower allowable solutions charge. This incentive should drive insulation standards up, thus helping the residents directly by reducing their energy bills.

Connection to the Damhead Creek powerstation, immediately adjacent to the Stoke Harbour site, for district heating would be viable on a development of this scale. District heating is a viable solution in areas where the density of housing is relatively high, such as Stoke Harbour. With the garden city being conceived as a compact development, district heating and CHP networks will be extended as far as cost effectively possible. The savings in carbon emissions from district heating can be as much as 23% of a district's energy output and therefore important in the drive towards a low carbon future.

Community energy

Whereas the heat network requires residents to stick to the city energy provider for heat, they will still have choice about switching for their electricity supplier. The Garden City would offer a Community Choice Aggregation (CCA) programme for electrical energy.

This is a proven purchasing structure for the local residents where 'bulk' purchase of energy allows the local energy company to negotiate corporate deals for domestic energy supply. Much successful work has been done in establishing such structures in the USA and mainland Europe and significant savings on bills (c. 15-20%) can be achieved (see case study Appendix IV).

Furthermore, the CCA can determine the amount of 'clean' energy it can afford to purchase and can set targets for renewable energy in their tender for the winning supplier to achieve over time.

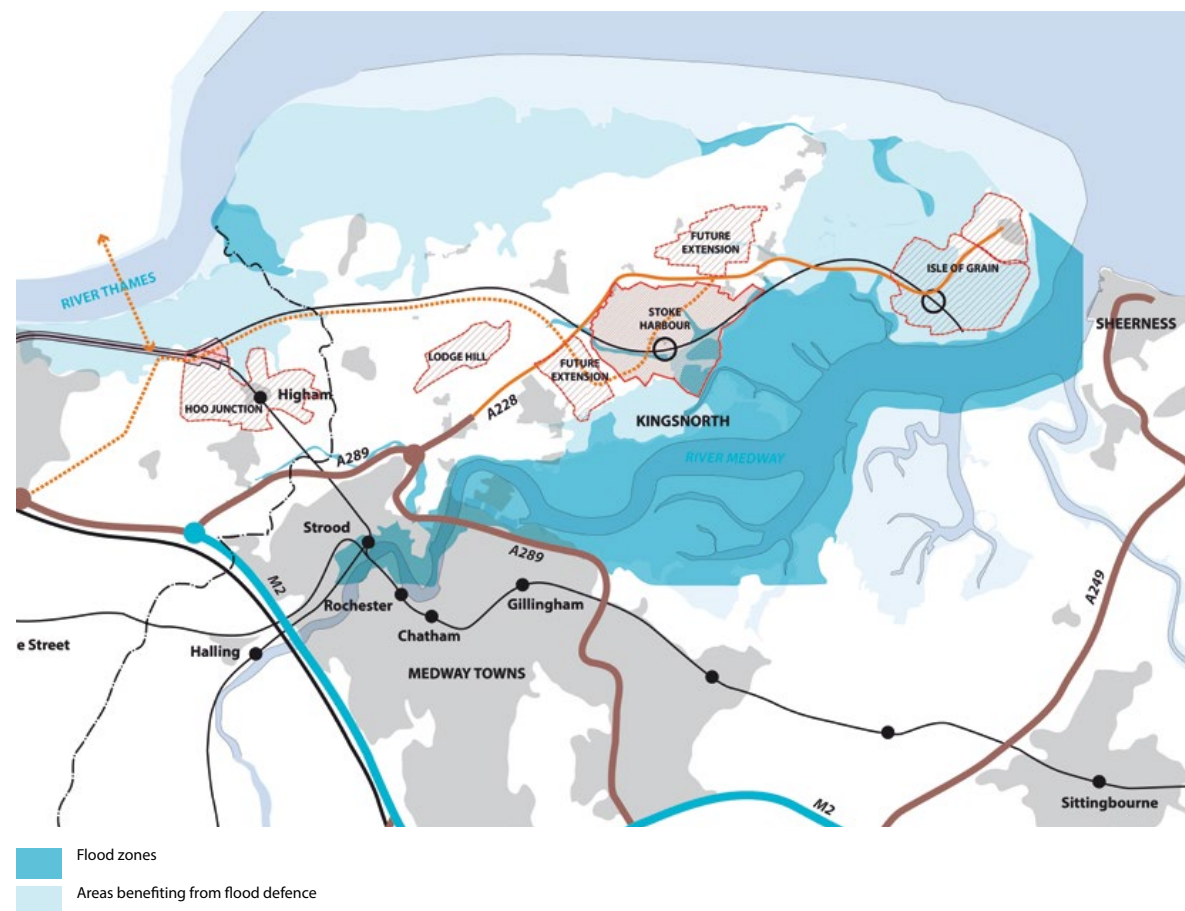
Flood Risk

Most of Stoke Harbour occupies a spine of higher level land, with the town centre located about 25m above sea level. The majority of the site is therefore in the Environment Agency's lowest risk category for planning purposes (see map). Fully aware of the growing flood risks associated with increasingly unpredictable weather patterns, the Harbour and Canal districts nevertheless confidently engage with the coastline, following a strong tradition of coastal settlement in the UK, and directly addresses the issues of flood risk to illustrate how the national challenge can be addressed.

The masterplan responds to and mitigates any potential flood risks in a number of ways:

- Where flood risk areas penetrate further inland, green grid corridors are proposed with a full range of water attenuation/ overspill measures adding value in the form of watercourses, ponds and lakes.
- For immediate waterfront areas, flood defences are already in place, including those around the Kingsnorth Power Station and business park. These will be strengthened in due course as per the recommendations of a full Environmental Survey.

Figure 24: Flood risk



- Areas closest to Kingsnorth Power Station and Damhead Creek have been reserved for light industrial uses, which can be more readily and economically made resilient to flood risk.
- The proposal for constructing a significant harbour and canal system is itself a further flood prevention measure, since it will greatly increase the immediate area's water absorption capacity.

- For detailed urban design/ architectural proposals, best practice guidance will be followed, particularly relating to the construction, adaptability and resilience of the ground plane and ground floor uses.²⁴

These responses are all informed by a belief that flood prevention need not only be a cost, but when driven by a vision of placemaking can also add significant value.

²⁴ RIBA note: "Designing for Flood Risk"

f) Community Trust

To foster civic identity and provide additional services, our development model channels some of the assets and income streams created locally into a Community Trust²⁵ run by and for local people as well as delivering the necessary returns to our investors.

Long term ownership of a portfolio of valuable assets will give our Garden City's Community Trust an annual income to support excellent, additional services – and provide education and training grants to local residents. The Community Trust's anticipated annual budget rises from £700k in the first year of operation to over £30m after 75 years.

The vision for the Community Trust is based around three core principles:

1. Residents should be instrumental in the major decisions that affect their new community.
2. Residents should also have an ongoing role in 'co-producing' the planning, design and commissioning of services. This will ensure there are a range of opportunities for residents to take part in particular areas of commissioning, where they have an interest or specialism.
3. Ultimately residents will be the beneficiaries of the initiatives funded by the Trust: we suggest therefore that residents are best placed to evaluate the impact of initiatives, and this should be built into scrutiny arrangements.

²⁵ We set out the financing model and governance structure for the Community Trust in detail in Part IV

g) Economy

Central to the idea of a garden city is that it has its own economic purpose. Whilst as with any city it will be reliant on links with other places, it will be more than a residential area. Eventually we expect the majority of the residents of the new garden city to be working there, or at least the numbers commuting in to work exceed those commuting outwards.

The economic development of a place is not an easily directed or certain process. Simply creating new offices and commercial floor space is not enough to guarantee that firms will come to the garden city, neither is simply the desire to have a brand new hi-tec industry. The location has to serve latent demand, and for businesses it has to make sense commercially. Importantly, it needs to provide good access to key consumer and input markets; including labour of a high enough quality.

As it stands, the area around the Hoo peninsula is a relative economic underperformer, both in comparison to the South East and to the UK as a whole. The unemployment rate in Medway and Gravesham (8.4% - Year to March 2014) is higher than the English average (7.3%) and significantly higher than the South East as a whole (5.3%). The median wages of people working in Medway and Gravesham are also below both the UK and South East levels.

Many of its residents with jobs work outside the area. According to the ONS Annual Population Survey around 21,500 people regularly commute in to Medway and Gravesham to work, whilst 71,000 Medway and Gravesham residents travel outside the area to their place of employment; predominantly to jobs in the services sectors.

A relative lack of economic vitality does not necessarily provide the ideal grounding for the development of a new city - if it hasn't happened already, why would it happen now? However, the Garden City development is large enough to bring about a step change in the economic fortunes of the area. Both the scale of the development and the improvements in connectivity are likely to be transformational for the local area. It's also close enough to London to make serving significant latent demand a realistic proposition.

The large construction programme will create demand for construction labour over a period of at least 14 years. Once housing and infrastructure building start in earnest, upwards of 1,000²⁶ jobs in construction will be supported. If the supply chain and induced impacts are also taken into account, then that number could be upwards of 2,500. Some of these indirectly created jobs will be located in other parts of the country, however given the Laing O'Rourke intends to locate a new factory in the area, for example, we expect to see many of them captured by the Garden City site.

Once residents start moving in there will be a demand for local services, including shops, hairdressers, car mechanics and local bank branches. Our calculations, based on average employees per head of population suggest that the additional population alone in Stoke Harbour (36,600) could generate at least 2,000 retail, hospitality, communications, real estate and financial services and an additional 1,000 in public services and related sectors²⁷ to fill minimum requirements for services.

Those numbers are likely to be upwards of 7,000 and 3,500²⁸ respectively if the community more closely reflects the national average in terms of socio-economic status and need for public services. These jobs in general will not be additional because the same people would have required similar services where they lived before. However, it will be creating new employment opportunities in an area where there is relatively high unemployment, so there could be a significant positive social impact.

²⁶ High level calculations based on ONS input-output matrices.

²⁷ This calculation is based on the minimum employees to population ratio across all of the Local Authorities in Great Britain

²⁸ This calculation is based on the average employees to population ratio across all of the Local Authorities in Great Britain

As is stands, the Hoo Peninsula is on the periphery of some of the most affluent areas in the UK. Improved connectivity will help it access those areas. The upgrade of transport links will increase the number of people willing to travel between the Hoo Peninsula and other economic centres, including to London. The consequence of greater connectivity is to increase the effective labour pool and the size of the consumer market for businesses thinking about locating in the area. That impact will be enhanced if the development of Ebbsfleet goes ahead, further increasing the local population and employment density in the area.

In addition to retail, provision for other local services and the Laing O'Rourke factory, the development will create commercial space that could see 5,000 jobs located there, once in full use.

Those businesses are most likely to come from industries that need to have access to customers in London, but cannot justify the cost because margins are relatively low or because they require large amounts of floorspace. This might include market research or

publishing firms or a high-tec manufacturing plant. With the location of the Laing O'Rourke factory the area might also attract firms of construction engineers, for example. Ever increasing pressure on space in London means that the attraction of a site outside of London, but with easy access, will only grow.

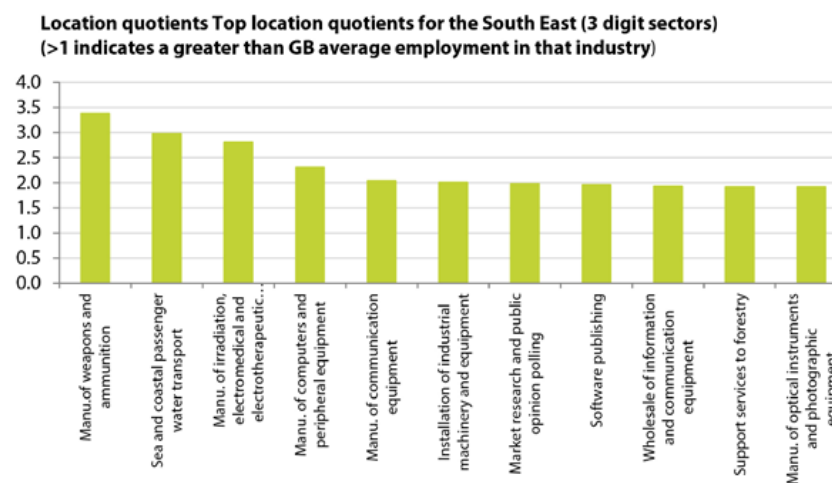
These types of industry are those choosing to locate in the South East already. The chart opposite shows the highest scoring location quotients. These reflect the concentration of employment in particular sectors.

In the long run we expect the garden city to develop further beyond our conservative estimates of jobs detailed above. However, we are realistic about the time it will take to happen. The key advantage of the location of the Hoo Peninsula is that in the short term it will be able to attract people working in London with income to spend in the local economy, which will provide a platform for further development.

Table 5: Employee calculations for Stoke Harbour

	Area (Hectares)	Area per full time employee (m2)	Employees
Office	4.2	12	3500
Business Park	1.41	10	1410

Source: Shelter calculations using HCA Employment Densities Guide



Source: ONS



PART III : VIABILITY

In the following Part we provide the detail to support our vision for Stoke Harbour, and outline the specifics of its delivery.

a) Setting up Stoke Harbour Limited Liability Partnership (“SHLLP”)

We (Shelter) would act as the initial Promoter, undertaking initial polling in the Medway area to demonstrate local support and opening high level discussions with potential Co-Promoters, Core Development Investors, Medway Council and the major landowners (see below). Shelter will also undertake project-specific fundraising for the scheme. Shelter’s trusted brand and campaigning expertise will be of use in helping to secure local consent, by reassuring local residents and stakeholders of the motivation behind the proposal and its benefits to them.²⁹

We will engage advisers to produce a conceptual masterplan and outline business plan (as has been prepared in this submission).

Co-Promoters and Core Development Investors

We would approach large land promoters and speculative land buyers (ie, real estate private equity funds; family offices; real estate developer/managers; – all of which have very active markets - potentially also Registered Social Landlords as part of a consortium) for a Co-Promoter willing to invest c.£5m-£7m³⁰ to fund the partnership up until a successful referendum outcome and grant of LDO (which we have estimated as a 3-4 year timescale). The Co-Promoter would invest while land assembly and planning risk still exists and therefore would expect to access a 200%-300% return.

We will also talk to prospective Core Development Investors (the private equity opportunity/value-add funds outlined above would also be suitable for fulfilling this role and RSLs would also be relevant) to arrange a pre-agreement to acquire the Co-Promoter’s partnership interest after a successful referendum, giving the Co-Promoter a defined exit timeline and return. We would expect the Core Development Investor to have an investment timescale of 5-7 years, and therefore for there to be a sale to Core Development Investor (#2) halfway through the construction period.

The Core Development Investors would invest after the resolution of most of the land assembly risk and post planning risk. Furthermore, the business plan of selling small land parcels to developers (Section (f)) means that rather than full construction risk they would be taking a small amount of construction risk (in respect of preliminaries and social infrastructure)

²⁹ Medway focus groups undertaken by BritainThinks reported that Shelter’s brand was overall seen as a positive addition to the proposition due to the view that Shelter would not be motivated by profit (please refer to Part IV, Section (a) for further details). There was however some scepticism about our ability to deliver by ourselves, hence the need for a wider team as we have assembled.

³⁰ This includes the following costs: land assembly- advisers fees- the referendum campaign and the partnership’s running costs

and a share of demand risk (which will be managed by the negotiation of a contractual investment waterfall, discussed in Section (d), and a flexible and comprehensive marketing and pricing strategy).

Our indicative model shows a 200% return for a Co-Promoter of £18m based on a £6m contribution, with a pre-agreed exit to a Core Development Investor.

We have modelled two Core Development Investors over the full build out period. The first of these has an indicative return of 120%, £112m on an investment of £51m³¹ at an IRR of c.16.5%; the second an indicative return of 78%, £98m on an investment of £55m at an IRR of c.14.2%. This reflects a slight step down the risk curve the later the investment in the construction phases.

The Long-Term Investor (typically an institutional investor) achieves a steady 7% return on a £30m outlay.

Major land owners

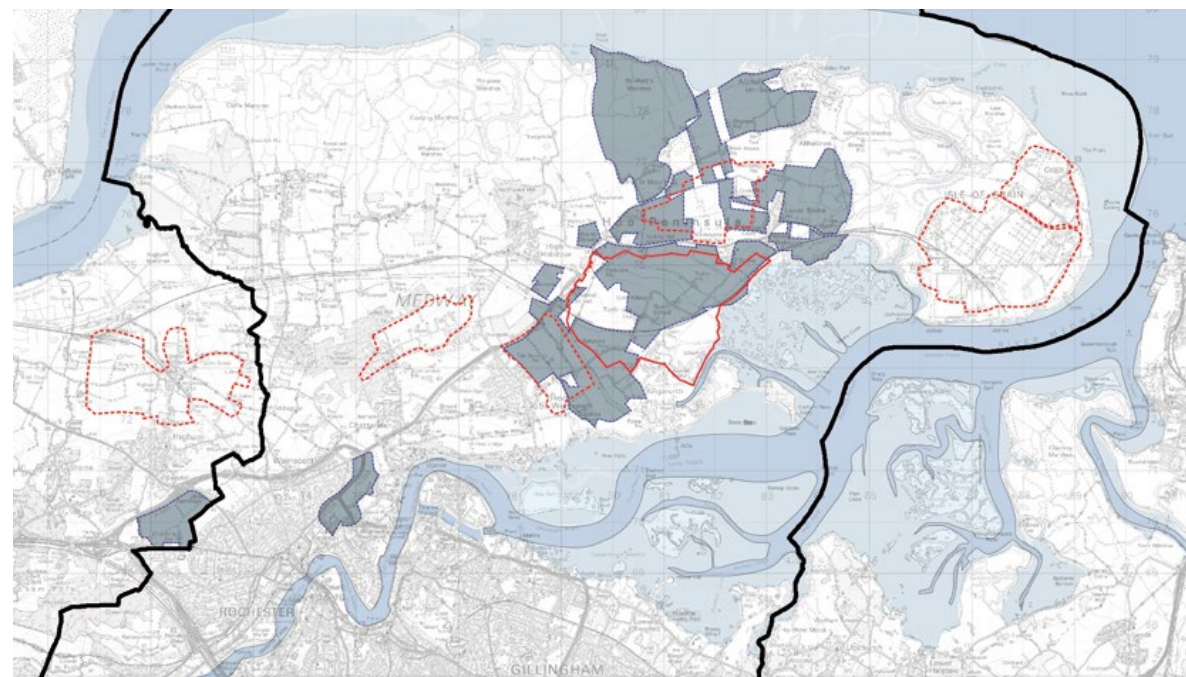
The Church Commissioners own the majority of the Stoke Harbour site (c.70%). We would offer the Commissioners the opportunity to invest their land into the partnership, with a call option exercisable if planning permission has not been achieved within 12 years (so that they do not bear planning risk), and a deemed uplift in the value of their partnership interest once planning permission has been granted.

Our outline business plan estimates that they would achieve a 16-17 multiple of the land value (£320,000-£330,000 per hectare) plus an annual yield of c.26%.³²

³¹ The Core Development Investor's contribution will cover the following costs: land acquisition 'the exercise costs of options already acquired', SDLT, detailed masterplanning costs, advisers fees, forward funding of social infrastructure and the partnership's running costs.

³² Based on estimated existing use land value.

Figure 25: Church Commissioners land and Stoke Harbour Site



As a legacy landowner with a stated interest in long term, sustainable development of mixed tenure communities and a provider of support to the Church of England in its work for the common good³³ they are ideally suited to act as the core landowning partner in our co-investment partnership model. We consider that the indicative investment returns would be attractive to investors like the Commissioners, were the proposal to be offered in the 'real' world. There is also strong primary evidence that the Commissioners are supportive of development on "the Rochester Estate"³⁴ (although not specifically in relation to the Stoke Harbour site) as outlined in DTZ's written statement on their behalf, in response to a recent nearby planning application:

*"The Commissioners are committed to high quality, sustainable development and believe that their sites could make a substantial contribution towards meeting housing need in Medway."*³⁵

"We believe that the Church Commissioners' land offers a practical solution to delivering a substantial proportion of Medway's housing need without delay."

*"We formally request that the Core Strategy is modified to include alternative, suitable and sustainable locations for housing development, such as land around the wider Lodge Hill area and in Hoo St. Werbergh."*³⁶

Furthermore, the Commissioners would retain long term ownership and strategic decision-making powers over the majority of the Stoke Harbour land through its partnership interest in SHLLP and its positions on the delivery boards for SHLLP and the Community Trust.

However, initial conversations with the Commissioners confirmed that it would not be appropriate for them to either endorse or comment publicly on a hypothetical proposal such as this,

particularly without having had sufficient time to carry out proper due diligence on the proposal before its submission, and they have not therefore endorsed our proposal at this stage. The next stage would be to engage further with the Commissioners to discuss the proposal in more detail.

³³ Foreword by the Archbishop of Canterbury, The Most Reverend Justin Welby, The Church Commissioners Annual Report 2013.

³⁴ Their land on the Hoo Peninsula and surrounding area.

³⁵ 2013, May 22, "Medway Core Strategy Examination: additional Lodge Hill Hearing Statement of Representation on Behalf of The Church Commissioners For England", Davies C, DTZ, [Accessed at <http://www.medway.gov.uk/pdf/Hearing%20Statement%20from%20DTZ%20on%20behalf%20of%20the%20Church%20Commissioners.pdf> 19 July 2014]

³⁶ Ibid.

Other land owners and existing residents

Other land owners would be offered the same co-investment opportunity as the Commissioners (with a seat on the Delivery Board representing them cumulatively). This land assembly method significantly reduces the funding hurdle of upfront payments for land. Table 6 outlines the compensation/acquisition offers (including should a land owner not wish to co-invest) and levers to aid the negotiation process.

Table 6: Land acquisition options for small land owners

Stakeholder	Sale incentive	Other levers to incentivise sale	Fall back option
Existing small land owners, existing land value estimated at £20,000-£25,000 per hectare	OPTION A Invest land on the same terms as the Church Commissioners, estimated return of £320,000-£330,000 per ha of invested land, plus annuity income with yield of 26% of Existing Use Value	a) We will make it clear from the outset that the success of our town relies on complete control of the development land at reasonable prices: our offer to landowners will therefore not improve, and there will be no rewards for holding out.	In the event that an owner of a piece of land that is critical to the development refuses to accept our offer we will ask the local authority to compulsorily acquire it.
	OPTION B Upfront payment of existing use value, plus interest in SHLLP of 3 x EUV with estimated return of £150,000-£160,000 Ha and 10-12% yield.	b) Some of the land within our town will be designated as Local Green Space by the Local Planning Authority, preventing it from being developed for ever, without any change of ownership being required. Any land we are unable to acquire will be the prime candidate for such a designation as we lay out the masterplan for our town.	
	OPTION C Option to acquire land granted at a premium equal to existing use value and then exercised at the grant of planning permission with an exercise premium of 4 x EUV.	c) Any recalcitrant land owners would be threatened with CPO via Medway Council or the HCA (see Appendix I for further details). Given there is little possibility for development in the 'no scheme' world, we would make clear that 'hope' value would be low.	

Local Authority

Ultimately, legitimacy for the development of Stoke Harbour would rest on support from a majority of people in a local referendum, but like any major development, effective delivery would depend from an early stage on the leadership of the local authority, Medway Council. The council is the democratically accountable body for local service delivery, and holds legal responsibility for planning and other powers that the development would depend on. It would also provide services to the population of Stoke Harbour after the formal development of the settlement was complete.

We would therefore look to engage with Medway Council early on in the initial discussions.³⁶

Our proposal for Stoke Harbour creates significant benefits to Medway's economy and population, and we outline below some of those benefits we believe would encourage the council to engage with our proposal and provide the necessary assistance during the land assembly process, support the holding of a local referendum, and join SHLLP after the referendum so that all parties work together during delivery:

Growth

While a new 15,000 unit development would be significant for any local authority area, population growth on this scale is consistent with the council's vision for the area, which projects 25,000 new residents between 2013 and 2021 alone.³⁷ It will contribute to the council's targets for delivering new market and affordable homes and is also in line with Medway's ambition for city status for the conurbation: the addition of Stoke Harbour would make Medway larger than Newcastle, Plymouth or Brighton & Hove.³⁸

The new employment opportunities and national centre for offsite construction will make a significant contribution towards delivering the council's ambitions of assisting people to improve their skills and find employment, supporting existing businesses and attracting new businesses.³⁹ This would all be delivered at no net cost to the council.

Supporting local capital expenditure on infrastructure

Budget constraints have placed considerable pressure on local authorities' revenue and capital budgets, and put local infrastructural improvements in doubt.

³⁶ We recognise that Medway Council cannot formally assess our proposition at this stage due to its hypothetical nature, the short timelines of the competition, and existing planning applications on the Hoo Peninsula.

³⁷ Medway Council Plan 2013-2015

³⁸ Medway sought city status in 2011 for the Diamond Jubilee

³⁹ Medway Council Plan 2013-2015

The Stoke Harbour development would make a considerable contribution to delivering the council's capital programme and would partially or completely deliver their following priorities for expenditure, which are not otherwise currently funded:

Upgrading the Hoo Junction to Grain railway branch to deliver a good commuter rail link to London;

Making capacity and safety improvements to the A228

Improvements around the Four Elms roundabout, including leading into the Four Elms to Medway Tunnel

Contribution to flood defences on the north bank of the Medway through canals and drainage

A new Sure Start Centre

New play facilities

A new library

New health facilities including a new community hospital and GPs

New emergency services for the Hoo peninsula

New primary and secondary schools

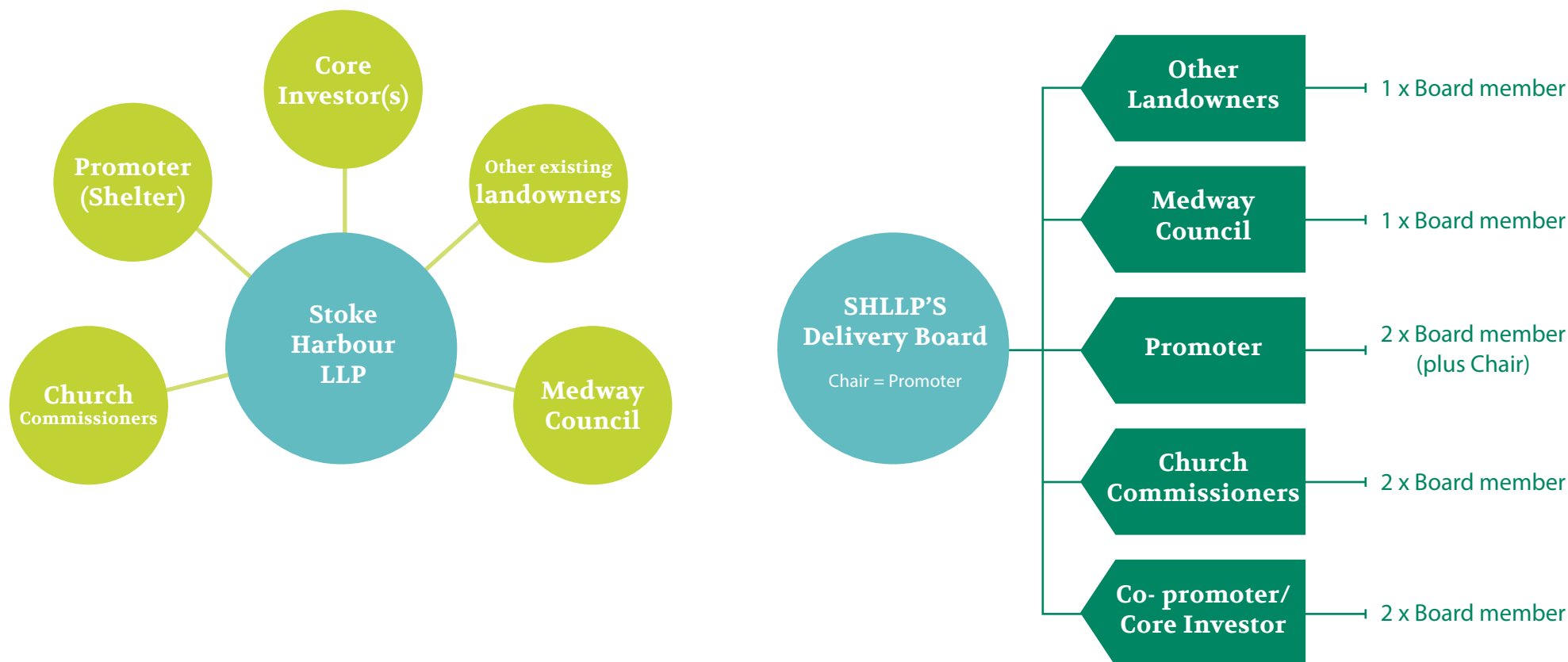
Table 7 provides further detail on our offer to Medway Council, and what co-operation/assistance would be sought in return.

Table 7: Our agreement with Medway council

We offer Medway:	We ask Medway to provide:
A promise to fund the local capital expenditure on transport infrastructure as per the Council's capital programme, outlined above.	In principle support for our vision and co-operation in our land acquisition strategy, by making it clear to landowners that if they deliberately obstruct the strategy, the council will be ready to: <ul style="list-style-type: none"> • Make Local Green Space Designations for specific sites within and around our town • Issue Compulsory Purchase Orders as a last resort. Co-operation in the holding of a local referendum.
Full cost recovery on planning: we will fund a full time, specialist team of 8 people to handle all aspects of the planning process. We have estimated this cost at £300k	Agreement to commence the Local Development Order process after a successful referendum, including a Planning Performance Agreement setting firm timescales for all planning decisions and processes.
To exceed the Council's entire 5 year housing target of 4,075 homes, (819 every year), and the implied total affordable homes target of 1,222 in five years (246 per year) 2 in our town alone, reducing pressure to deliver elsewhere in Medway.	Co-operation in marketing and promoting our town and its housing offer to local people.
The opportunity to be the manager of part of the social housing within Stoke Harbour, including a management fee of 1.5% of build cost which covers maintenance, sinking fund and surplus for the Council for 45 years. Nomination rights for social housing under Council management.	Provide the pension fund investor a guarantee on the 4% index-linked yield rental payments on the social rented homes for 45 years
Partnership interests in SHLLP and Infra LLP (see below) at the same terms as other partners. Representation on the Delivery Boards of both Partnerships and the Infra LLP Chairman role for the Council Leader.	Small upfront capital contributions to the partnerships to align financial interests. Support of the request to Government to designate Stoke Harbour an Enterprise Zone for 35 years and contribution of all retained business rates to Infra LLP to fund transport infrastructure.
Fund the provision of social infrastructure, plus additional community facilities and services for our town (and the wider community) as per the Council's capital programme, outlined above.	Contribute 100% of CIL payments and 50% of New Homes Bonus payments to the provision of infrastructure.
Representation on the board of the Community Trust.	Adopt the highways, streets and basic services as would normally occur.
Provide continuing revenue support for additional services via the Community Trust, and pledge no additional call on Council revenues.	Agree that the additional funding via the Community Trust will provide additionality for our residents, and that Council support for local services will broadly match that across the Unitary Authority.

Assuming that the referendum is successful, and Medway Council therefore agrees to enter into the partnership, its make-up and Delivery Board will be as shown in the figure below.

Figure 26: SHLLP's make up and Delivery Board



Projected partnership returns (see also Appendix VIII)

SHLLP's investors will be exposed to a number of different types of income: premiums on the grant of long leases, profit shares on the sale of owner occupier properties by developers, rental income from head rents on leasehold property, and estate service charges. The intention is that the estate service charges fund the improvements/maintenance of the public realm.

The estimated investor contributions and returns are outlined overleaf. We consider that the returns outlined in this table are commensurate with the risks borne by each partner, and would be attractive to all target investors.

Investors would be able to sell to each other or a third party so as to allow for a secondary market in the partnership interests and create the required flexibility for exit.

Property sale price scenario modelling

We have used a three point (low, expected, high) cost estimation technique, with contingencies built in where risks have been identified. We have also undertaken sensitivity testing to determine the impact if construction and infrastructure costs are "high" or "low". We have also modelled four scenarios for property sale prices; Scenario 1 represents a base case where all properties are sold at the lowest specified price, and the three further scenarios have incrementally increasing outlooks on potential sale prices. We consider that Scenario 4 is the most realistic in terms of matching SHLLP's business plan, and that there would be potential for significant upside beyond this scenario. The cash flow graph overleaf shows the results for Scenarios 1-3, to demonstrate that even if sale prices are less than expected, there is still a significant positive cash flow.

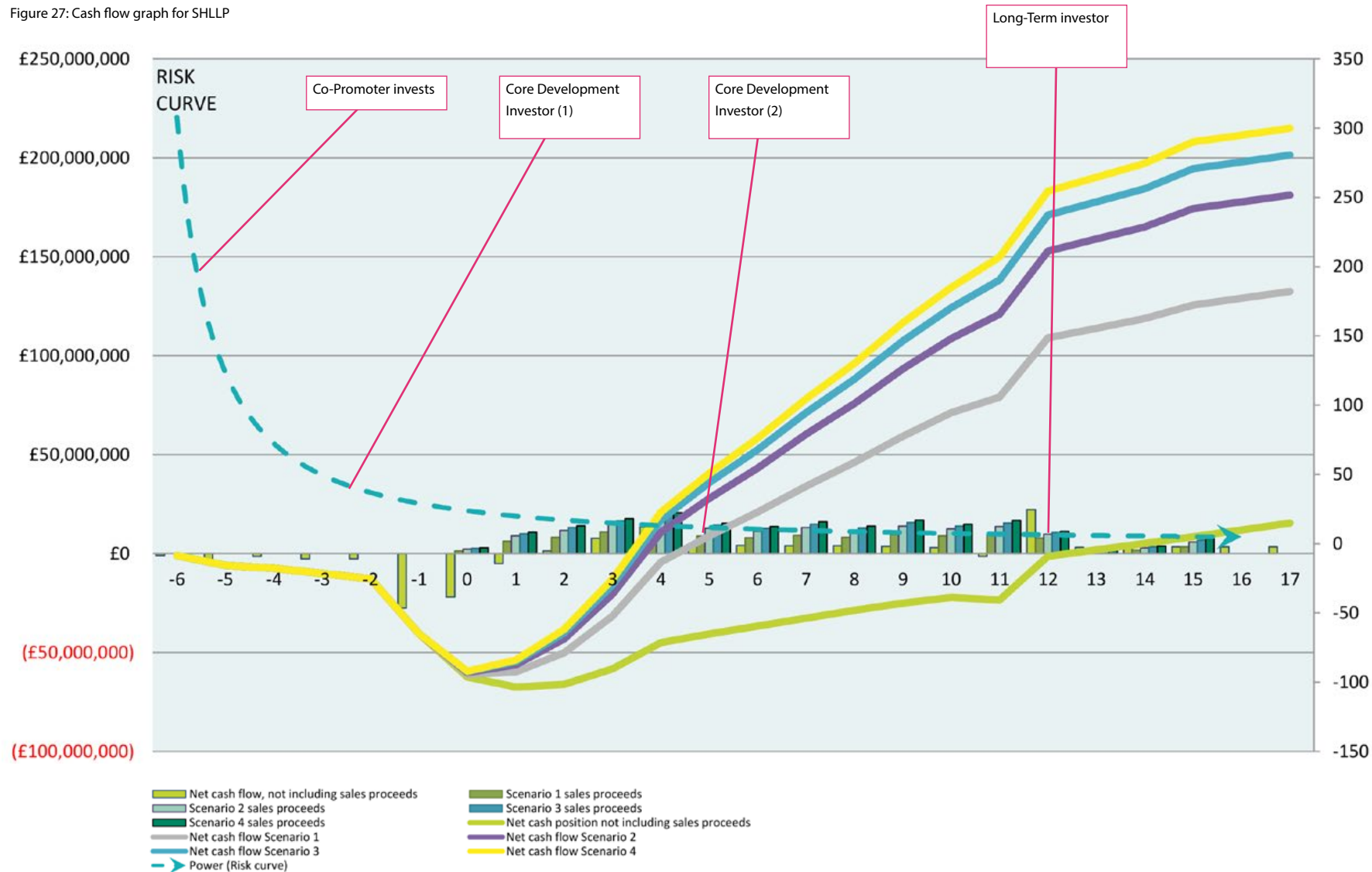
Table 8: SHLLP investor results, based on Scenario 4 and "Expected" results

SHLLP Investor	Asset contributed	Years of investment	Initial contribution	Deemed uplift / future contribution	Total	Profit share	Cash return (to end of build out)	Equity multiple	Estimated IRR	Target IRR	Annual yield
			(£m)	(£m)	(£m)		(£m)				
Promoter	Cash	All	£1.5m	-	£1.5m	1%	£6.5m	4.3			4%
Co-Promoter	Cash	3-4 up to LDO grant	£6.0m	-	£6.0m	n/a	£18.0m	3.0			n/a
Core Investor 1 (Development)	Cash	15 yrs (5-7 per investor)	£18.0m	£33.0m	£51.0m	41%	£112.0m	2.2	16.5%	15-20%	n/a
Core Investor 2 (Development)	n/a	15 yrs (5-7 per investor)	£55.0m	-	£55.0m	41%	£97.5m	1.8	14.2%	12-17%	n/a
Core Investor 3 (Long-term)	n/a	Long-term years 15+	£30.0m	-	£30.0m	41%	n/a	n/a	7.0%	6-10%	7.0%
Church Commissioners	Land	All	£7.5m	£44.0m	£73.5m	56%	£126.5m	16.9			27.1%
Medway Council	Cash	Medium term	£0.5m	-	£0.5m	0.5%	£1.2m	2.4			4%

As outlined in the cash flow graph and the table of results, the indicative model shows that SHLLP breaks even on a revenue basis (i.e., not including profit share) in year 12 and then produces an annual annuity of c.£3.4m, but when capital receipts are included the break-even point moves forward to between years 3-4, with net cash generated of over £200m in the estimated 21 year period from the formation of SHLLP to full occupation of Stoke Harbour.

This gives the opportunity for all investors to make their target returns, and we consider there to be opportunity for significant uplift as our indicative model is based on a number of conservative assumptions (see Appendix VIII).

Figure 27: Cash flow graph for SHLLP

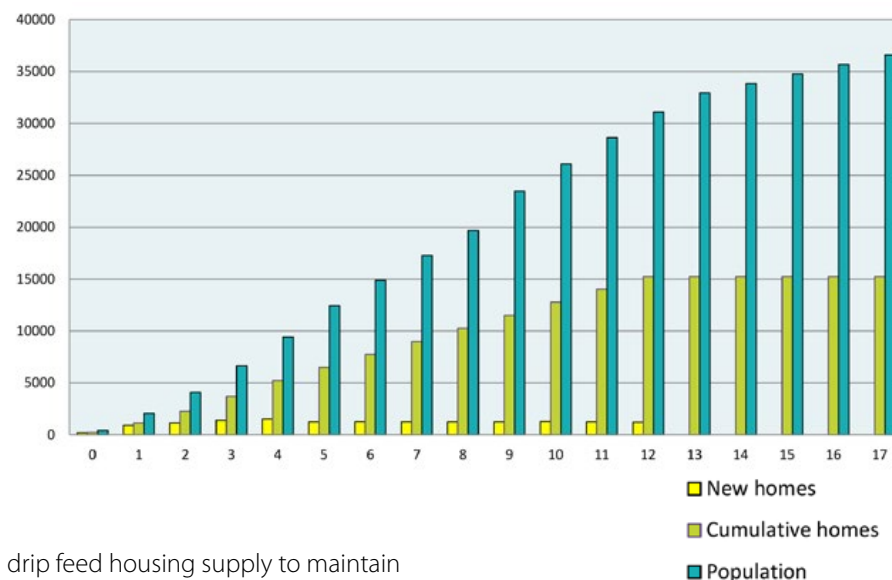


b) Phasing Plan and Delivery Timeline

Figures 28 and 29 show the projected timeline for the delivery of Stoke Harbour in terms of pre-planning, social and transport infrastructure and house-building. The construction will be split into three phases of four years, with milestone reviews after each phase and constant monitoring of market absorption so that SHLLP can respond quickly and adjust marketing, pricing and other strategies accordingly.

As outlined in our Vision section, rapid build out is central to the growth plans for Stoke Harbour, which averages 1,250 homes per year. Our target build out rate is 4-5 times the current UK average. We believe that this and higher is achievable through our delivery model. The current estimated UK average of 50 homes per year per site is driven by housebuilders' need to

Figure 28: House-building and projected population growth



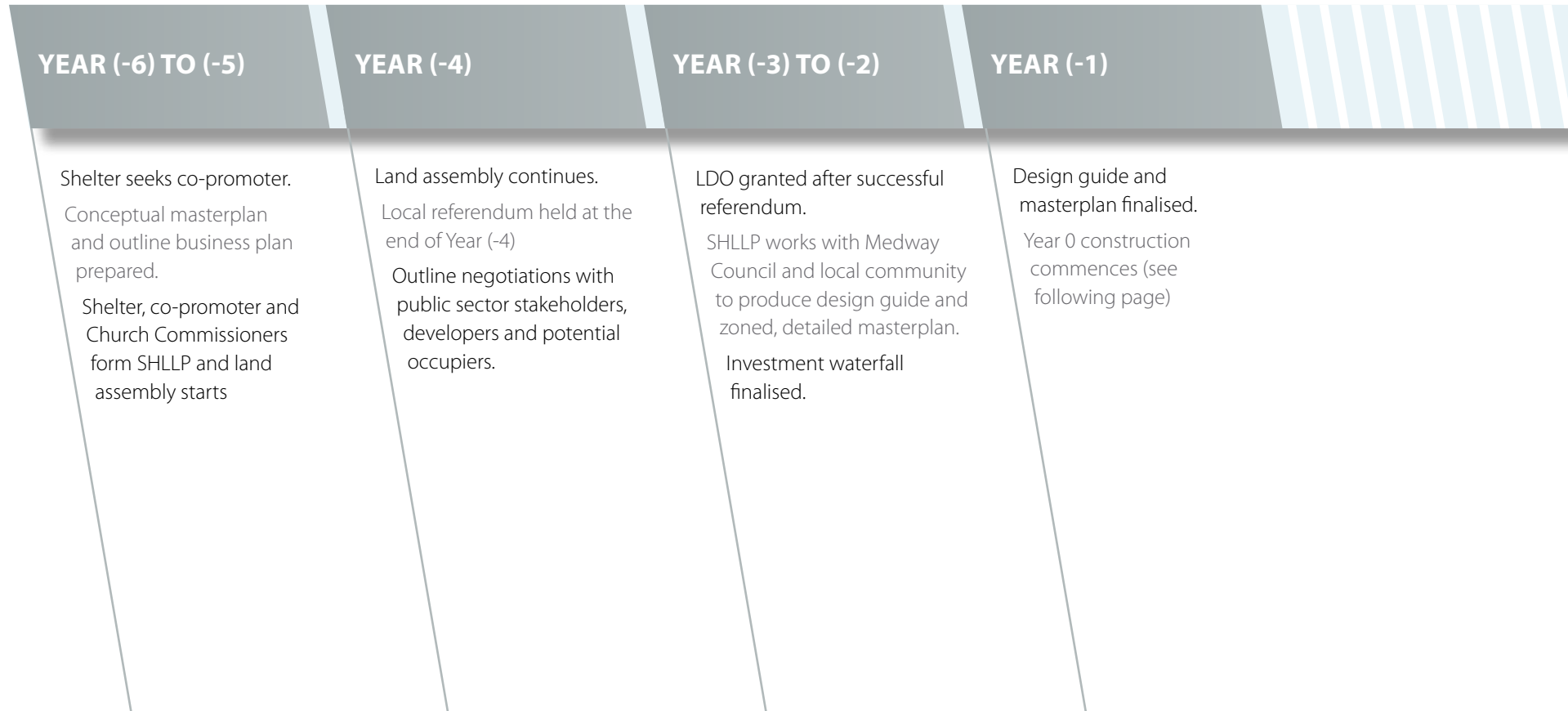
drip feed housing supply to maintain sale prices and margins.⁴⁰ Our targets are based on Northern European delivery models, where rates in excess of 700 units per site are not uncommon⁴¹ often through land parcelling and off-site construction.

⁴⁰ Factors affecting housing build-out rates, Adams Prof.D., Leishman Dr.C., Department of Urban Studies, University of Glasgow, [http://www.gla.ac.uk/media/media_302200_en.PDF accessed 20.02.14]

⁴¹ Set out in the Appendices of Shelter's first round submission to the Wolfson Prize

Figure 29: Stoke Harbour construction timeline

Land asset transfer from SHLLP to the Community Trust



PHASE I : YEAR 0

NHS polyclinic, nursery/primary school, small secondary school, sports fields, children's centre, youth activity facilities, park and play area

New road North from town centre to A228

Regional food store

Temporary train station and car park

PHASE I : YEAR 1-2

Town square and associated commercial space

Town centre wi-fi

Shared emergency services hub

New Laing O'Rourke offsite manufacture plant on industrial area

New road North East from town centre to A228

Permanent station

Broadband

PHASE I : YEAR 3-4

Three neighbourhood hubs with: Community centres, nursery / primary schools, parks and play areas, sports facilities, local libraries, GP surgeries and dentists.

Extension of the small secondary school and a new small secondary school

New commercial space between town centre and rail station

Allotments and ecology/conservation areas

Start of harbour construction

PHASE II : YEAR 5-8

Harbourfront retail and commercial space; water related tourism and leisure opportunities.

One neighbourhood hub with a community centre, nursery / primary school, park and play area, sports facilities, local library, GP surgery and dentist.

Second regional food store.

Further town centre commercial space and a new business park.

Country house hotel

Parks, play areas and ecological/conservation areas

Car parking to support role as Hoo Peninsula centre, including multi-storey at rail station and edge of centre locations.

Continued broadband roll out

PHASE III : YEAR 9-12

Further harbourfront and canal development and commercial space.

Community hospital.

Two more neighbourhood hubs with community centres, nursery / primary schools, parks and play areas, sports facilities, local libraries, GP surgeries and dentists.

New secondary school and expansion of existing small secondary school.

Completion of town centre commercial space and public realm.

Medway University satellite and main library.

Urban hotel and second country house hotel.

Expanded emergency services hub

Parking capacity and broadband roll-out growth.

Achieving accelerated build out rates

In line with the Key Principles of a New Garden City Growth Plan ((Part I, Section (c)), we will achieve these accelerated build out rates through a combination of measures designed to ensure sufficient capacity in the supply chain to allow 1,250 unit per year to be built, and also to maximise market absorption so that demand is sufficient to justify this build out rate. Key measures for this are:

Offsite manufacture

Licensing construction to small and medium sized firms

Segmenting the market

Utilising existing infrastructure where possible

Creating a sense of place at the outset

Providing plots for self-build from day 1.



© Laing O'Rourke Plc



Offsite construction in Stoke Harbour

We have discussed the use of offsite manufacturing extensively with Laing O'Rourke Plc, who are market leaders in this area and have significant investment plans in this industry. Laing O'Rourke Plc believe that, with the level of demand we propose, Stoke Harbour would be an ideal site for a medium sized offsite manufacturing facility⁴², which would be able to produce in excess of 2,000 units per annum. Stoke Harbour has an existing freight rail line, which, with the addition of a siding into the offsite manufacturing facility, would be able to ship structures via rail across the UK. Stoke Harbour is also well placed for the Channel Tunnel and ports servicing Europe. Therefore, while initial demand will be internal, Stoke Harbour's facility is expected to become a regional facility servicing the South-East and potentially further afield.

Manufacturing components offsite enables a team of four trained individuals to assemble a house in roughly four hours, after a construction period of around 30 days. Medium rise apartments can be constructed within 15 weeks.⁴³

As shown in the images [opposite], offsite construction is no longer the preserve of 1950s pre-fabs. It now allows a vast range of forms plans and materials to be used such that traditional, modern or customised homes can be constructed, which are indistinguishable in appearance from traditionally constructed homes but of superior build quality.

⁴² The initial factory will have a footprint of around 30,000 square metres with gross internal area of 48,000 square metres.

⁴³ Data supplied by Laing O'Rourke Plc

Employment Opportunities: Offsite Construction⁴⁴

The offsite manufacturing facility will employ c.350 full-time staff, sourced locally, with different levels of skills and training. Local people will be trained to provide the 50 degree-qualified digital engineers working with CAD CAM, and we will look to partner with Greenwich University to run courses at their engineering faculty in Medway to help with this training and training for future employees.

The remaining jobs will be for skilled section leaders, who will be offered additional NVQ level training, and for degree-qualified staff, who will be offered additional training for specific roles.

Additionally, around 100 apprentices will be required in various skills, including plumbing, electrics, kitchen fitting and cabinet making, and manufacturing. These will all be full time roles, with a 2-4 year commitment for employment, and placed via Stoke Harbour's Apprenticeship Training Agency, set up in conjunction with the Community Trust (Appendix XVI).

Using offsite construction creates a more socially sustainable model for employment in the construction industry. It is typically a struggle to recruit and retain young people into construction. Young people want stability, which construction is typically often unable to offer. Moving jobs to manufacturing facilities addresses some of the issues by giving people a location at which to work, from where they can base their home lives. Manufacturing facilities are also better places to work, without the exposure to inclement weather, dirt and dangerous working conditions which can all too often be found on building sites.

⁴⁴ All employment and factory data provided by Laing O'Rourke Plc.

Licensing construction to small and medium sized firms

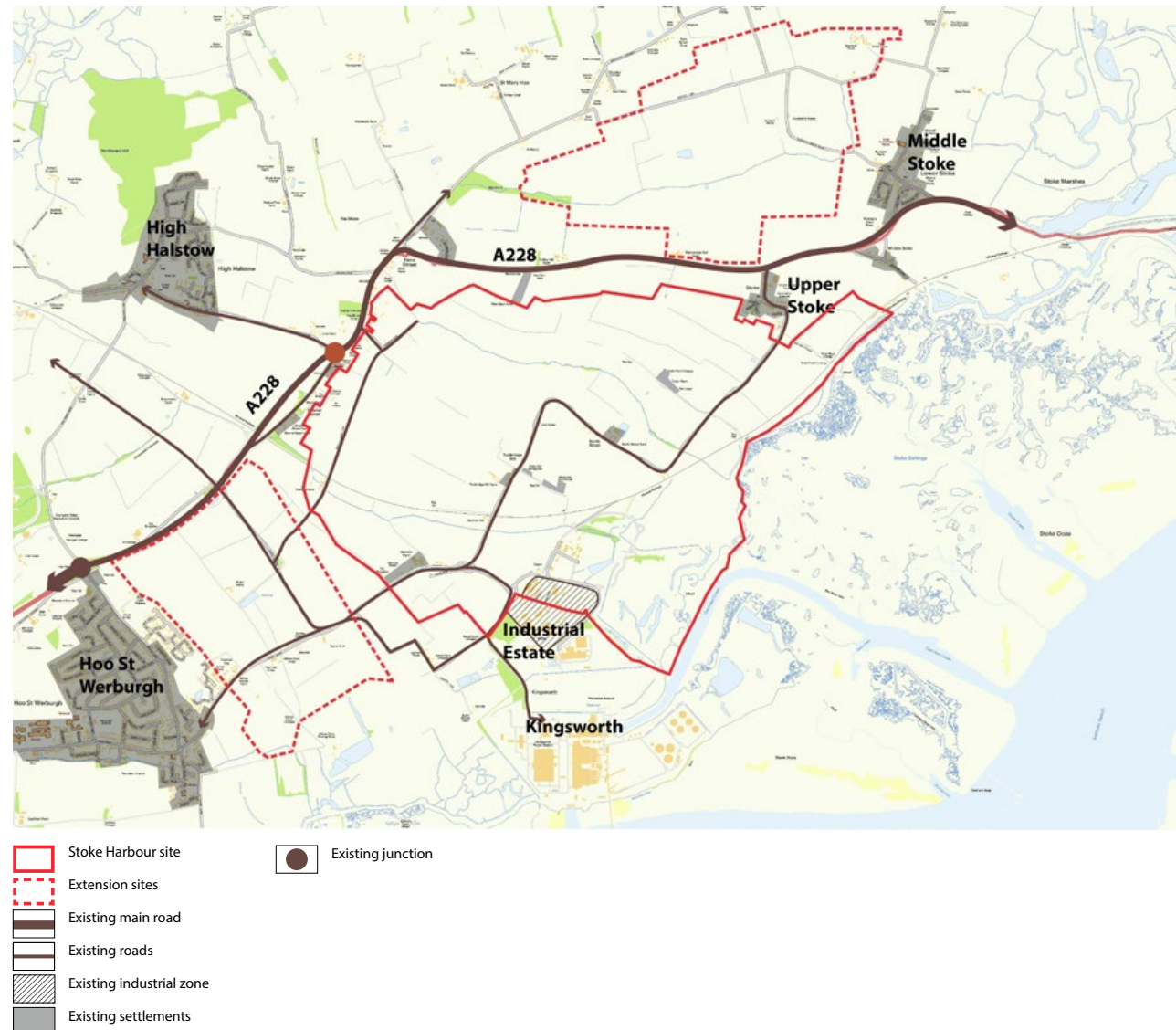
The major barriers to the multiple small to medium sized development and construction firms operating in the UK are access to land and finance. Our model overcomes these barriers by offering serviced plots with outline planning permission to small and medium enterprises (SMEs) to build under license and sell within pre-agreed price bands and timescales. This model is designed to encourage them to compete on quality and price and to be motivated by transactions rather than margin.

c) Stoke Harbour Growth Plan

The key principles of segmenting the market, utilising existing infrastructure where possible, creating a sense of place at the outset and providing plots for self-build from day one are best shown through the growth plan for Stoke Harbour, which is outlined in the maps below, and described in detail in Appendix VII. The growth plan is inherently intertwined with the investment waterfall (Part III, (d)) and financial justifications for each development opportunity.

Figure 30 shows the Stoke Harbour as it currently exists, with a number of farm buildings on the existing road infrastructure and an existing industrial estate and power station complexes to the South West.

Figure 30: Stoke Harbour as existing- Year 0



The first few days

As outlined in Figure 31, the granting of planning permission will trigger the first steps of the investment waterfall, which finances the initial building of a social infrastructure hub (NHS polyclinic providing GP surgery, dentist, pharmacy and opticians, nursery/primary school, small secondary school and child/youth facilities) and a 3,000 square metre regional food store. This is justifiable from existing Hoo Peninsula demand (there is no regional foodstore on the Peninsula) and would represent an attractive opportunity for an investor due to the lease length (typically c.20 years) and low credit risk of the tenant (a large food retailer). This would be pre-let with an agreement negotiated at the pre-planning stage, contingent on planning permission.

It will also trigger the first house building, which will consist of detached and semi-detached low density larger residences based around the fringe of the settlement on existing roads. Self-build plots will also be offered in accessible areas. Figure 31 illustrates how this may proceed based on the draft masterplan and the existing road infrastructure.

Figure 31: Stoke Harbour Year 0-1

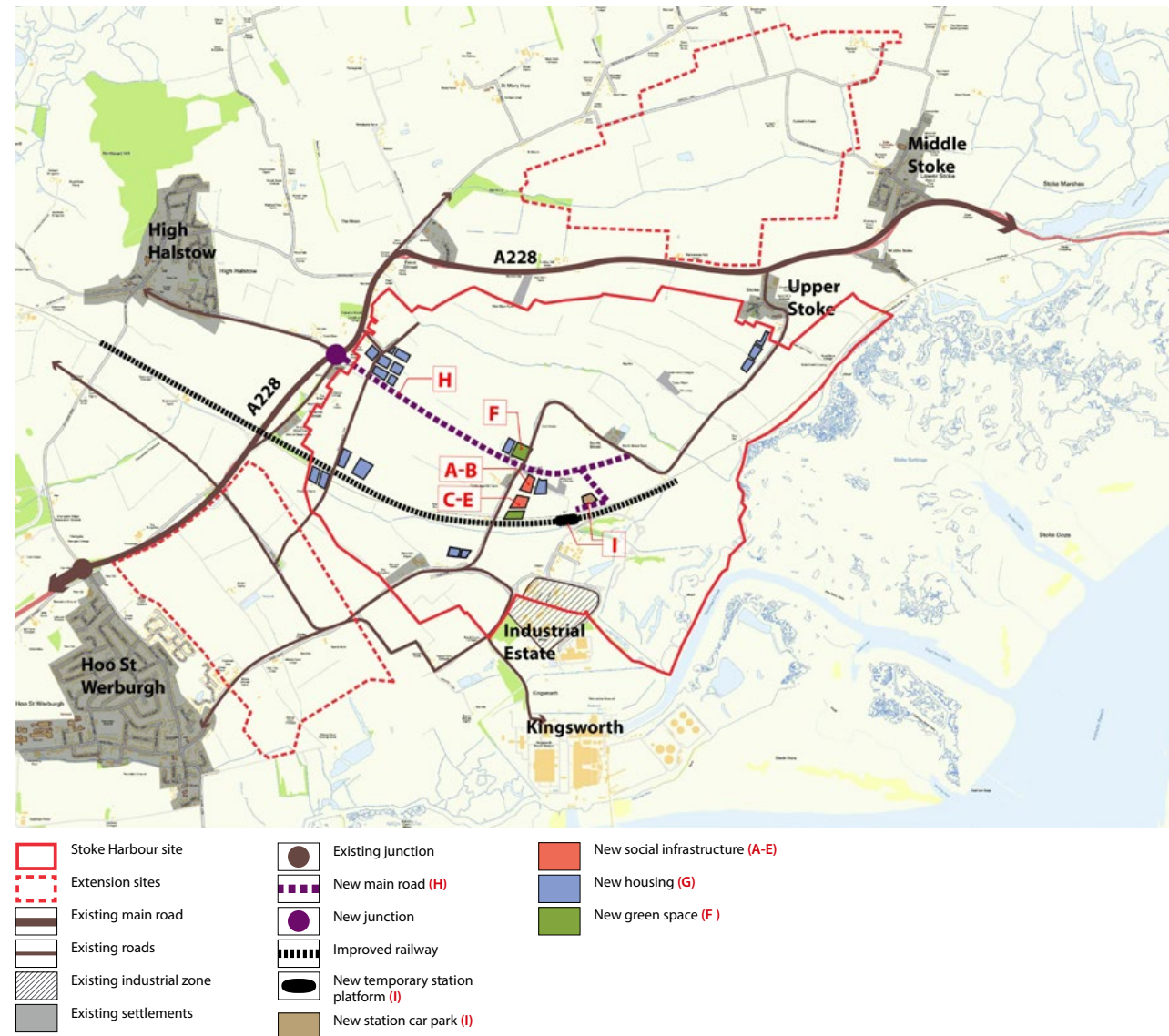


Table 9: Stoke Harbour year 0-1, detail for Figure 31

Map ref	Infrastructure or housing strategy	Justification	Financial justification	Financial return produced	Trigger contingencies
A.	Regional food store	Existing demand on the Hoo Peninsula plus future demand	Pre-let on c.20 year lease, planning and letting risk removed for investor.	Annuity income	Planning permission and pre-letting
B.	NHS polyclinic (GP surgeries, dentists, opticians, pharmacy and children's centre)	Existing demand on the Hoo Peninsula (none of these services are available through the NHS on the Hoo) plus future demand.	NHS pre-agreement to 45-year lease provides guarantee and low risk return. Rent is based on construction cost (with no land cost) so is low for the NHS.	Annuity income	Planning permission, pre-letting and time and cost guarantee from the construction partner
C.	Small secondary school, including community sports fields.	There is one existing secondary school on the Hoo Peninsula. As second school would give choice and competition help improve educational standards plus provide spaces for new residents.	DfE pre-agreement to 45-year lease provides guarantee and low risk return. Rent is based on construction cost (with no land cost) so is low for the DfE.	Annuity income	Planning permission, pre-letting and time and cost guarantee from the construction partner
D.	Nursery/primary school	To meet the new demand.	As above	As above	As above
E.	Youth centre including, eg small skate park	Limited existing youth facilities on the Hoo. This provides facilities to encourage early movers and also to provide benefits for existing residents.	Funded by SHLP through the social infrastructure levy. The asset would be donated to the Community Trust.	n/a	n/a
F.	First park near to town centre	Help to build character of central area and provide leisure space for residents.	As above	n/a	n/a
G. (Housing)	Detached / semi-detached and self build on the rural fringe along existing roads. Also first houses near to the central hub.	This type of housing is consistent with the existing stock, utilises existing infrastructure, has expected demand and high profit margins, thus bringing cash into SHLP at an early stage.	Low land acquisition premium, profit/risk sharing model plus existing demand for these larger residences in the area should attract developers.	Development profits. SHLLP receives upfront premiums plus profit share.	Planning permission
H.	Main inner access road from the A228 running South to meet existing Stoke Road	This road will provide the connectivity required to bring traffic to the town centre, as well as opening a new artery for house-building.	The estimated cost of this road is £10m (1 mile). SHLP will fund this via social infrastructure levies and a short term loan if needed.	The return is achieved from the development it facilitates.	Planning permission and signed agreements for the regional food store and NHS polyclinic.
I. (Transport)	Initial temporary train station and ground level car park	A (relatively) small initial outlay that creates a step change in connectivity for Stoke Harbour and the Hoo Peninsula.	Existing demand and future demand justify the TOC's inclusion in their franchise. Land value uplift gives SHLLP return.	Car park income and user tolling ticket levy.	1) Government to request a "costed option" in TOC franchise bids. 2) Start of construction.

Phase 1: The first four years

Providing social infrastructure at the outset, building at several nodes, including the town centre, and careful management of the public realms will help to create a sense of place and develop the identity of Stoke Harbour. The social and community aspects of the new settlement are important factors in attracting new residents and must not be overlooked in these early stages. The Community Trust will work with existing organisations to utilise the social infrastructure, open spaces and natural surroundings to provide new residents with social, leisure and conservation-based opportunities.

Market absorption rates – real or perceived – are a major constraint on developers' build out rates. We will overcome these barriers by segmenting our offer across a range of different tenures, designs and price points, and by working on a number of different construction sites in parallel (eg, town square, neighbourhood hub, harbour front, rural fringe) to achieve the breadth of dwelling types we are seeking to further broaden the market absorption.

Figure 32: Stoke Harbour year 1-2

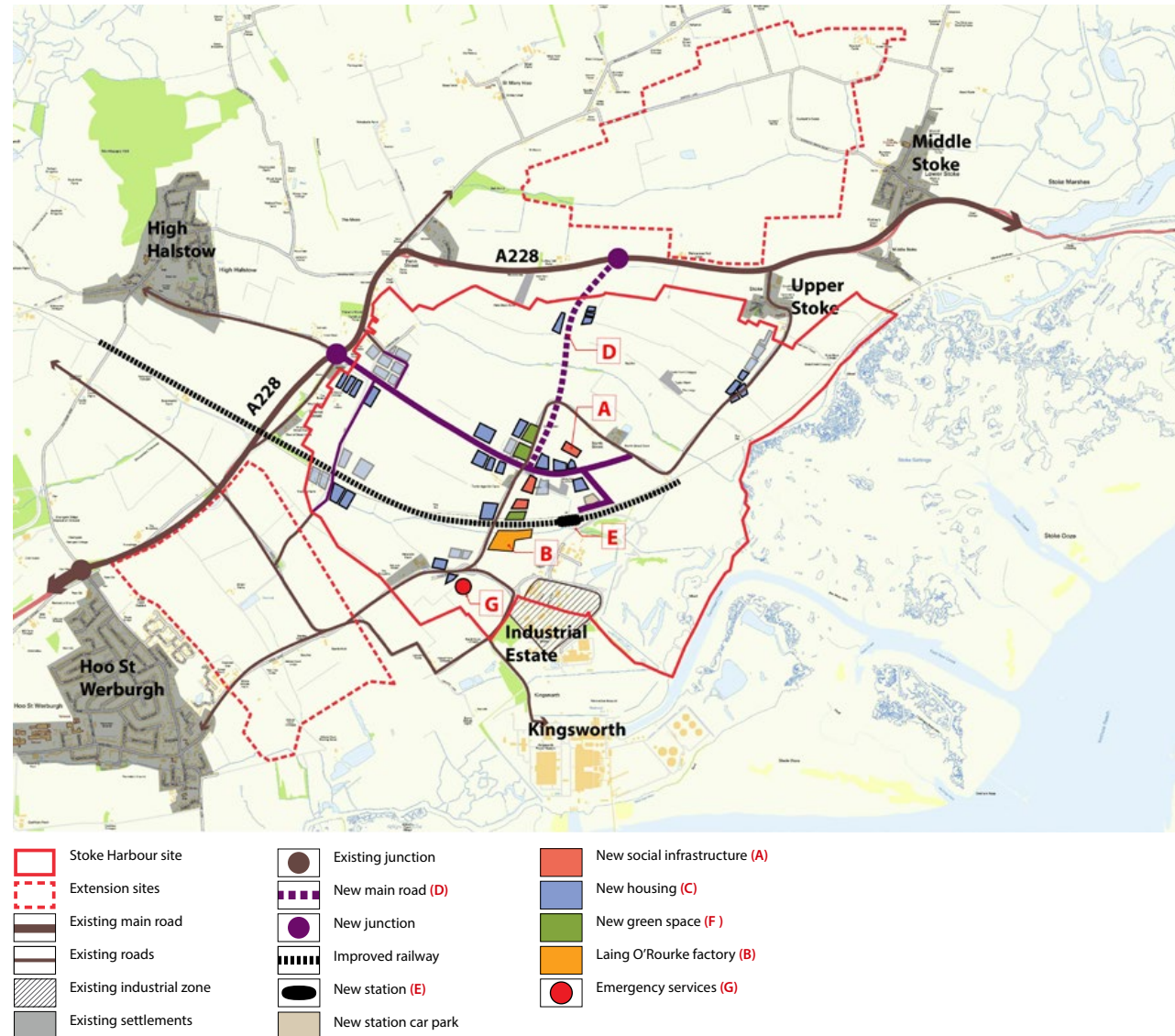


Table 10: Stoke Harbour year 1-2, detail for Figure 32

Map ref	Infrastructure or housing strategy	Justification	Financial justification	Financial return produced	Trigger contingencies
A.	Mixed use commercial space in half of town square (20,000 sqm GIA)	The town square is a key identifying characteristic and focal point, its energy is vital to attracting new residents. The medium rise massing allows medium density housing to follow.	No upfront land cost, construction time and cost guarantee and profit share rent lower risk. Pre-letting and central management reduce letting risk.	Rental income with expected large future yield rises.	Activation of passenger rail link. At least half pre-let. Commitment that Phase I timetable is not market absorption dependent.
B.	Laing O'Rourke offsite manufacturing facility	To meet projected build out rates the offsite manufacturing facility will need to be operational. Estimated construction time and employee training time is 1 year.	No upfront land cost and very low head rent as incentives. The employment narrative and delivery impact justify this approach.	Low level rental yield on land acquisition value.	Commitment to use offsite manufacturing for all social housing, PRS, shared ownership, schools, hospitals and commercial.
C. (Housing)	Large homes and self build at fringe and first terraces more centrally on the new road, including elderly provision. First medium rise apartments near town centre/rail station.	Medium rise apartments start building the urban character. Adding in terraces including with elderly provision increases the sale price points and target markets, plus the density. Self-build and large homes in the rural fringe will help with cash flow and population.	These dwellings cut across price points and demographics and will include a small amount of PRS as well as private sale therefore maximising market segmentation and absorption.	Development profits, margins for s/m builders. SHLLP receives upfront premiums plus profit share.	Start of construction of new SW-NE road, permanent rail station and other transport upgrades.
D.	Upgrade of Stoke Road and extension to the A228 to give a SW-NE route.	This road will provide the connectivity required to bring traffic to the town centre, as well as opening a new artery for house-building.	SHLP will fund this via social infrastructure levies.	The return is achieved from the development it facilitates.	Substantial completion of the Year 0 road from the A228 to the town centre.
E. (Transport)	Start construction of permanent rail station. (Further transport strategy detail on page 46)	It is important that the rail station's capacity grows ahead of the population and that the temporary station is quickly upgraded.	Future demand from population growth.	The return is achieved from the development it facilitates.	Completion of the temporary station.
F.	Construction of further parks and play areas in cultivation of new ecological areas.	Demonstrates commitment to garden city principles, improves attractiveness and provides Community Trust with opportunities for involving residents.	Improves attractiveness and market absorption. Allows involvement of important external stakeholders such as RSPB and Natural England.	Development profits. SHLLP receives upfront premiums plus profit share.	First 200 homes and first road constructed.
G.	Shared emergency services hub.	An important popularity measure and meets existing demand on the Hoo (part of Medway Council's projects list)	Possible rental model akin to a school/hospital, but otherwise head rent justifies outlay.	Head rent return	Lease Agreement with the Emergency Services

Figure 33: Stoke Harbour year 3-4

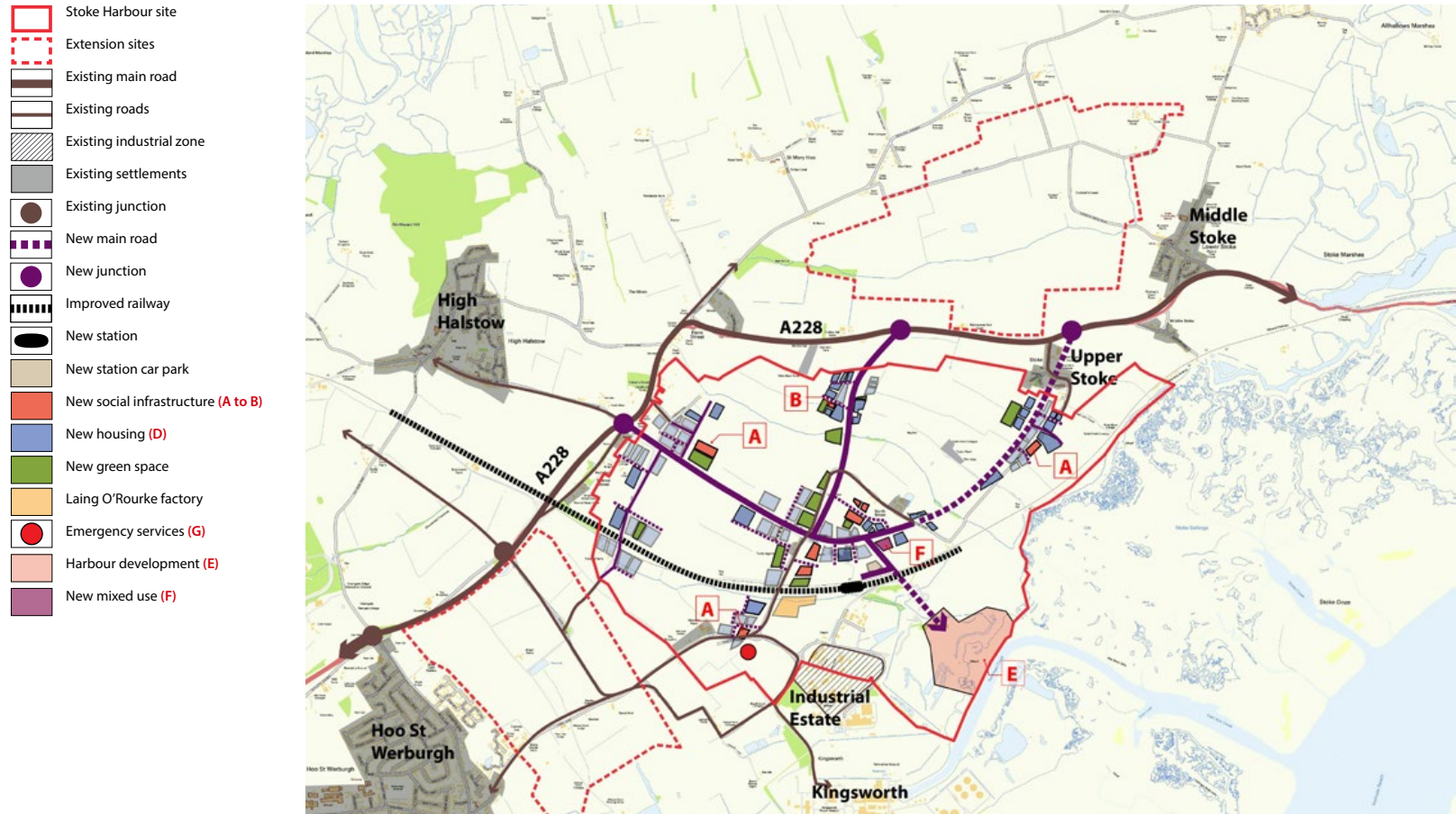
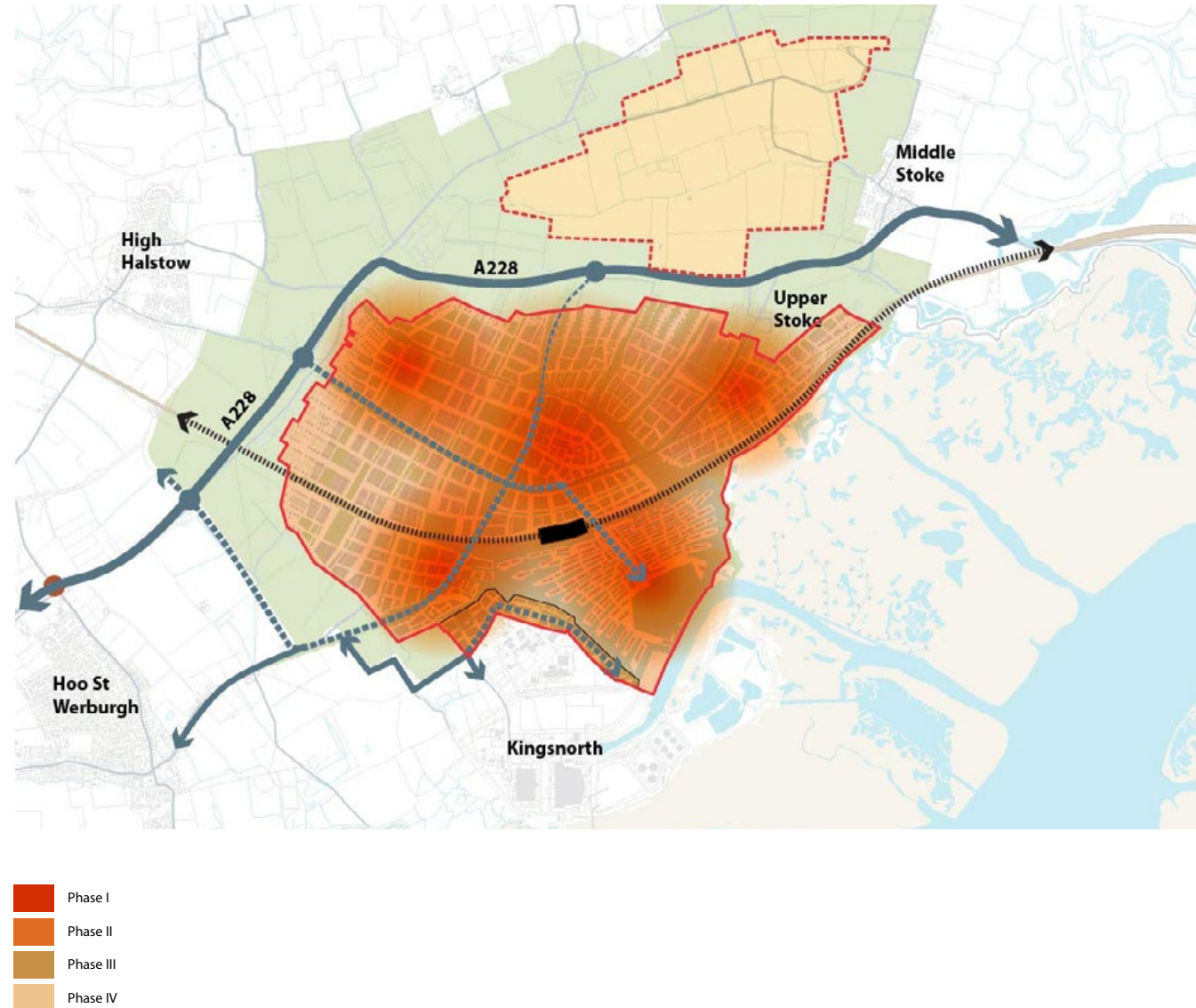


Table 11: Stoke Harbour year 3-4, detail for Figure 33

Map ref	Infrastructure or housing strategy	Justification	Financial justification	Financial return produced	Trigger contingencies
A.	Three neighbourhood community hubs to aid the creation of walkable neighbourhoods.	Each hub has: GP surgery, dentist, community hall, nursery/primary school, park, fields and play area, small library, eco and allotment areas and youth facilities. The services will attract new residents.	These will be funded by infrastructure levy contributions to SHLLP and managed by SHLLP in conjunction with the Community Trust.	Small head rents from some of the occupiers.	The substantial completion of construction of the year 1-2 homes.
B.	New small secondary school and extension of existing small secondary school.	Population growth will require regular new school facilities to deliver capacity ahead of demand.	DfE pre-agreement to 45-year lease provides guarantee and low risk return. Rent is based on construction cost (with no land cost) so is low for the DfE.	Annuity income	Construction of Year 1-2 homes, pre-letting and time and cost guarantee from the construction partner.
C.	Construction of smaller side roads.	These will help form and give opportunities for adding definition and density to the neighbourhoods.	These will be funded by infrastructure levy contributions to SHLLP.	They facilitate further development.	Construction of Year 1-2 homes.
D. (Housing)	Nucleated house-building around community hubs, including the first social housing apartments and houses and elderly and wheelchair access homes.	Centering homes on neighbourhood hubs will help build communities and character to form.	Construction should now be happening across all tenures and price points and at sites with different characteristics, which should maximise market absorption.	Development profits and annuity returns. SHLLP receives upfront premiums plus profit share.	Start of construction of neighbourhood hubs, additional schools and side roads.
E.	Start of the harbour construction, starting with the main harbour front, protecting walls and the waterfront properties, and then working back from there year by year to produce the 'canal' area.	Waterfront is a prized asset in the UK. Utilising this and making it accessible will form a big part of Stoke Harbour's character and regional identity. Working with the RSPB, Natural England and the new Stoke Harbour Conservancy Agency we will mitigate and control impact on existing marine life and habitats.	The harbourside and canal properties would be a mixed development consisting of premium properties and retail and commercial opportunities and therefore allow for increased development profits and rents.	Development profits and annuity returns. SHLLP receives upfront premiums plus profit share.	Completion of year 1-2 house-building and social infrastructure.
F.	Mixed use developments on the road between the rail station and the town centre.	This is an important walking route and the footfall and proximity to the station would present attractive retail and commercial opportunities.	This increases the commercial space (under the same strategic management as the town square)	Rental income with expected large future yield rises.	Completion of year 1-2 house-building and significant progress with years 3-4 housebuilding.

The Phase I construction plan has been outlined in the tables and figures above. Figure 34, shows how the growth for Phases II and III work continue around the neighbourhood hubs (of which more would be created as the construction programme moves forward).

Figure 34: Stoke Harbour phased neighbourhood growth plan



d) Investment Waterfall: Creating the Confidence to Invest in Stoke Harbour

During the pre-referendum stage SHLLP will enter into discussions with potential developers, investors, retail and commercial occupiers, Government, the local NHS Trust and Department for Education.

Once the LDO has been issued, SHLLP will finalise these discussions so that there is a series of contractual agreements for investment or occupation, based on the completion of specified trigger contingencies (construction and population/market absorption milestones) the “investment waterfall”, examples of which are given in the Section above, in relation to Phase I. This will require commitment from the NHS and Department for Education to agree to leases on polyclinics, schools and a hospital, at stages where there would be excess capacity in order to anticipate the growth in demand through Stoke Harbour’s construction phases.

The investment waterfall provides developers with certainty that they have secured the opportunity, but with confidence that they will not have to commit any funds without supporting demand, and therefore helps to protect investors and the public sector from over-reaching if market absorption is lower than projected.

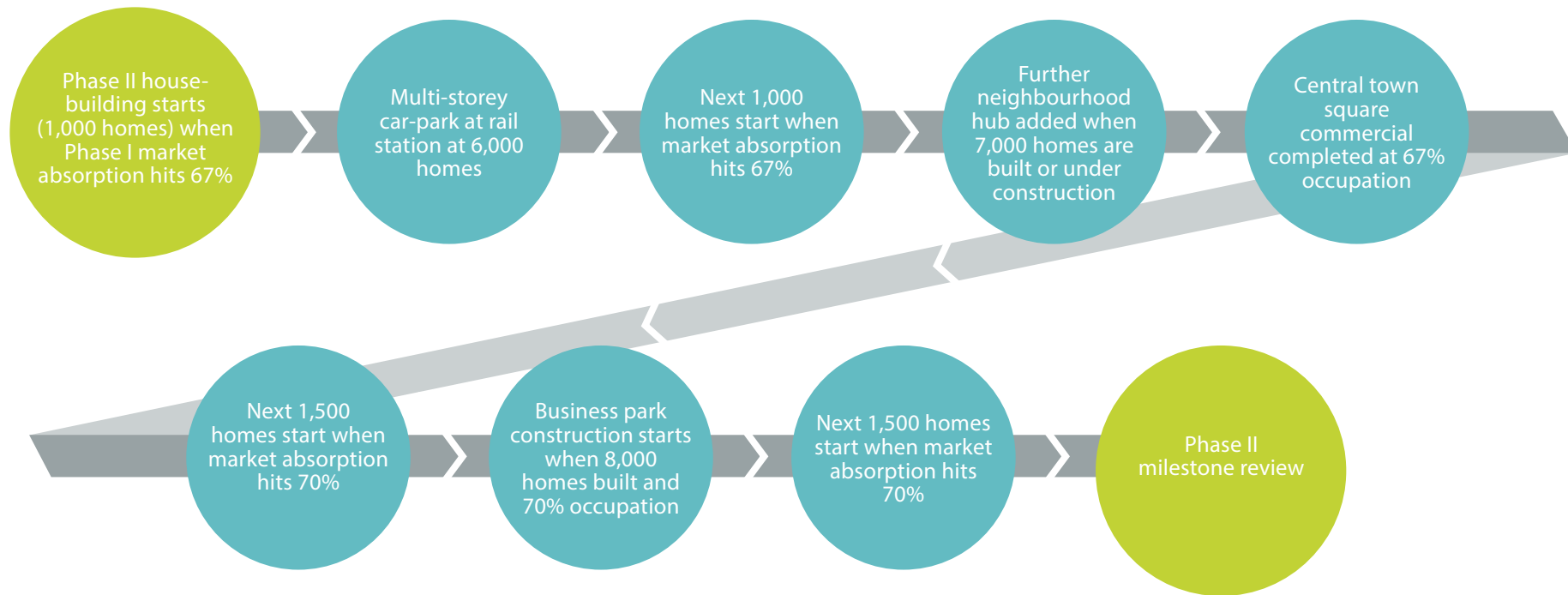
Something needs to kickstart the waterfall, and for Stoke Harbour this will be the utilisation of existing Hoo Peninsula demand for services (as outlined above), and the start of the upgrade to rail infrastructure with the construction of a temporary station.

The outline of the investment waterfall and trigger points for Phases II and III is below, (full detail at Appendix VII).

Market absorption will be tested on a monthly basis and adjustments made to marketing spend, tenure mix and pricing to allow construction to meet demand, especially in respect of the release of land for self-build. This should be reviewed at the end of Phase I and if market absorption is say, less than 60%, then consideration should be given to slowing down the future construction rate. However, momentum is key and if market absorption is above this rate and there is felt to be sufficient demand based on viewings/enquiries/properties under offer etc then the construction programme should be maintained.



Figure 35: Phase II Investment Waterfall

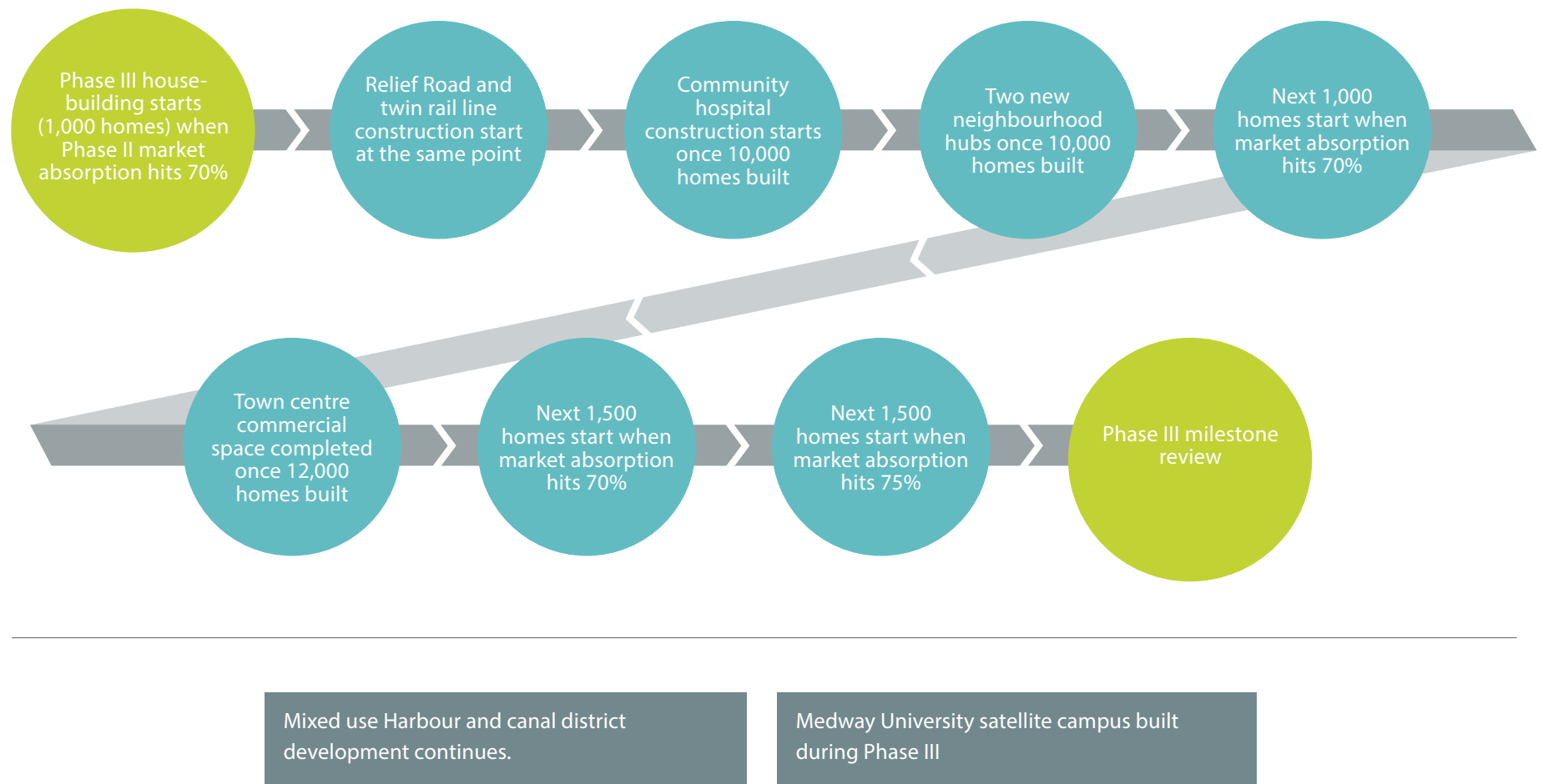


Harbour / canal construction continues.
Mixed use waterfront developed.

Second regional foodstore built when
population reaches 15,000

Play area, conservation/eco areas and parks
added as the city grows.

Figure 36: Phase III Investment Waterfall



e) Applying the Transport Strategy to Stoke Harbour

As outlined in our Vision section, our transport strategy involves making immediate improvements where it will create a step change in connectivity for the Hoo Peninsula (re-opening the passenger rail service), or where it removes a potential constraint to the growth of Stoke Harbour (doubling the capacity of the Four Elms roundabout). We will then wait for Stoke Harbour to take hold and become a success before committing the large amounts of investment required to build a second rail track and a relief road. When these large upgrades do take place, they will be constructed at the same time in the same transport corridor so as to minimise disruption and cost and maximise construction efficiency.

Phase I strategy (first 4 years)

Double Four Elms roundabout capacity and approach via Four Elms Hill

Estimated cost £22m.⁴⁵ Full detail Appendix V.

Restore passenger service to the Gravesend – Grain railway⁴⁶

Estimated cost: £15m, including a temporary and then permanent station at Stoke Harbour, the addition of a passing point, signalling and junction upgrades, works at Gravesend station and the installation/upgrade of level crossings. Appendix V.

Adding a passenger service to this functioning freight railway will make Stoke Harbour a 45 minute rail commute from King's Cross via HS1 or Charing Cross, both from Gravesend (Figure 18, page 46). This will be an important pull factor in attracting residents and hugely increases the geographical reach of Stoke Harbour's market to include London based workers, which will be important both in the early years when Stoke Harbour does not have an internal economy and therefore many of its residents will need to commute to work, and also in later years in allowing residents to access high earning employment in London to be spent in the local economy.⁴⁷

Gravesend and Ebbsfleet are also being considered for extensions to the Crossrail programme⁴⁸, which would add connectivity to Canary Wharf, Liverpool Street, the West End and West London.

⁴⁵ Estimated cost based on £10m/mile as per the proposed A11 upgrade and previously proposed £5m Bracknell twin roundabout fly through.

⁴⁶ We have assessed our estimated costs for the restoration of the passenger service against publically available material available in respect of the EastWestRail committed, funded scheme to re-introduce passenger and freight services between Bedford and Oxford, Milton Keynes and Aylesbury. The latest GRIP level 4 (Governance for Railway Investment Projects) cost information (available at <http://www.eastwestrail.org.uk/sites/default/files/images/shared/documents/east-west-rail-grip4-business-case-report-jul-2010.pdf> accessed 1 August 2014) shows total capital expenditure of £178m-£212m for 101km of track, which includes track upgrades but also re-opening disused line, and works at 8 stations, an average of c.£2m per kilometre. Our total estimated railway infrastructure cost is £64m in respect of 12km of track and 2 stations, or an average of c.£5.3m per kilometre. We therefore consider our estimate to be a prudent one.

⁴⁷ We have carried out further comparisons against the schemes assessed as having positive business cases in the ATOC June 2009 report, "Connecting Communities, Expanding Access to the Rail Network", which range from £1.1m-£2m/km when upgrading existing lines to £4.4m-£5.6m/km where line is being reinstated or new lines built. Given that our proposal involves elements of upgrades and new track we again consider this benchmarking to show our cost estimates to be prudent.

⁴⁸ www.networkrail.co.uk/RoutePlans/PDF/RouteA-Kent.pdf (accessed 24 July 2014)

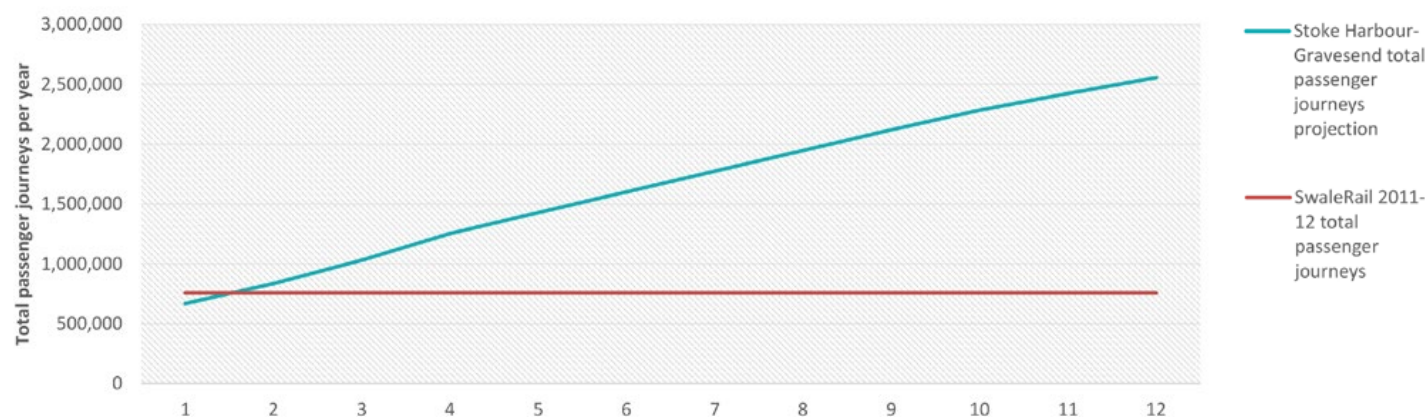
Running a new passenger service requires either a private service run through an Open Access Agreement with Network Rail to be set up, or an existing Train Operating Company agreeing to extend their franchise to this service. The TOC option is the more attractive, as a private service would need to source rolling stock, experienced staff and management expertise. To achieve this we would also ask Government to request a “costed option” in the franchise bids for the South East TOC contract, which is due for renewal in 2018.

Whether it is feasible for a TOC to operate a service on a new rail line will to a large extent depend on the economics of providing the service. Based on our passenger demand calculations (Figure 37 below and Appendix V), we consider the economics to be such that it would justify a half-hourly service through Phase I and then more regularly in later phases. We anticipate demand would very rapidly grow to in excess of the demand for a local comparator, ‘SwaleRail’, the branch line between Sittingbourne and the Isle of Sheppey.

Subsidised bus service

We propose to provide a subsidised direct bus service at peak times from Stoke Harbour to Strood station (chosen as a suitable site for onward journeys through Medway) for six years. We will discuss bus new routes that take in Stoke Harbour without disrupting existing journey times with Arriva (the existing provider) and subsidise these until they are commercially viable. A viable bus service should help to reduce car use, improve connectivity to Medway for those residents without cars and reduce peak congestion. Estimated cost: £100,000 pa, growing to £200,000 pa for six years.

Figure 37: Projected Stoke Harbour rail extension passenger demand



Phase 2 strategy

During this period we will upgrade the roundabouts and roads of stretches of the A228 adjacent to Stoke Harbour, at an estimated cost of £15m.⁴⁹ We would also make small improvements to signals and level crossings anticipating the safety requirements of future growth at an estimated cost of £4m.

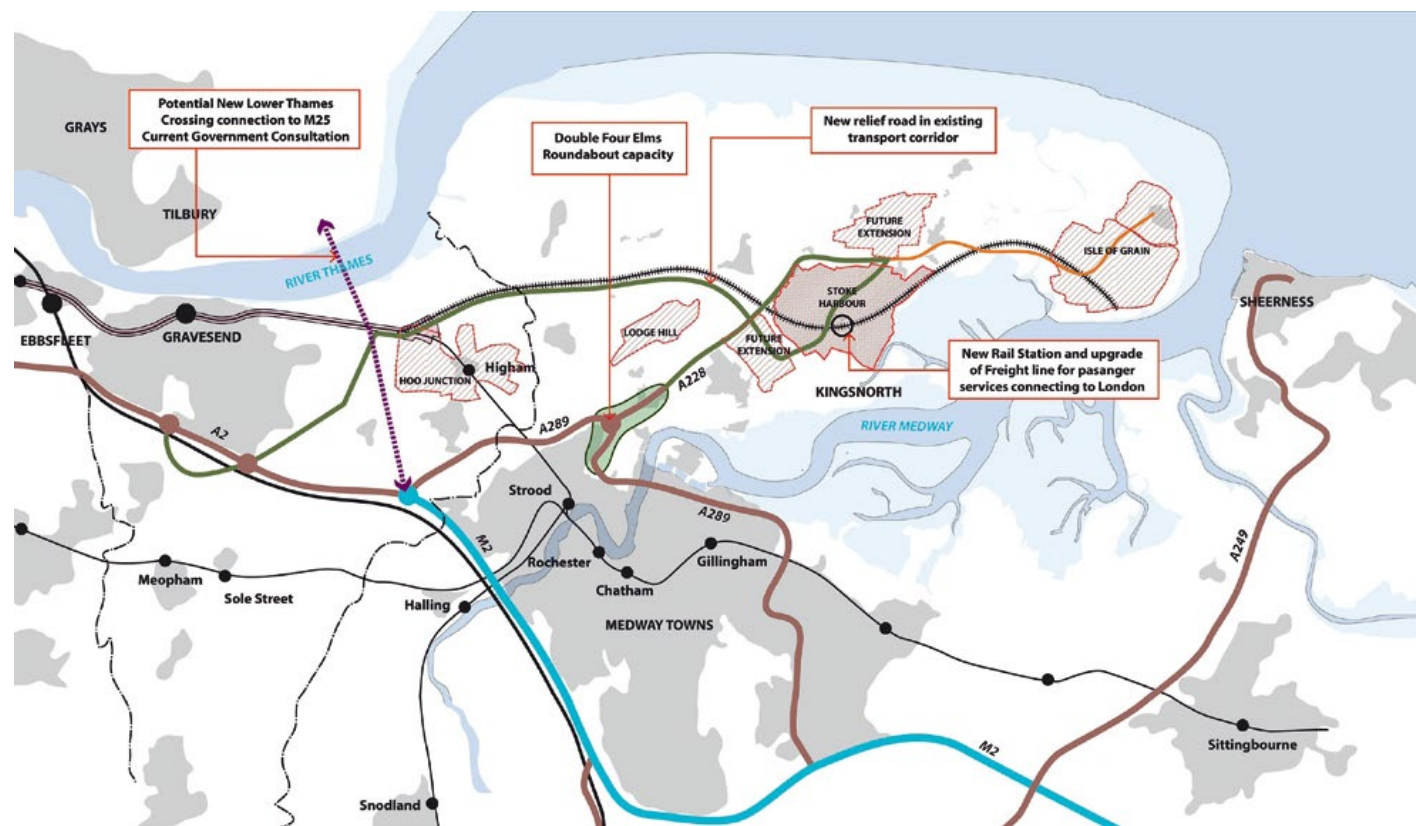
Phase 3 strategy

A relief road will increase connectivity to Gravesend and relieve pressure on the A228/A289. Our proposal is a forward-looking solution to highways access that will allow more significant long-term expansion, including the proposed orbital developments and the expansion of Stoke Harbour. This route also supports Kent County Council's ambitions for improving the A2 junctions at Gravesend and is designed to minimise environmental and local impact through use of the existing transport corridor created by the train line.

The estimated cost is £160 million.⁵⁰

The relief road will intersect with the proposed Lower Thames Bridge, should the M2 to M25 option be chosen, which will greatly increase Stoke Harbour's connectivity with Essex and areas North of the Thames.

Figure 38: Infrastructure diagram



During Phase 3 we will offer business rate subsidies to any private operator (or consortium) who is willing to put on a passenger ferry service to Medway from Stoke Harbour. Private operators who are willing to offer this service will also be granted commercial licenses to operate leisure boats from the harbour for trips along the Medway or out to the North Sea, which should help to cross-subsidise the service.

A functioning river ferry service should increase the profile of Stoke Harbour and the Hoo Peninsula within the region, increasing commercial opportunities for leisure and tourism.

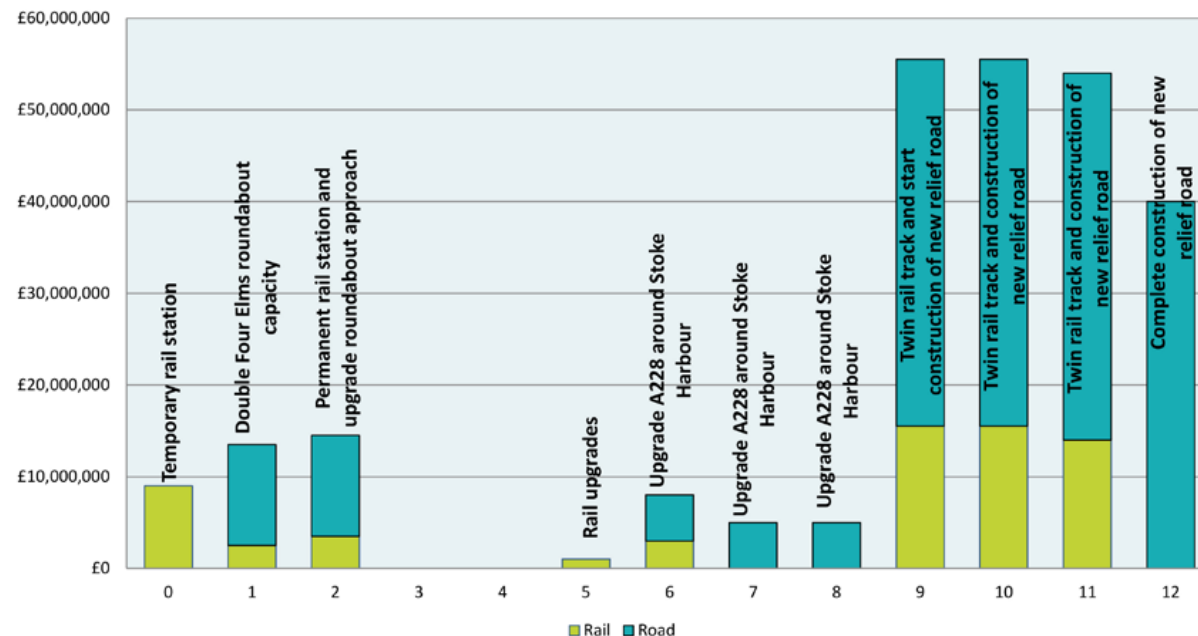
⁴⁹ Estimated cost based on £10m/mile as per the A11 roundabout and dualling of carriageway works proposed by the Highways Agency <http://www.Highways.gov.uk/roads/road-projects/a11-fiveways-to-thetford-improvement/>

⁵⁰ Estimated cost based on £16m/mile for single carriageway with passing points and A2 junction upgrade

Phase 4 Stoke Harbour expansion

Phase 4 development will require a new Stoke Harbour ring-road north of Lower Stoke (estimated cost £35 million) while the proposed Higham expansion and Grain settlements will require one new station and one expanded station, and the laying of new rail track (estimated cost of £30m-£35m⁵¹).

Figure 39: Graph of anticipated transport infrastructure expenditure (by year)



⁵¹ The increased frequency would make electrification suitable, as this would reduce the wear load on the track and produces less carbon dioxide than diesel trains, but has an estimated cost of £60 million for the full line to Grain.

f) SHLLP's Business Plan

SHLLP's business plan is to grant long leases over small areas of land within Stoke Harbour (as zoned according to the masterplan) to developers/investors in return for upfront premium payments and future profit shares on resale (thus benefitting from the land value uplift). SHLLP will be the over-arching organisation responsible for the management of the Stoke Harbour Estate and will receive head rent and estate service charge income from tenants. As assets are ceded to the Community Trust, the responsibility for management and head rents and estate service charge income will also be transferred to them. Further details of the asset transfer are provided on page 132.

In order to allow SHLLP and, in the future the Community Trust, to benefit from medium term land value appreciation, the head rents will be reviewed every five years and increased in line with average property price growth for that tenure and type of building/residence, with a cap for residential property based on 1.2 times the percentage local median wage increase. This is designed to ensure that the cost of property ownership does not become prohibitive if property prices rise, albeit that in theory the existence of a head rent and estate service charge should act as a small brake on property prices.

Tenure models

We outline below some of the proposed tenure models that we think will work well in Stoke Harbour and indeed in other garden cities. SHLLP would also consider other tenure models, particularly where they allow institutional finance to enter the house-building market.

Private sale

There are two distinct strategies for private sale. The first is a developer model where SHLLP will grant long leases over plots of land for a premium and then receive a profit share (via an overage) on the end sale of the property to the new resident. The second model allows small and medium house-builders who cannot afford the upfront land cost to be granted a license to construct homes and act as sales agents in return for a pre-agreed share of the sales proceeds (which is equivalent to construction cost plus a margin) and a 2% sales fee.

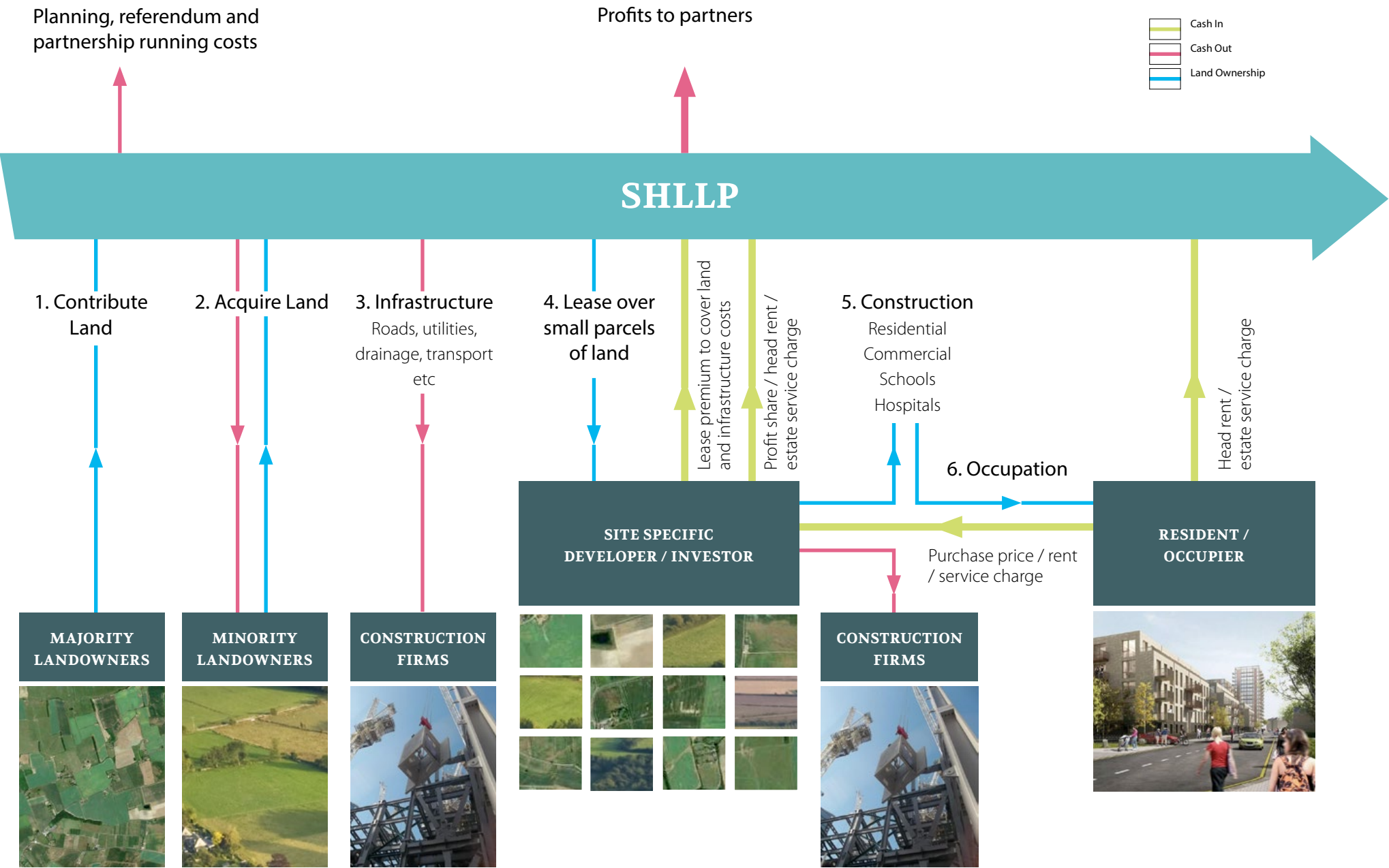
For private sale tenures, we understand that freehold ownership is a more attractive proposition (particularly outside of London) as it gives the home-owner greater comfort and security of ownership than a leasehold tenure. In order to provide perceived security to the purchaser, we anticipate the leasehold interests would be c.175

years, thus allowing a period of c.95 years before any loss in value. We will also make it very clear that we will support future applications for lease extensions. We will also set up a Scheme of Management for the estate, so that the requirement to adhere to Stoke Harbour's design code is maintained, in case of leaseholder enfranchisement.

For private sale properties a head rent of £10-£50 per property (depending on size) per month will be collected by SHLLP or other body, as directed.

SHLLP's indicative development return analysis, as shown in Table 15 on page 108, highlights that some building types (semi-detached and detached) have a greater profit margin than others (terraced housing and apartments). This is also true of homes that are located in the waterfront and harbour areas, which would command a premium in the market than properties elsewhere in the city. SHLLP will therefore look to negotiate agreements with developers whereby a land plot with high profit potential is matched with a plot with lower profit potential and the developer is expected to develop or arrange for the development of both. This cross-subsidy model should help to ensure that development of Stoke Harbour occurs across price-points and sites, which is a key component of the market absorption strategy.

Figure 40: Summary of SHLLP Business Plan



We will specify a minimum sales price for all housing, and a maximum sales price for each type of terraced housing and non-waterfront apartments, so that Stoke Harbour's initial affordability is retained. Therefore, a developer will be incentivised to develop the lower margin terraced and apartment buildings where potential profits are capped in order to gain access to the high margin unrestricted profits of the larger lower density housing.

We recognise that developers have specific market segments which they operate within and, for example, a developer at the high end of the market may not have the specific expertise for developing medium density terraced houses. We therefore expect our plot-matching policy to help small and medium builders realise opportunities through the subcontracting of the lower margin construction work, or for Laing O'Rourke's offsite construction solutions to be utilised.

Another important part of SHLLP's role will be ensuring that developers are meeting their sale targets for the lower margin homes, and this will be a criteria against which developers are assessed when applying for future plots for development.

Tenure flexibility

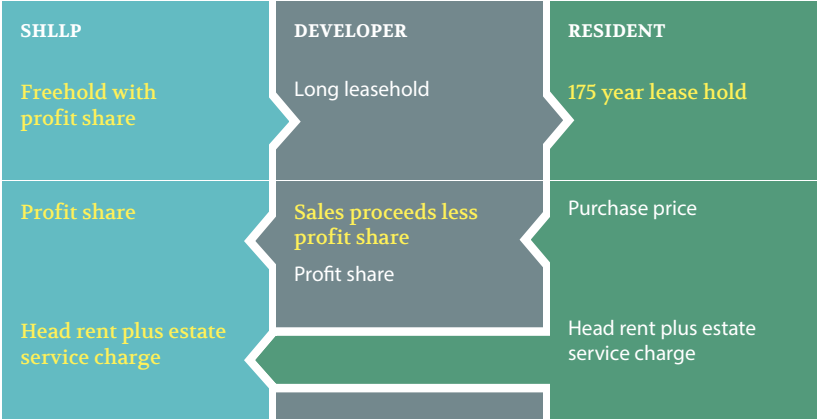
Developers should have sufficient flexibility so that should they find that there is greater demand for PRS rather than private sale during or post construction, they can choose to offer the property for rent rather than sale, with the head rent adjusted accordingly so that SHLLP shares in the rental profits from any letting or sub-letting (for which the head rent is double the private sale level).

Alternatively, SHLLP would help the developer or house-builder to find a buy to let investor to purchase the home(s) and allow them to realise their construction/development profit.



Figure 41: Stoke Harbour Tenure Models

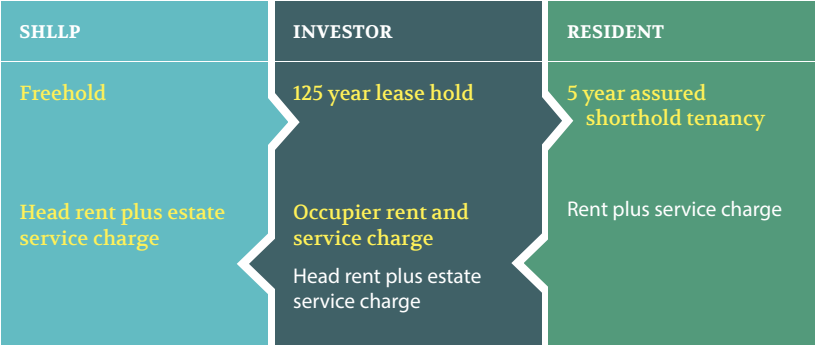
Private Sale



The diagrams below show the anticipated tenure models and how SHLLP will receive income (see also Appendix VIII).

The freehold will contain an overage specifying that 5% of any gain on sale by the resident is payable to the Community Trust. This enables the community to share in the increase in land value over time, in part created by the pleasant garden city environment and community.

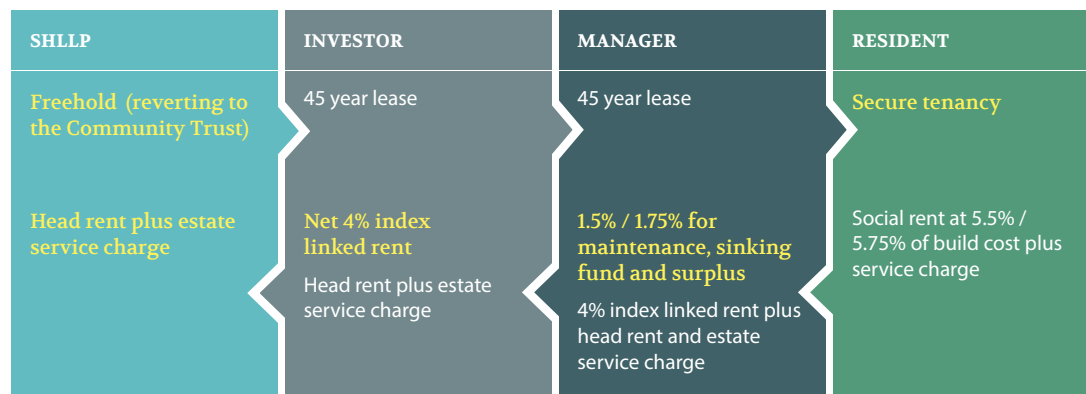
Private Rental



Assured Shorthold Tenancies will be for 5 years, in line with Shelter’s stable rental contract recommendations⁵², with annual RPI increases and then reset/ uplifted to market value at the end of the AST.

⁵² A Better Deal, Shelter, 2013

Social Housing



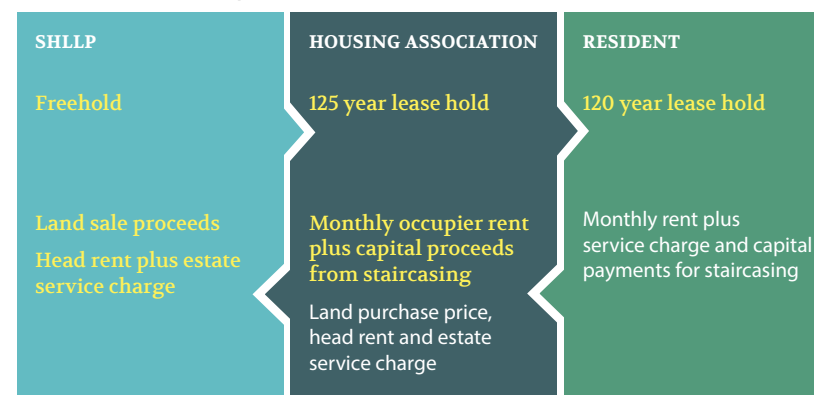
The social rental model illustrated above is the institutional investor lease and leaseback social housing model, whereby the institutional investor funds construction in return for a 45-year indexed linked payment of 4%-4.25% of their costs. Social tenants pay rent at a rate of 5.5%-5.75% on the construction cost (with annual RPI increases) to the Manager, who has provided a rental income guarantee to the investor. The Manager would be Medway Council or a Housing Association. The lease from the investor

to the Manager is a fully insuring and repairing lease, such that this risk and cost is removed from the investor.

The investor pays a small head rent to SHLLP (at a discount compared to private ownership) and after 45 years the leases unwind and SHLLP endows the Community Trust with the freehold.

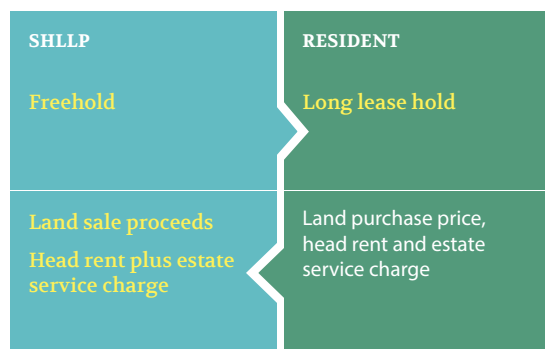
SHLLP will also welcome the traditional Housing Association model whereby they fund construction and manage the tenancies, paying a small head rent and estate service charge to SHLLP.

Shared Ownership

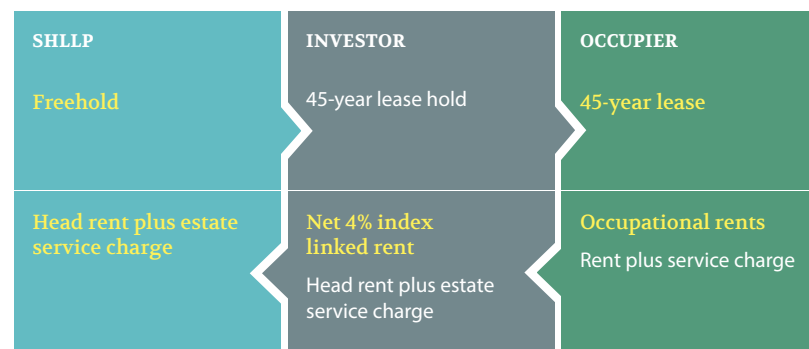


For the shared ownership model outlined above, the Housing Association will make staged payments to cover the construction cost and will acquire the property at 95% of the "low" value.

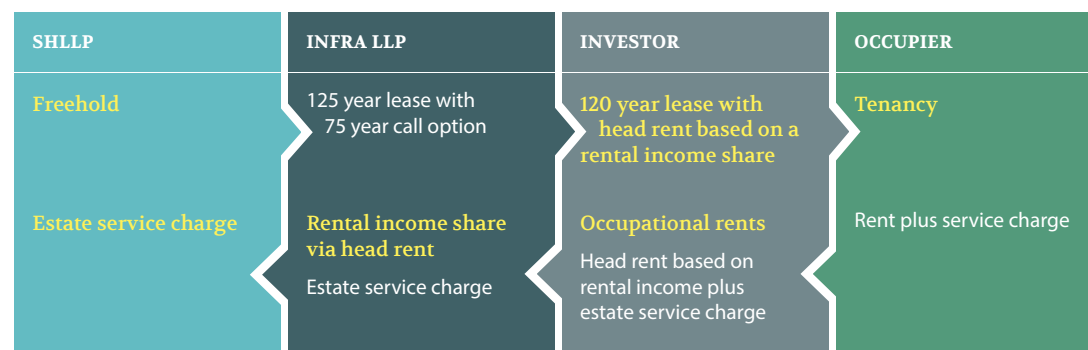
Self Build



Schools/Hospitals



Commercial



Where possible, SHLLP will work to ensure that the offsite manufacturing facility is used for construction. This is advantageous for a number of the tenures, as a cost and time guarantee would be available, and also due to the speed (and quality) of construction. We would therefore expect the offsite manufacturing facility to be used for social housing, PRS, shared ownership, commercial buildings, schools, hospitals, other community buildings, while remaining an option for self-builders and private sale (although there will undoubtedly be greater variety in the house-builders for these tenures).

Commercial and industrial land strategy

As outlined in Part II, Section (g), having commercial and industrial floorspace available is an important factor in enabling Stoke Harbour and its economy to grow. Figure 42 shows the timing of the provision of economic floorspace in Stoke Harbour.

Commercial land investors

Stoke Harbour's commercial strategy will reflect its future position as a small city and focal point for the Hoo, but also the requirements of its rapid growth model and the intermediate stages in this process.

Focussing first on Stoke Harbour's future role as a small regional city and centre of the Hoo, recent experience has shown that a retail area that is under a single ownership and has a single active management strategy for the whole area performs much better than a typical UK high street where each unit is individually owned. SHLLP will therefore seek to appoint a single commercial property manager (or utilise the experience of the Co-Promoter/Core Development Investor) for all commercial/mixed use areas within Stoke Harbour, so that all commercial areas can complement each other to produce the best overall result for owners, occupiers and the city. The property manager/partner will work with the masterplanners to produce a phased plan for the commercial/mixed use areas, and using a leasing agent will approach potential occupiers pre-construction. As outlined in the table below, the

property manager will use inducements and turnover based rents to lower the risk for these occupiers.

Once c.35%-50% of the retail/entertainment space has been pre-let, we will then approach a potential investor for finance to construct the building, having agreed a time and cost guarantee for the construction of the building with the construction partner (utilising offsite manufacturing where possible). The property manager would then continue to seek retail, office, food and beverage, entertainment, residential, cultural, small independent business lettings for the remaining units before and during construction.

See Appendix IX for further details on how a single strategic manager will benefit Stoke Harbour's mixed use/commercial areas

Table 12: Commercial land strategy risks

Risk	Mitigation strategy
Construction risk	SHLLP will work with the house-building construction partner to offer 'preferred partner' status for commercial property so long as they provide guarantees for construction time and cost. This should be possible due to known manufacturing costs, and will boost demand for the offsite manufacturing facility.
Letting risk	<p>The property manager will look to negotiate with national multiple retailers and other occupiers during the pre-planning stage so that there are some agreement in principles for pre-letting.</p> <p>Rents would also be agreed on a turnover basis with ratchets for construction milestones/population increases, this will help share risk between the occupier and the landlord and make the opportunity more attractive for the occupier.</p>
Occupational risk (risk of occupier having low sales/demand)	<p>By having one strategic property manager, Stoke Harbour will be able to benefit from a policy of targeting occupiers that match local demand, thus reducing the risk of an occupier having low sales/demand.</p> <p>The property manager will be regularly monitoring the trends of the local population so as to actively manage the mixed use areas to retain their relevance. The starting point will be to assess the retail, food and beverage outlets and entertainment demands of the existing Hoo Peninsula population</p>

The key risks for investors in commercial land and SHLLP's approach to mitigating these risks are outlined in the table opposite.

Our approach to developing commercial areas will be to partner with long term funders (via a lease with an income share rental clause) so that SHLLP's share of rental profits can be utilised to fund transport infrastructure expenditure (Section (h)). SHLLP will therefore be looking for long term investors who are happy to fund construction in exchange for no upfront land costs and a rental income share arrangement. Our target income split would be 67%/33% funding investor/SHLLP. Once a lease has been agreed in principle on these terms SHLLP will grant a slightly longer lease to Infra LLP, so Infra LLP can then grant the actual lease and benefit from the rental income to meet the costs of transport infrastructure.

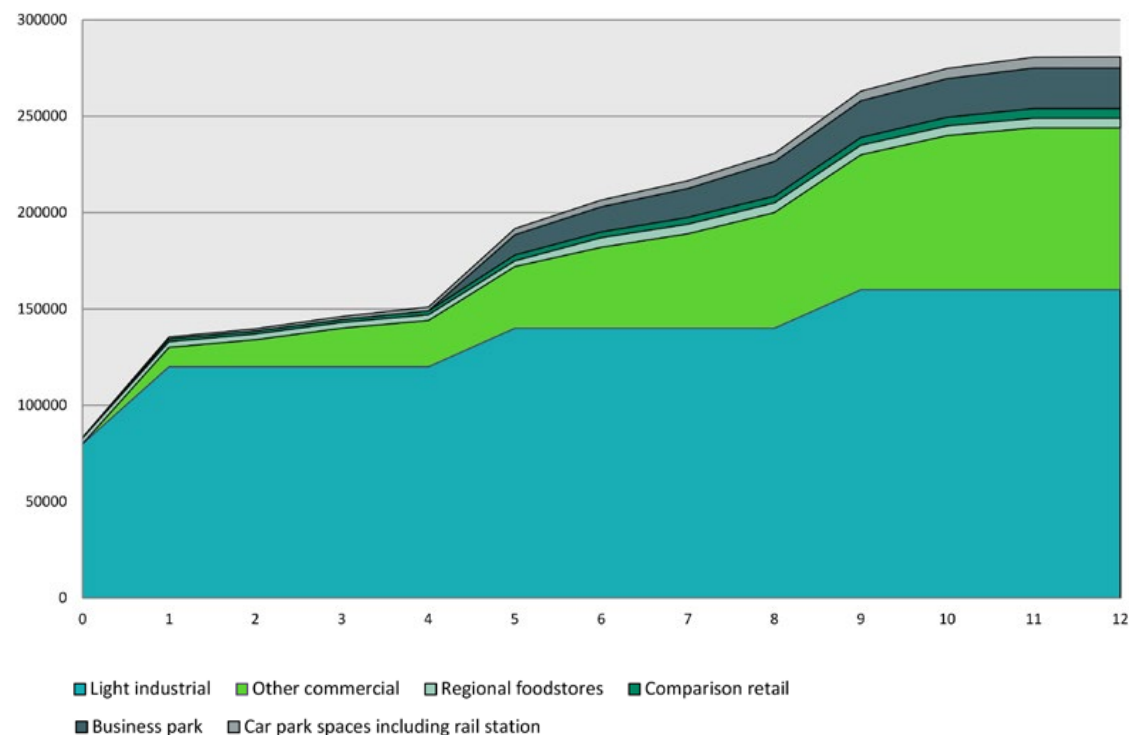
Industrial land strategy

As shown in Figure 30 on page 79, the existing Kingsnorth industrial estate is adjacent to our proposed Stoke Harbour site. The industrial estate is approximately 20 Ha in total area and has good quality access roads and roundabouts.

Rather than seek to acquire this land, we believe it represents an excellent opportunity to have floorspace on hand to help with Stoke Harbour's economic growth. We will engage with the land owner so that we can use its access road network for works traffic and then site our industrial area and business park adjacent to Kingsnorth. The offsite manufacturing facility will be sited on industrial zoned land acquired by SHLLP adjacent to the railway, but Kingsnorth should then benefit from demand by complementary businesses and suppliers seeking a site close to the facility.

Given that the estate is currently low-value warehousing, we expect that the landowner should find the proposal for a nearby garden city to be a positive one and be supportive in respect of allowing access through their land.

Figure 42: Timeline showing availability of economic floor space in Stoke Harbour



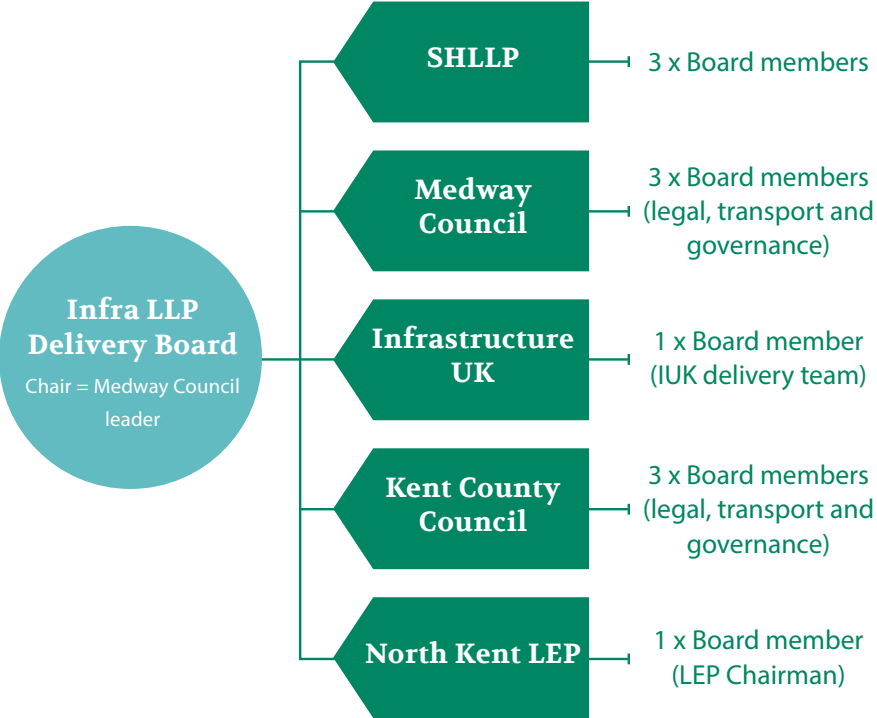
g) Key Risks of the SHLLP Business Plan

Risk	Mitigation
Construction cost increases	<p>Increase utilisation of offsite manufacture with known costs.</p> <p>Volume procurement.</p> <p>Increase in price ceilings.</p> <p>Adjustment of minimum sales price if the market allows it.</p>
Slower than expected market absorption	<p>Increased marketing spend.</p> <p>Increased self-build allocations.</p> <p>If price is found to be the barrier, temporary reduction in land cost to developers and reduction in minimum price until demand is met.</p> <p>Major transport spend is not until year 9 and can be delayed to match market absorption.</p>
Slower than expected build out rate	<p>Adjust incentivisation model for boosting build-out by developers/house-builders.</p> <p>Incentivise use of offsite manufacturing.</p>
Low demand for commercial space within mixed use areas.	<p>Use of rent free periods, turnover based rents and other incentives.</p> <p>Increased marketing spend and segmental analysis of Stoke Harbour residents to give occupiers confidence of their market.</p> <p>Target pop-ups, start-ups, arts and cultural opportunities to have temporary use of the space and influence the mood of the central areas.</p>
Market house prices and rental values are below expectations	<p>Further investment in social infrastructure, community support and the public realm.</p> <p>Consider acceleration of transport infrastructure spend and waterfront development, or slowing down development to support prices, model the scenarios to determine the best approach.</p>

Table 13: Project Risks

h) Modelling Transport Infrastructure Financing for Stoke Harbour

Figure 43: Infra LLP Governance



We have applied the transport infrastructure financing principles outlined in Section (e) along with a number of assumptions when arriving at an indicative funding solution for Stoke Harbour.

The partners in the infrastructure joint venture (Infra LLP) and anticipated Delivery Board is set out opposite.

Medway Council and Kent County Council would be asked to provide a small amount of initial equity on a preferred return basis⁵³, but SHLLP would provide the bulk of the equity by contributing 125 year commercial property leases to Infra LLP, but with a call option that can be exercised after 75 years, so that once the transport has been paid for the rental income returns to SHLLP and boosts its annuity returns. On an NPV basis, Infra LLP's commercial property leases have a value of £150m once all construction has taken place. The commercial property is considered an appropriate asset class to be

contributed to Infra LLP, due to the direct relationship between economic growth and transport infrastructure. This is therefore a further land value capture mechanism to finance infrastructure expenditure.

These leasehold interests will provide most of the income that will be used to meet the transport infrastructure expenditure. SHLLP will also contribute cash through transport infrastructure levies received in respect of the private sale properties (an average of £5,000 per home). As outlined in Section (e), Medway Council in conjunction with Infra LLP will request to Treasury that Stoke Harbour is made a 35 year enterprise zone, with business rates retained and contributed to Infra LLP.

⁵³ This would be a staggered return of 4% if there is a surplus prior to year 45, 3.5% if there is a return prior to year 5 and 3% if the surplus is generated after year 50.

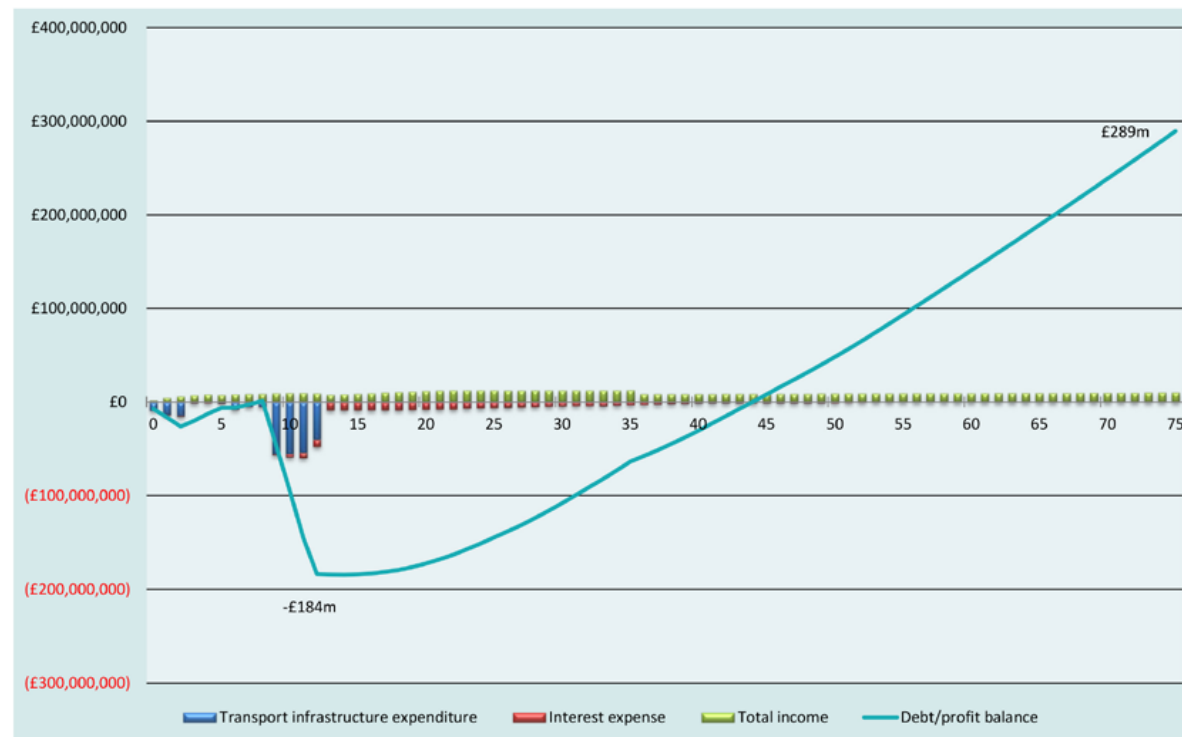
Infra LLP would also implement a small element of user tolling, through small rail ticket levies designed not to impact demand and car-parking income at the rail station and 50% from wider Stoke Harbour.

Infra LLP will therefore use the following cash sources to repay the bonds and bank loans over its life:

- a. Commercial rents.
- b. Business rates from Stoke Harbour Enterprise Zone contributed by Medway Council.
- c. Rail station car park income and rent from businesses in the station.
- d. 50% of Stoke Harbour car parking income for 25 years.
- e. User charging through ticket levies.
- f. Transport infrastructure levies from the development of Stoke Harbour.

The bulk of the upfront capital cost of construction would be funded by debt. As per our transport infrastructure strategy, Infra LLP would incur some initial expenditure making step change improvements to rail connectivity and road capacity, and then utilise the upgraded infrastructure to allow for the bulk of the house-building and growth of

Figure 44: Infra LLP project expenditure and income



Stoke Harbour before committing further significant expenditure for relief roads and improving the rail link in years 9-12.

We have modelled a hybrid debt solution for Infra LLP, (Appendix VI).

Our projected cash flow and project debt/return profile, based on the above debt solution and assumptions as outlined in Appendix VI shows peak debt of £184m in year 12, breaking even by year 44, and returns of £4m-£10m per annum from year 41 (totalling £289m) before the expiry of the commercial

leases and ceding of assets to SHLLP. The returns have an NPV of c.£15m for SHLLP and allow Medway Council and Kent County Council to realise a 4% annualised return.

i) Site Specific Developer / Investor Returns

Pursuing a business plan that allows individual investors to develop specific parcels of land or buildings (in line with Stoke Harbour's masterplan) maximises Stoke Harbour's chances of success through:

Sourcing £2bn of capital expenditure without reliance on any one or small number of investors.

Benefitting from the expertise of each investor/developer; the matching of the opportunity with their risk profile retains maximum value within SHLLP and the Community Trust.

The negotiation of terms favourable to the long term health of Stoke Harbour, such as head rents, through giving up some of the potential upfront land price.

In the tables below we have summarised the investment models available; analysed the risk profile of each investment offering, the typical returns required for this model, and the investor categories suited to this; and summarised the investment returns.

This analysis has formed the basis of our conclusion that SHLLP would be successful in enticing developers/investors to agree a construction and investment waterfall through Phases I, II and III. Table 15 shows that our estimated returns for all tenures, when modelled at high, expected or low scenarios meet the thresholds required for investment, in particular when you take into account that SHLLP has borne all the planning risk.

Furthermore, we consider the house price and rental income assumptions we have made are prudent and subject to a fair opportunity for upside, given that many of the comparators we have used are low-grade stock in run down areas of Medway. If Stoke Harbour is a success, then the environment and atmosphere would be significantly different to this and the property prices and rental income (where they are not controlled) would be in excess of these low benchmarks.

Table 14: Investor opportunities and expected risk profiles

Tenure/infrastructure opportunity	Risk analysis	Risk rating	Returns sought	Investor profile
Social rental	Construction risk mitigated by guarantee from contractor and use of offsite manufacture. Letting risk taken by operator (Housing Association or Medway Council provides guarantee) and there is high social housing demand.	LOW	4% plus RPI increase	Annuity funds (pension/insurance) for liability matching
Private Rental Sector ("PRS")	Construction risk mitigated by guarantee from contractor and use of offsite manufacture. Letting risk is lowered as PRS is just 10% of available tenures, therefore supply is restricted.	LOW / MEDIUM	6%-9%, increases achieved through annual RPI uplifts during lease and reset to market value for a new tenant	Institutional / real estate fund / sovereign wealth.
Private sale (development model)	Construction risk is low/medium dependent on whether using offsite or traditional construction techniques. Financing risk is lower as there is a reduced cash outlay due to a low land premium. Demand risk is medium, as the investment waterfall means that excess supply is avoided.	MEDIUM	10%-15%	Property developers
Self-build and shared ownership	Construction risk is taken by resident /Housing Association has construction guarantee in exchange for forward funding. Demand risk is low, there is high self-build demand and shared ownership is only 7.5% of tenures so excess supply is avoided.	LOW	n/a	Self build = no investor, direct sale to end user Shared ownership: Housing Association
Schools and hospitals	Construction risk mitigated by guarantee from contractor and use of offsite manufacture. Demand risk mitigated by pre-agreement with NHS Trust/Department for Education with 45 year guarantee.	LOW	4% plus RPI increase	Annuity funds (pension/insurance) for liability matching
Commercial	Construction risk mitigated by guarantee from contractor and use of offsite manufacture. Letting risk mitigated via pre-letting where possible, single strategic management and turnover based rents. Occupier sales risk mitigated by strategic property management for all commercial areas.	MEDIUM	10%-15%	Institutional / real estate fund / sovereign wealth.

Table 15: Summary of investor returns based on “expected” construction costs

Tenure	Expected category of investor	Required total investment	Target return	Estimated return based on expected costs			Notes
		(£m)		Scenario 2	Scenario 3	Scenario 4	
Private sale	Developer	£828m	15%-20%	£170m (profit) 20.5%	£201m 24.5%	£215m 26.0%	15-20% as developer bears own finance costs, otherwise 10%-15%.
				Low	Median	High	
PRS	Institutional / real estate fund / sovereign wealth	£155m	6%-9% (with uplift)	5.0%-6.7%	5.9%-8.3%	6.9%-9.8%	RPI annual uplift expected plus reset to market value at the end of the tenancy
Shared ownership	Housing Association	£143m	n/a	n/a	n/a	n/a	We have not modelled shared ownership returns due to the potential permutations.
Self-build	Owner occupier	£105m	n/a	n/a	n/a	n/a	
Social housing	Housing Association / Medway Council / Institutional	£405m	4% index linked	n/a	4% index-linked (institutional model)	n/a	Return will remain at 4% index linked. Build cost impacts allocations to social housing as the maximum rents are fixed. Please see Appendix XV for further details.
Schools and hospitals	Institutional	£90m	4% index linked	n/a	4% index-linked (institutional model)	n/a	Return will be set at 4% index-linked on construction cost
Commercial	Institutional / real estate fund / sovereign wealth	£155m	10%-15%	11.3%-14.9%	12.5%-16.6%	12.9%-17.0%	Commercial land is held by Infra LLP
Total		£1,881m					

An aerial photograph of a coastal city, likely San Francisco, showing the Golden Gate Bridge, the city skyline, and the surrounding water. The image is overlaid with a semi-transparent teal banner that contains the text "PART IV : POPULARITY".

PART IV : POPULARITY

Introduction

No matter how well designed or economically viable a potential garden city may be, it will not succeed as a city – and indeed may never even get built – if it does not have the support of local people.

It is not possible to win over everyone in a local area to a major new development, but with targeted incentives, sensitive design and smart campaigning it is possible to convince a majority of local people to show their support. To demonstrate this majority support to local and national stakeholders with the power to deliver a garden city (councils, DCLG, the Treasury), we will **hold a local referendum**⁵⁴ of residents in the relevant local authority area.

This referendum will need to:

Be fair (and perceived to be fair)

Maximise turnout

Be purely about the garden city proposal, and not house building in the local authority per se (regardless of the vote in the referendum, the local authority will still have a duty to plan to meet local housing need)

To fulfil these goals, the referendum will:

- Be scrutinised by an independent and impartial body
- Be held on a day likely to maximise turnout, such as the day of a local or national election
- Use modern voting techniques such as online voting to increase turnout
- Be open to all residents of the local authority area only. This avoids:
 - (i) Opening up the franchise to a wider constituency (for example, people who register as potential future residents, or the county region as a whole), which could be perceived as vote rigging by local residents and a motivation to vote no.
 - (ii) Restricting the franchise to residents of the directly affected site, which excludes the legitimate views of those affected in Medway (eg, those needing a local home they can afford).

The electoral geography must be coterminous with the local planning authority. The point of a **local referendum** is to gain a **local political mandate**.

In this part we look at how to ensure the best possible chance of winning this referendum:

a) Understanding local people

We have looked at **existing data** on local people in Medway, and then built up a more detailed picture through commissioning **bespoke polling** (with YouGov) and **in-depth qualitative analysis** (with BritainThinks). This new research has been made possible with the kind sponsorship of Legal & General and has informed our bid already.

b) Winning over local people

We have then **segmented the audience** and devised a **targeted campaign strategy** with different approaches for each segment, and bespoke messaging aimed at building support and overcoming opposition. Our strategy is one of triage: by identifying the groups most likely to support, oppose and waver we can target our resources effectively at convincing waverers, rather than trying to convert die-hard opponents.

Winning the referendum would trigger Medway Council to grant Local Development Orders for the sites

proposed. This would simplify, speed up and de-risk the planning process – creating the confidence for detailed masterplanning to begin.⁵⁵

However, we know that winning a local referendum is not the final word in securing local support. Over the lifetime of the development, local people must feel that the garden city is theirs if it is to retain legitimacy and avoid being labelled as something that is imposed upon them. The final section of this part looks at this.

c) Working with local people

Current and future residents should have real ownership over the masterplanning process, through a **co-production model that involves local people directly in the design of the garden city**. In addition, **community ownership** of assets and control of an annual revenue budget for local services will give the residents of our garden city unique benefits and services that will foster ongoing support.

⁵⁴ Building on the ideas of Henry Cleary and Andrew Wells in *Light Bulb Prizes* published by the Wolfson Economics Prize 2014

⁵⁵ This process is set out in more detail in Appendix I.

a) Understanding Local People

We have conducted a significant amount of research into the attitudes and opinions of local residents on the Hoo Peninsula, in the Medway local authority area and across the wider South East. We have done this in three ways:

- (i) Using existing data about demographics, housing tenure and communications preferences – to build a general picture
- (ii) Commissioning specific quantitative research – to get answers on specific questions about our proposal from a representative sample of local people
- (iii) Conducting in-depth qualitative research – to fully understand the underlying motivations behind people's stated opinions

Existing data

Shelter has created a bespoke tool – 'Shelter Housing Insights for Communities' (SHIC) – which uses advanced demographic data from the ACORN consumer classification and combines this with data

on attitudes towards housing, propensity to support or oppose new developments and communications preferences.⁵⁶

Using this to look at Medway shows that the three largest groups of the population – Post-Industrial Families, Secure Families and Blue Collar Roots – all have a fairly high or average likelihood of opposing a development initially, but also a low or average likelihood of actively opposing it (i.e. attending planning meetings to express their opposition). The next largest group – Struggling Families – are

much more likely to support a proposed development. A smaller number of the population are Flourishing Families, highly likely to be actively opposed to any such development.

In Table 17 on the next page we present detailed analysis from SHIC on the most populous group in Medway: Post Industrial Families.

Table 16: Housing Insight categories in Medway

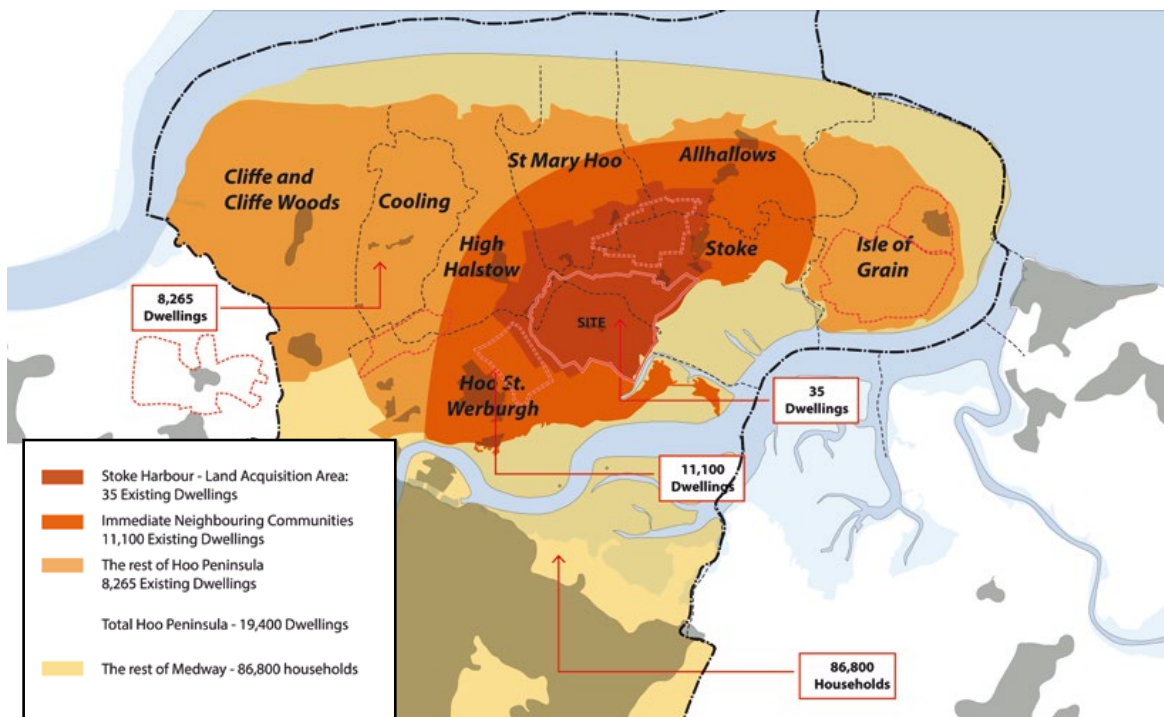
ACORN group	% local population	Likelihood to oppose development	Likelihood of actively opposing a planning application	Overall rating
Post Industrial Families	22%	Fairly high	Fairly low	
Secure Families	21%	Fairly high	Average	
Blue Collar Roots	16%	Average	Fairly low	
Struggling Families	10%	Low	Low	
Flourishing Families	7%	High	High	

⁵⁶ ACORN is a geodemographic segmentation of the UK's population. It segments small neighbourhoods, postcodes or consumer households into 5 Categories, 17 Groups and 56 Types. By analysing significant social factors and population behaviour, it provides precise information and an in-depth understanding of the different types of people in different parts of the UK. Shelter's SHIC tool, available for free online, is specifically aimed at winning local people's support for new developments. For each local authority area, it is possible to see the relative sizes of various demographic groups, what they are likely to think about new housing developments, and the best way of speaking to them in order to win their support or alleviate their concerns. Data in this report is based on pre-2013 ACORN classifications.

Table 17: Shelter Housing Insights for Communities (SHIC), Post-Industrial Families

Post-Industrial Families (22% of the population in Medway)	
Description	<p>A combination of skilled older families and young working families, who are likely to work in office, clerical or retail jobs, predominantly between 40 and 49 years old, with some in their thirties. A high proportion took out a mortgage just before the recession, and with higher loan to value ratios and falling house prices, some are likely to be in negative equity.</p> <p>Very concerned about high house prices, and think that only children of well-off families will be able to get a foot on the housing ladder.</p>
Housing aspirations	<p>If not already a homeowner, they aspire to owning a home in the long term (15 to 20 years' time). They are very concerned about high house prices, and think that local people cannot afford to buy a home.</p> <p>They feel that in some areas only the children of well-off families will be able to afford to buy a home. They are concerned about how their own children will afford decent housing in a good area.</p>
House building opposition and support	<p>This group has differing views on house building, with a small number being opposed. Others within the group are fairly positive towards social and affordable housing and see the council having a role in providing these and homes to buy.</p> <p>They may not be satisfied with their home and may want to move locally. Many have recently experienced job loss or redundancy.</p>
Planning opposition and support	<p>They are fairly unlikely to oppose planning applications and fairly likely to support them, but this does not appear to be active support, as they are fairly unlikely to engage in local community. They are likely to have some concerns over new housing especially in relation to whether it will be affordable and for local people.</p> <p>They also have concerns about how local services will cope. If these are overcome, and they are convinced that new housing would improve the area and bring better community facilities with it, they may support local house building.</p>
Issues/concerns and suggested messaging to overcome	<p>Issue: House prices are far too high for local people to afford.</p> <p>Suggested messaging: "Local house prices put home ownership out of the reach of many people. The new development we're proposing is an opportunity for local families to access a new home that they can afford. Make your support for this development known."</p> <p>Issue: I am not satisfied with my home or local area but can't afford to move to a better area.</p> <p>Suggested messaging: "The new development offers local families the opportunity of a brand new home. It will also help to make the local area one that all families aspire to live in. Let the community know how much you support this new development."</p> <p>Issue: New housing will bring improvements to the local area, including better community facilities.</p> <p>Suggested messaging: "We want your views on how the new development can improve community facilities and make the area a better place to live. Get your friends and neighbours involved."</p>
Communications preferences	<p>They read the Sun, the Daily Mirror and the Daily Mail. They are highly likely to read their local free newspaper and are also very likely to read free newspapers.</p> <p>Direct mail is a means of communication highly likely to influence this group.</p>

Figure 45: Proximity to Stoke Harbour



The detailed SHIC analysis in Table 17 shows that our initial reading of Post Industrial Families – as likely to be in principle opposed to a new development – requires revisiting. There is some scope to win their support: by talking about affordability, community and improved services. A similar analysis can be done for each of the major demographic groups in the area.

Local people's attitudes towards the garden city will of course be influenced by more than just their demographic group. Where they live in relation to the proposed site will also play a major part. Those closest are most likely to face disruption during the construction phase, for instance, but are also most likely to benefit from new services.

We have identified four 'zones' which are likely to have disproportionate impact on people's attitudes to the proposed development:

Those directly affected, i.e. with a home on the proposed site (approximately 35 households)

Those in the immediate neighbouring communities (11,100 households)

The rest of the Hoo Peninsula (an additional 8,265 households to the above)

The rest of the Medway local authority area (an additional 86,800 households)

Quantitative research

We can enrich this initial analysis with quantitative research. We already know that nationally there is increasing public recognition of the need to build more homes. 64% of people agree that "as a country we need to build more homes", an increase from 57% in 2012.⁵⁷ This is not just an abstract concept for people: the percentage who support more homes being built in their local area has increased from 29% to 47% between 2010 and 2013, with opposition falling from 47% to 32% in the same period.⁵⁸

To see whether these broad national trends were reflected in local attitudes, we commissioned YouGov to poll people in Medway and the wider region of Kent, Essex, Sussex and Surrey (KESS).⁵⁹

We found that:

- 65% of people in KESS agree that young people won't ever be able to afford to buy a home.
- The figure is 69% among people in Medway specifically.
- This figure rises to 74% of people in KESS with at least one child under 26 years of age.

⁵⁷ YouGov for Shelter, 2012-2014

⁵⁸ British Social Attitudes Survey, 2013, published by the Department of Communities and Local Government (DCLG) in July 2014

⁵⁹ YouGov polled a representative sample of 3,344 people in Kent, Essex, Sussex and Surrey. This included 97 people in Medway specifically

When we have asked a similar question nationally, 51% of UK adults without children agree and 36% of UK parents agree that their children would never be able to afford a decent home.⁶⁰ This suggests that people in Medway and the wider KESS area are more likely to be feeling the impact of the housing crisis – another reason it is an appropriate site for a new garden city.

We also asked people about their views on a garden city on the Hoo Peninsula specifically:

50% of people in KESS would support such a garden city. There was also a large proportion who said ‘neither support nor oppose’ or ‘don’t know’ (34%).

Net support in Medway was 54% (compared to net opposition of 33%). This breaks down as follows:

- 23% strongly support
- 31% tend to support
- 11% neither support nor oppose
- 9% tend to oppose
- 24% strongly oppose
- 2% ‘don’t know’⁶¹

⁶⁰ YouGov for Shelter, June 2014

⁶¹ From our sample of 97 in Medway specifically, 23% strongly support, 31% tend to support (54% net support); 24% strongly oppose and 9% tend to oppose (33% net oppose).

In the immediate vicinity of our garden city, and within the wider region, there is already more support than opposition for our proposal. In Medway specifically – where the referendum would be held – there are roughly equal proportions of people who are highly supportive (23%), or highly opposed (24%) to our garden city. That leaves around 50% of the local population who could be persuaded of its virtues via responsive design and effective campaigning. Our polling shows a majority of these already tend to support the proposal.

Finally, we tested the effects of various incentives associated with a garden city on people’s likelihood to support it – from an increase in the number of local

jobs and apprenticeships, to improvements in local services, and the share investment scheme which we had proposed in our original submission.

People in KESS and Medway were significantly more likely to support a proposal for a garden city if it meant that local services would be improved, and if it meant more local jobs and apprenticeships. The share investment scheme did not have a positive impact.

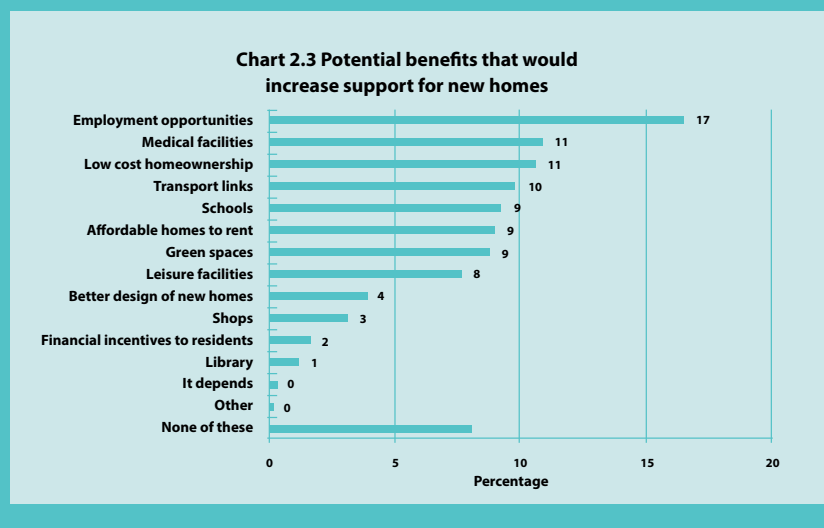
Table 18: Impact of various incentives on support for a garden city

Questions: “Would you support...”	Net support - KESS	Impact of incentive versus score in Q1 - KESS	Net support – Medway	Impact of incentive versus score in Q1 - Medway
1.“...a garden city in your local area...”	46%	-	46%	-
2.“...resulting in more local jobs and apprenticeships?”	59%	+13%	60%	+14%
3.“...resulting in improved services?”	58%	+12%	61%	+15%
4.“...with a share investment scheme?”	44%	-2%	41%	-5%

National attitudes to house building

Our findings on Medway residents' attitudes to house building and associated incentives echoes what others have found at a national level. The 2013 British Social Attitudes survey asked people who were opposed or neutral to housebuilding in their area, what might increase their support for new homes. This survey found

that 'employment opportunities' and infrastructure ('medical facilities', 'transport links', 'schools' etc.) were paramount, while the tenure of the homes built ('low cost homeownership') also featured highly. 'Financial incentives to residents' fared poorly, ranking eleventh out of twelve options.



Qualitative research

To develop our understanding of local people yet further, and to ensure that we had understood the motivations behind the kinds of answers people give in polls, we also conducted a range of qualitative research with local residents below.

Qualitative research approach

Working with BritainThinks, we conducted:

Four mixed gender focus groups with people from across Medway, split into:

- People aged 20-30, who are privately renting and looking to get on the property ladder (some with children and some without).
- People aged 31-60, who are owner-occupiers with at least one child over the age of 16.
- People aged 31-60, who are currently in social housing with at least one child over the age of 16.
- People aged 60+, who are owner-occupiers.

Three in-depth telephone interviews with residents of the Hoo Peninsula.

A 'Citizens' Jury', held in Chatham, with a representative cross-section of the Medway population spending a day scrutinising and inputting in to our proposals.

Throughout this qualitative research, we found that housing was a spontaneous local concern (see word cloud opposite). Having spoken to local people about housing in general, we presented them with our specific garden city proposal. BritainThinks concluded that there is “broad support from Medway residents for [Shelter’s] vision of a new garden on the Hoo Peninsula”. This was because “many of the core elements of the proposal speak directly to residents’ hopes and concerns for the local area”.

⁶² This graphic shows the most common answers from all groups to the question: “what are the biggest issues locally?” The question was asked before Shelter, housing or Stoke Harbour were introduced by the moderator.



Figure 46: Unprompted ‘biggest local issues’⁶²



Again, there were two main reasons for people being supportive of our proposal:

The need for more opportunities for young people in Medway, specifically employment opportunities and opportunities to get a home of their own

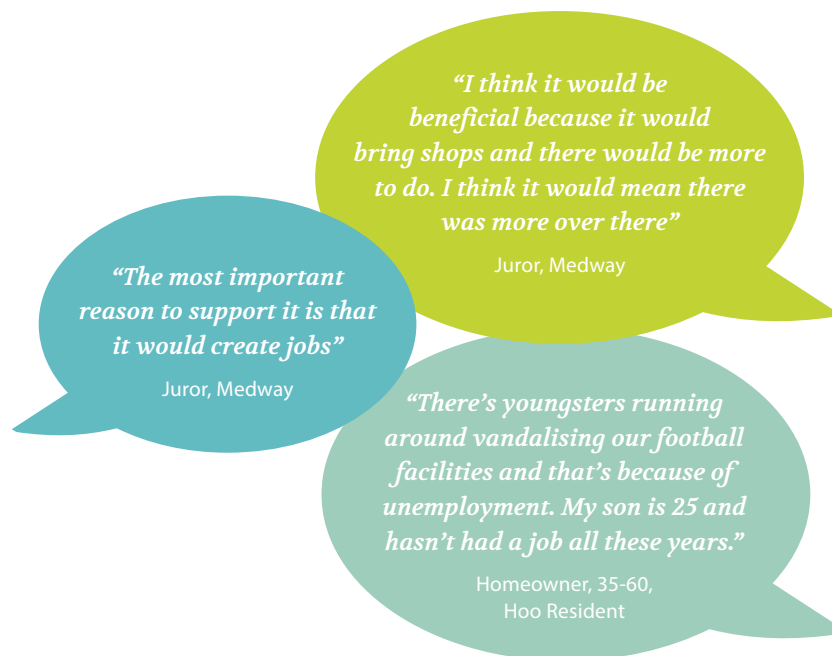
The need for investment in services in the local area (roads, schools, hospitals)

Local people's views of our proposal were not wholly positive, though. They expressed some concerns, of three kinds:

A cynicism – partly informed by other developments they had experienced in the area – about competence to deliver the garden city, connected to Shelter's association with the project. While Shelter was seen as beneficial because of the values we bring – prioritising people over profit – there was concern that we did not have the capability to deliver a project of this scale and complexity.

A fear that the area itself was unsuitable for housing and that the homes would not have adequate protection (or insurance) against flooding

A general suspicion over who the town would benefit, with the spectre of it benefiting "outsiders" (whether from London or elsewhere) being raised



We also used the focus groups and Citizens' Jury to look in detail at a range of incentives that might make local people more supportive of our garden city. We looked at financial incentives – specifically a payment of £5,000 to each affected household. This proved deeply unpopular. People felt like they were being “bribed” or “bought off”. A large majority of people in the focus groups felt that a £5,000 cash incentive was not only wholly insufficient to make them change their minds about a potential new development, it was also insulting. They perceived such an offer to be “corrupt”, and it made them suspect our potential motives for offering such a payment. As Deborah Mattinson of BritainThinks said, “I’ve rarely seen a reaction so strong to an idea come across so consistently in different focus groups. We were tempted to remove the proposal of cash incentives from the Citizens' Jury altogether, to stop it angering people and distracting from the rest of the discussion”.

“They are building more houses but we are not getting more doctors or more schools. I’m not against building houses but that has to come with everything else that people need.”

Juror, Medway

“I would say [Shelter] are definitely punching above their weight. I wouldn’t immediately associate a garden city development with Shelter. I would think it would be one of the big conglomerate building societies.”

Homeowner, 35-60, Hoo Resident

“If you are building homes for people who need them then why do you need to buy people off? Is it so they can’t complain later on?”

Homeowner, 60+

This strong rejection of straight cash payments to residents of anything up to £5,000 suggests that they would not be an effective way of winning over local support. It is possible (though we have seen no evidence to support this) that a higher amount – say £10,000 – would convince people to accept a new garden city. However, at that level of payment the

scheme becomes financially unviable. With almost 20,000 households on the Hoo Peninsula, £10,000 cash payments would mean an upfront cost of £200m to the developer, which is broadly equivalent to our modelled total construction profit for SHLLP. This level of outlay at the start of a development would therefore be prohibitive.

“I think it’s a good idea apart from the flooding risk”

Juror, Medway

“[Shelter’s] primary aim is not going to be to make profits but to help people”

Homeowner, 60+

“Why would they give to you? Is it to move to the area?”

Social renter, 35-60

We also tested a number of different incentives with the people who attended the focus groups and the Citizens' Jury:

A preferential opportunity to invest in shares in Stoke Harbour LLP, which could offer a long term return (as set out in our original submission).

Provision of public goods such as infrastructure or parks for the existing community.

Job guarantees, opportunities and apprenticeships for local young people.

Preference for local people or their children in access to the new homes in Stoke Harbour.

Again, **investment in the local economy** (to benefit local people) was seen as the most important incentive. Mentioning **young people** as specific beneficiaries is important to all groups (and especially young people themselves), in particular in relation to access to new homes and jobs.



However, we found that our original proposition of a share incentive scheme was not popular (though not as unpopular as straight cash incentives). It was perceived as too complex and “not for someone like me”.

“If young people are benefiting through jobs and apprenticeships then parents are benefiting. Everyone benefits from young people getting more out of it.”

Private renter, 20-35, Hoo Resident

“I think a proper apprenticeship scheme should be started again as it is not very good at the moment. It would be helpful to know more about what that would entail.”

Homeowner, 35-60, Hoo Resident

The local authority

In addition to winning the backing of local residents for our garden city, we also need to ensure the local authority supports our proposal.⁶³

The council currently projects population growth of 25,000 between 2013 and 2021 alone⁶⁴ – meaning our 15,000 home garden city will be consistent with existing projections.

Medway has previously applied for city status for the conurbation⁶⁵, and the new garden city – which would make Medway larger than Newcastle, Plymouth or Brighton & Hove – would contribute to that. It would also contribute to the council's targets for delivering new market and affordable homes.

Finally, the council has stated aims to assist people to improve their skills and find employment, to support existing businesses and attract new businesses.⁶⁶

⁶³ We recognise that Medway Council cannot formally assess our proposal at this stage, due to its hypothetical nature and the short timelines of the competition. However, as the support of the local authority would be so critical to the success of the garden city, we have outlined in this part what we believe to be the most compelling arguments for Medway Council to support the proposed garden city and the local referendum to approve it.

⁶⁴ Medway Council Plan 2013-2015

⁶⁵ Medway sought city status in 2011 for the Diamond Jubilee

⁶⁶ Medway Council Plan 2013-2015

Conclusions

All of this research gives us a thorough picture of who local people are, where they live and what their attitudes are likely to be towards our garden city. Based on this understanding, there are four distinct groups of local people, each of whom will need to be treated differently if their support is to be won or their opposition neutralised:

1. **Directly affected residents (the 35 households who live on the site where the city will be built)**
2. **Die-hard opponents (the 24% of Medway residents who say they would strongly oppose a garden city on the Hoo Peninsula)**
3. **Natural supporters (the 23% of Medway residents who say they would strongly support a garden city on the Hoo Peninsula)**
4. **Waverers (the 53% of Medway residents who say they would tend to support, tend to oppose, neither support nor oppose or don't know whether they would support or oppose a garden city on the Hoo Peninsula)**

b) Winning Over Local People

To maximise the likelihood of a 'yes' vote in the local referendum, we need to use our insight about local people to develop the best possible pre-referendum campaign. The best campaign strategy to win support for a development of this kind is one of triage: splitting out the different groups of support or opposition to understand their different motivations and opinions, designing tactics and focusing resources accordingly to maximise impact and avoid wasting resources on those who already support development, and those who never will.

It is also important that we understand the impact of different potential incentives on local people, to determine which of these incentives is most likely to win over local support – and to ensure that we have taken into account local people's concerns about our proposed garden city. Therefore, before setting out our detailed campaign strategy, we look at possible incentives in more detail as well as considering the action we would need to take to address local concerns.

Incentives for local people

To evaluate the effectiveness of different types of incentive, we used the framework of economic theory. In this framework, each individual in a community has 'utility' – a measure of their welfare or happiness. This utility is increased and decreased by a range of tangible and intangible factors. In the case of a new garden city, we can assume that the utility of each individual is negatively affected (or perceived to be negatively affected) by the proposed development – either because of the noise and disruption, or because there is an expected negative financial impact, such as a fall in the value of a house due to increased supply.

To win local people's support, we will need to return their level of utility to at least as high a level as it would have been without the garden city. This can be done by giving them more of something that increases their utility. The basic principle is that compensation needs to reach the point at which the community is 'willing to accept' the development.

In its simplest terms, that could be done by **offering local people a straight cash payment**. However, as we have seen in both our quantitative and qualitative research, such an incentive is highly unpopular and in fact can actively increase people's opposition to a proposed development.

This is consistent with existing behavioural economics literature⁶⁷, which considers the use of financial incentives to increase participation in an activity (such as donating blood) and accepting an unwanted development (such as a nuclear waste facility). The empirical research in this area suggests that the framing of financial incentives is paramount to their success. Financial incentives perceived as "bribes" have been found to decrease willingness to accept development, and equally compensation perceived as "too little" has also been found to reduce willingness to accept. We have seen that an upfront cash payment of £5,000 is seen as both a "bribe" and "too little" for local people, and any amount higher than that would render the garden city financially unviable. That is why we have ruled out the use of upfront cash incentives to win support for our garden city.

Alternative financial incentives – such as our originally proposed **preferential share scheme** – are not as unpopular as direct cash payments, but do still risk being seen as confusing. For that reason, we have chosen not to continue with this form of incentive.

⁶⁷ We review this literature more fully at Appendix II

However, we do know that cash-equivalent benefits like tax rebates or reduced energy costs are more popular.⁶⁸

Bearing that in mind, we propose:

A targeted council tax rebate,

during the lifetime of the development, to those people who are not within the site of the development but in the adjacent communities.¹⁵ This is similar to a cash incentive, but can be perceived quite differently if marketed as “compensation” for disruption and not a “bribe”. This rebate of £100-£150 per home will start from the first month of the development and will be geared between these amounts depending on the number of homes built each year, incentivising neighbouring residents to support growth long term. It will be funded from Stoke Harbour’s revenues, eliminating the upfront cost problem of a cash incentive.

A joint energy purchasing

scheme. This will be based around the purchasing power of the new city to negotiate lower bills from an existing energy supplier for all residents of the new city, and any other residents in

Medway who choose to join, and could lower bills by 15%-20% (see Appendix IV). The opportunity for lower energy bills was the most popular incentive in a national poll conducted by the Wolfson Economics Prize.

We also know that people in Medway place a high premium on the employment opportunities for local people, and the improved public services, that accompany a new garden city. For that reason, as set out below, we will focus on these benefits of our new garden city in communications materials for the referendum campaign.

It is worth noting that determining the most appropriate incentive or compensation package for a hypothetical project is difficult, especially as the context and framing of the offer is so crucial to the impact on individual utility. More conclusive evidence could be generated from a more detailed ‘willingness to accept’ study once the project was being considered as a serious possibility.

⁶⁸ Polling conducted by Populus for the Wolfson Economics Prize 2014



Addressing local concerns

Our research into Medway residents' attitudes revealed three particular areas of concern for local people. We address each of these concerns through revisions to the garden city design and through our strategy for the referendum campaign:

1. Competence to deliver:

People were inherently sceptical about the ability of an organisation like Shelter to deliver (although our brand did improve people's perception of the values and underlying motivation behind the new garden city). To address this, when promoting the project we will use the brands of our partners, constructors and advisers – alongside that of Shelter in order to increase the perceived ability to deliver among the key audiences.

2. Flooding:

People were also concerned about the risk of flooding on the Hoo Peninsula. As set out on page 58, we will outline the measures being taken to prevent flooding.

3. Allocations policy:

People were worried that new homes in the garden city would not be for people like them, and instead would go to "outsiders". To address this:

- a. We will introduce an allocations policy that allows Medway residents to go straight to the top of the reservations list for new homes to buy or privately rent if they decide to put their names down. They will need to be on the electoral roll as proof of residence. This will not prevent anyone else from being able to visit the site as it is developed in order to see show homes or get more information.
- b. This will be repeated at each stage of the development. If someone from Medway does not put their name down at first, but later decides that they would like to, they will go to the top of the reservation list for the next stage of homes to be completed.
- c. Those at the top of the list will get discounts of around 5% on the first homes sold at each stage of development. This is standard industry pricing practice, but provides additional benefits to local people.
- d. Stoke Harbour will not market homes overseas at all.
- e. There will be a ban on buying homes with buy to let mortgages. This will help first time buyers, and preserve market share for our purpose-built private rental homes.
- f. Medway residents will get standard priority for social rented and shared ownership homes.

Campaign

We will conduct a referendum campaign using a triage strategy: to **compensate, contain, channel** and **convince** each of our four distinct groups with distinct offers and tactics.

This strategy, and the different approaches it entails, is based on an understanding of each group's current position in relation to our garden city, and an ambition for what we would ideally like their future position to be. Each approach is set out below – in summary in the table, and then in more detail.

Table 19: Strategies for segmented groups in Medway

Group	Current Position	Ideal Future Position	Strategy
Directly affected residents (within the development zone)	Very concerned about the impact that the development could have on them and their family	Understand what is being proposed and their options for compensation. Believe that, despite the disruption, the proposal will benefit them or their family long term, or at least that the compensation offered to them will mean strenuous opposition will not be seen as legitimate by others.	Compensate: Generous compensation offered up front, plus additional choice of other incentives.
Die-hard opponents	Will not support a proposal for various reasons including environmental, social, and economic. Highly motivated to vocally oppose and form groups to oppose.	Less motivated to vocally oppose and form groups. Seen locally and nationally as one point of view, rather than the sole legitimate voice of local people.	Contain: Reduce dominance of voice in the debate and motivation to oppose by addressing legitimate concerns (and offering compensation to those near to the development).
Natural supporters	Worried about the cost of housing and want to see more development to benefit them or their family. Often low income families and do not have a prominent voice in the debate.	Motivated to be vocal and organised in their support and are heard to be so locally and nationally.	Channel: Give them strong reasons to campaign for the garden city in different ways, from talking positively with their peers to calling phone-ins.
Waverers	Worried about the cost of housing and their children's prospects of home ownership, but sceptical about solutions – especially in their local area. Not motivated to be vocal about proposals for a garden city and will form opinion based on what they hear from trusted local sources.	Link their concern about their children's future to the shortage of homes locally. See a garden city proposal as meeting local infrastructure needs as well as homes for their children. More motivated to support vocally on radio phone-ins, letters to the paper - and to vote in the referendum.	Convince: persuade to vote by addressing key concerns and needs.

1. Directly affected residents

Aim

Compensate generously as they will be directly impacted. Reduce their motivation to align with, or campaign on behalf of, the die-hard opponents group.

Insight

This is a very small group (approximately 35 households in Stoke Harbour) whose residential buildings are within the site boundaries and who will be highly impacted by the building of the garden city. They are mostly rural households and homeowners.

Tactics

Write to the affected households to explain the nature of the proposal, the compensation they will be entitled to and how they can contact us. Be clear with them about the benefits of Stoke Harbour (i.e. primary care facilities and a regional supermarket).

Offer households 150% of the market value of their homes if they choose to sell and leave or a £100,000 sum plus living out expenses if they choose to stay.



Offer a preferential position at the top of the reservation list for their children or grandchildren buying or renting a home in Stoke Harbour.

Measures of success

80% of the affected residents accept our offer of compensation.

Fewer than 10 residents from the affected households make public statements supporting the 'no' campaign in the referendum.

2. Die-hard opponents

Aim

Contain by minimising their legitimate reasons to oppose the development. We should not expend a lot of effort communicating with this group in an attempt to change their minds, because their position is entrenched. Instead, we should focus on reducing both their motivation to campaign and their ability to persuade waverers to vote 'no'.

Insight

This group make up about a quarter of the population in Medway. They are most likely to come from the ACORN group Flourishing Families, whose major reasons for opposing new developments tend to focus on the impact on local services and communities, especially the pressure on roads and transport.⁶⁸ A recent planning application for a 5,000 home development at Lodge Hill^{69 70} provides strong evidence of the existing community concerns about development on the Hoo Peninsula – around transport, education, health care and retail (see Table 20 overleaf). We expect many in this group to live in communities close to the site, on the assumption that they will be most affected.

⁶⁸ Shelter Housing Insights for Communities tool, profile of Flourishing Families

⁶⁹ Hyder Consulting (UK) Ltd (2011), Lodge Hill, Evidence Base – Transport Assessment

⁷⁰ Dobson, Tom (2011), Lodge Hill; Outline Planning application on behalf of Defence Infrastructure Organisation, Economic Strategy, Quod Planning

Table 20: Addressing concerns raised at Lodge Hill

Concern raised at Lodge Hill	Stoke Harbour proposal
Congestion at Four Elms roundabout	Doubling of roundabout capacity prior to construction
No proposal for rail links	New passenger service prior to any residential construction
Local bus service inadequate	Dedicated bus lane and subsidised bus services
Internet provision is poor	Broadband connections to existing towns
Current schools are failing	New schools open to existing Hoo Peninsula residents
Nearest hospital is in Rochester	Provision of a community hospital with a minor injuries clinic and emergency services hub
Foodstore retail provision is poor	Provision of a regional food store
Insufficient existing employment	Creation of employment at Stoke Harbour such as Laing O'Rourke factory with 350 jobs and 50 apprenticeships
Construction traffic a concern	Offsite construction using industry located in Hoo, and use of rail to deliver material

Source: Hunt Dobson Stringer (2009), Lodge Hill, Site Specific Information Report – Social Infrastructure, Hunt Dobson Stringer

Medway Council (2011), Schedule of responses to public consultation for the Lodge Hill Development Brief

Tactics

Provide strong answers when legitimate concerns are raised about the strain on local infrastructure. Our proposal specifically overcomes all of the concerns set out in relation to the Lodge Hill proposal by providing excellent infrastructure, including important provision right at the start of the development phase (see table)

Minimise the environmental impact by working closely with the RSPB and other environmental organisations⁷¹ and being clear in communications about our commitment to this.

Give priority to Medway residents to buy and rent homes in the garden city. Promote this, alongside the new jobs and public services (such as schools and hospitals) that will be created as a result. Doing so will make it harder for this group to argue convincingly that the garden city

will not be for local people.

Offer a council tax rebate to those people who are not within the site of the development but in the immediate neighbouring communities. This is partly to compensate them for the disruption of the development, but also to act as an incentive not to actively oppose Stoke Harbour during the referendum campaign or during construction.

Measures of success

No more than 30% of Medway residents describe themselves as strongly opposed to a garden city on the Hoo Peninsula in polling.

⁷¹ For more detail, see page 53.



Shelter want to build a new Garden City on the Hoo Peninsula, to provide homes, jobs and services for people in Medway.

We want everyone to have a decent home - so we're working with experts, local people, builders and investors to design the Garden City. In doing so, we pledge:

- Over 2,000 new local jobs will be created by our Garden City through construction work and services, and 200 apprenticeships and training opportunities for local young people.
- We'll build or improve local infrastructure – the Four Elms roundabout and A228, a new train line, schools and a major food store – before any homes get built.
- We will protect all the homes against flood risk, and make sure they can be properly insured.
- People living in the Garden City and across Medway will be able to join a scheme to lower their energy bills.
- The majority of the new homes will be affordable, including homes to buy, part buy-part rent homes for young people trying to get on the ladder, and affordable homes to rent.
- All homes will be reserved for Medway residents first – so local people can get first claim on the homes built.

3. Natural supporters

Aim

Channel their support into action. Give them strong reasons to vote 'yes' in the referendum (and campaign where possible), by reflecting their aspirations and allaying any of their concerns.

Insight

This group is also around a quarter of the population in Medway. It is likely to contain a significant number of the ACORN group Struggling Families, who will tend to support a new development in their local area if it includes social housing, and if they perceive the new homes as being "for them and their children". The best communication channels for reaching them are direct mail and local newspapers.⁷²

Tactics

Make clear how unaffordable housing has become in Medway for those on average wages, using well-tested Shelter statistics and language, through local print media.

Build the positive case for Stoke Harbour through direct mail, out of home advertising and earned media in local newspapers, emphasising the priority for local families in access to homes to rent or buy.

Publish a 'pledge card for local people' that lists all the benefits the garden city will bring, and focus on the affordability of new homes and our allocations policy (see example opposite).

Measures of success

At least 20% of Medway residents describe themselves as strongly supporting a new garden city on the Hoo Peninsula in polling.

⁷² Shelter Housing Insights for Communities tool, profile of Struggling Families

4. Waverers

Aim

Convince them to support the garden city. With the numbers of die-hard opponents and natural supporters roughly equal, this group will hold the key to winning the referendum – and so will be the focus of our campaign. We will motivate them to (a) support Stoke Harbour by reflecting their hopes and aspirations, and (b) turn out to vote in the referendum by communicating a clear sense of urgency.

Insight

This group makes up just over half of all Medway residents. It contains large proportions of Post-Industrial Families, Blue Collar Roots and Secure Families, who are concerned about high house prices and the quality of their local area. They see potential in new developments to bring with them improved services and infrastructure – and they can be motivated by the opportunity for home ownership either for themselves, or for their children and grandchildren. The best communications channels for this group are direct mail and local newspapers .

Tactics

Create a sense of urgency by focusing on the lack of homes that are currently affordable for local first time buyers on average wages, through local media

Promote the benefits of Stoke Harbour through targeted direct mail. This will include the fact that the city will deliver new local jobs, services and homes, and the priority for Medway residents looking to buy new homes in Stoke Harbour. It will also make clear that the new garden city comes with significant transport investment which will reduce the strain on existing local services (see example on this and the opposite page).

Reduce local people's energy bills through the Community Choice Aggregation Scheme – and promote this heavily throughout the referendum campaign.

Maximise Shelter's brand, and those of our partner investors, advisers and construction companies, to build trust and confidence in the project – both in our values, and in our competence to deliver.

Figure 48: Example direct mail





Homes, jobs and schools for the next generation in Medway



'A majority of new homes built in Shelter's Garden City proposal will be affordable, including homes to buy, part buy-part rent homes for young people trying to get on the ladder, and affordable homes to rent.'

Dear <Forename>

The prospect of an affordable home is slipping away from the next generation, no matter how hard they work and save. In Medway, just 14 out of 100 homes on the market are affordable to local people on typical wages.

This shortage of affordable homes has led to high house prices, leaving young people trapped in unsuitable rented accommodation. Others are unable to move out of their childhood bedrooms until well into their thirties.

It doesn't have to be like this – and on <referendum date> you have the chance to vote to change things. Housing charity Shelter, in partnership with leading architects and local builders, is proposing a solution: a new 'Garden City' on the Hoo Peninsula. Medway residents will have the chance to vote for or against this on <date>.

The Garden City will include around 15,000 new homes (about the same size as Faversham). It will include all the services to meet the needs of those who live there – including new schools, doctors surgeries, supermarkets and transport links. All the homes in the city will be protected against flood risk.

It will include opportunities for young people to own their own home, and all homes will be reserved for Medway residents first. And the city will create the new jobs for local people that are desperately needed.

Please vote in favour of a new Garden City, and a brighter future for Medway, on <date>.

To find out more please visit
shelter.org.uk/hoo

Measures of success

A 5% swing from 'tend to oppose' into 'don't know' or 'neither support nor oppose' after each media story or direct mail burst.

A 5% swing from 'don't know' or 'neither support nor oppose' into 'tend to support' after each media story or direct mail burst.

Conclusion

With all of the above in place, we stand a good/excellent chance of winning the local referendum to secure support for the garden city. As BritainThinks stated in their summary of the qualitative research, "Shelter are in a strong position to make an engaging, clear and powerful case that will effectively win wide support for a garden city on the Hoo Peninsula amongst Medway residents".

c) Working with Local People

Once the referendum has been won, there is a clear mandate from the people of Medway for Stoke Harbour to be built. However, this does not mean that the involvement of local people is finished. For the garden city to be truly popular with local people before, during and after it is built, then local people should continue to be involved in the city's development after the referendum has been held and won. This involvement should come in two different forms:

1. Through the masterplanning process
2. Through the creation of a Community Trust

Masterplanning: participation, not consultation

Under our proposals, a yes vote in the referendum will trigger Medway local authority to issue Local Development Orders (LDOs) for the proposed sites. The LDOs provide the planning permission to build Stoke Harbour.

However, the bulk of the masterplanning will still need to be completed. It is essential that local people are involved in this process, and given the opportunity to have a genuine input into the design of their town.



This would be done through the following measures:

Arranging a series of engagement exercises with the existing residents in the surrounding area. Focus groups, social media, 'hack-day' or 'incubation' events and ongoing working groups are just some of the methods available to work with people in a genuine and equal way. We will tailor this engagement to fit the audience:

- Local professionals (such as architects, planners and builders) will be invited to take part in technical discussions to ensure that we can co-create plans that work for the local area.
- Local residents will be encouraged to provide input on all areas where they have an interest. From streets to services, schools to hospitals, town planning to community facilities, no aspect will be exempt where there is a desire to be involved.

Including all community stakeholders such as social enterprises, community groups and businesses.

Using the existing knowledge and skills in the area in architecture, construction and design to bring relevant expertise to the design process.

The Community Trust: long term stewardship

Through a genuinely participatory masterplanning process, we will ensure that the new garden city at Stoke Harbour will be a beautiful new place on the Hoo Peninsula, created with the input of local people and our partners.

However, over the long term it will be up to the people of Stoke Harbour and the wider garden city to determine the area's future success. The long term stewardship of Stoke Harbour is vital not just to the success of the new community, but also to its popularity, by ensuring that Stoke Harbour becomes and remains an attractive and affordable place to live.

To that end, we intend to set up Stoke Harbour Community Trust: a charitable non-profit body, dedicated to owning and managing property assets for the community in perpetuity.

The Community Trust offers something unique to residents of Stoke Harbour which can be expressed as:

"Substantial and sustainable funding for Stoke Harbour residents to decide how best to grow and develop Stoke Harbour over the long term."

We want to realise the full potential of the Community Trust to generate benefit for the community and long term support by establishing a vision and governance structure that will:

- Ensure the Trust meets its core objectives of delivering community benefit.
- Engage residents in "participation, not consultation" throughout the development of Stoke Harbour.
- Mitigate the impact of the city development on existing budgets where possible.

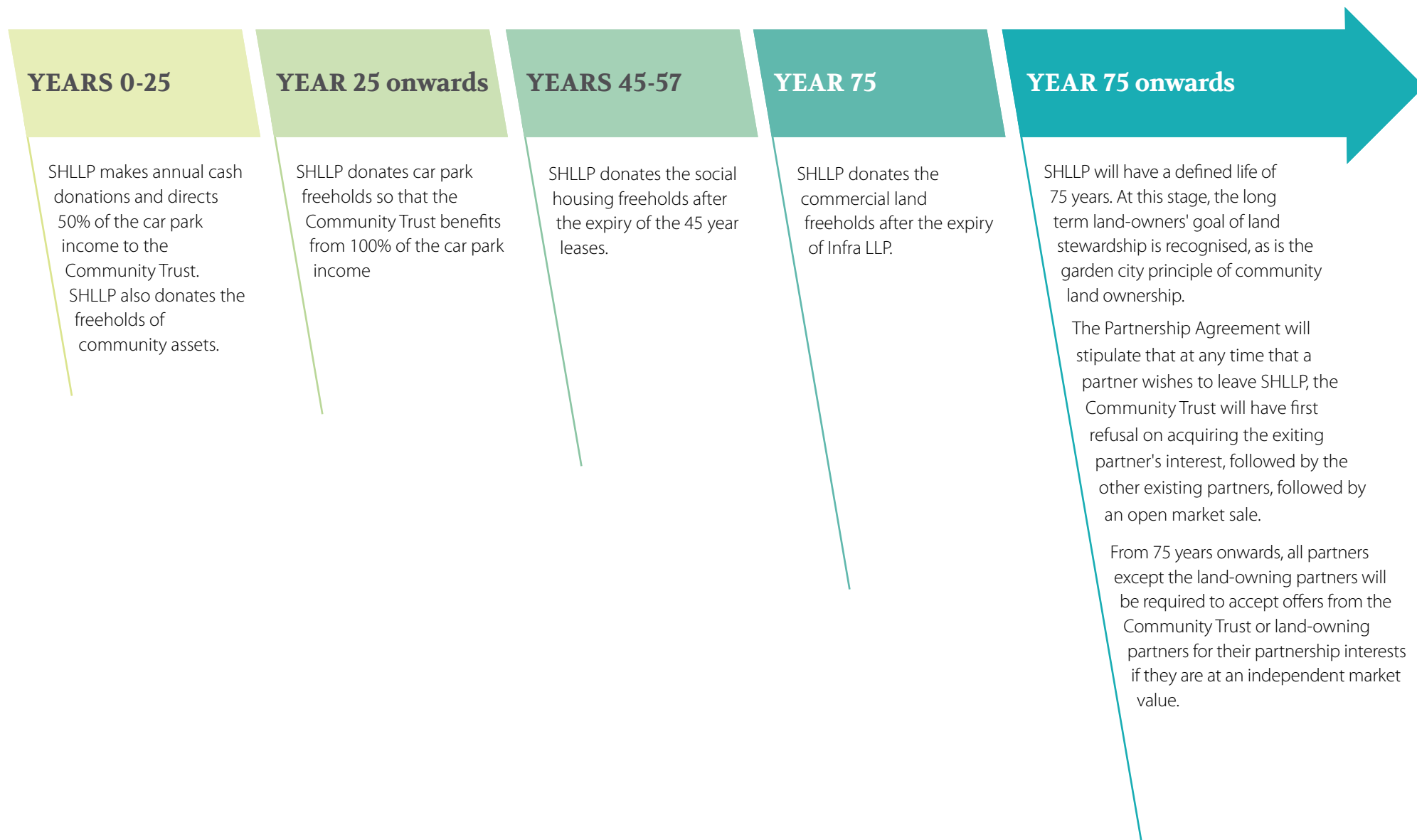
Over time it will become a substantial freeholder in the garden city, as agreed assets are ceded to it by SHLLP.

These land assets will yield income for the community through:

- The Trust charging a modest ground rent on the leases.
- Direct occupier rents once leases expire from 45 years onwards.
- A community levy of 5% on future capital gains, levied at the point of sale of residential property, yielding c.£500,000 pa, based on 2.5% house price growth per annum and an average of ten years' ownership.
- Car park income.

Figure 49: Asset transfer to Community Trust

Land asset transfer from SHLLP to the Community Trust



Vision for the Trust

The vision for the Trust is based around three core principles:

1. Residents should be instrumental in the major decisions that affect their new community.
2. Residents should also have an ongoing role in ‘co-producing’ the planning, design and commissioning of services. This will ensure there a range of opportunities for residents to take part in particular areas of commissioning, where they have an interest or specialism.
3. Ultimately residents will be the beneficiaries of the initiatives funded by the Trust: we suggest therefore that residents are best placed to evaluate the impact of initiatives, and this should be built into scrutiny arrangements.

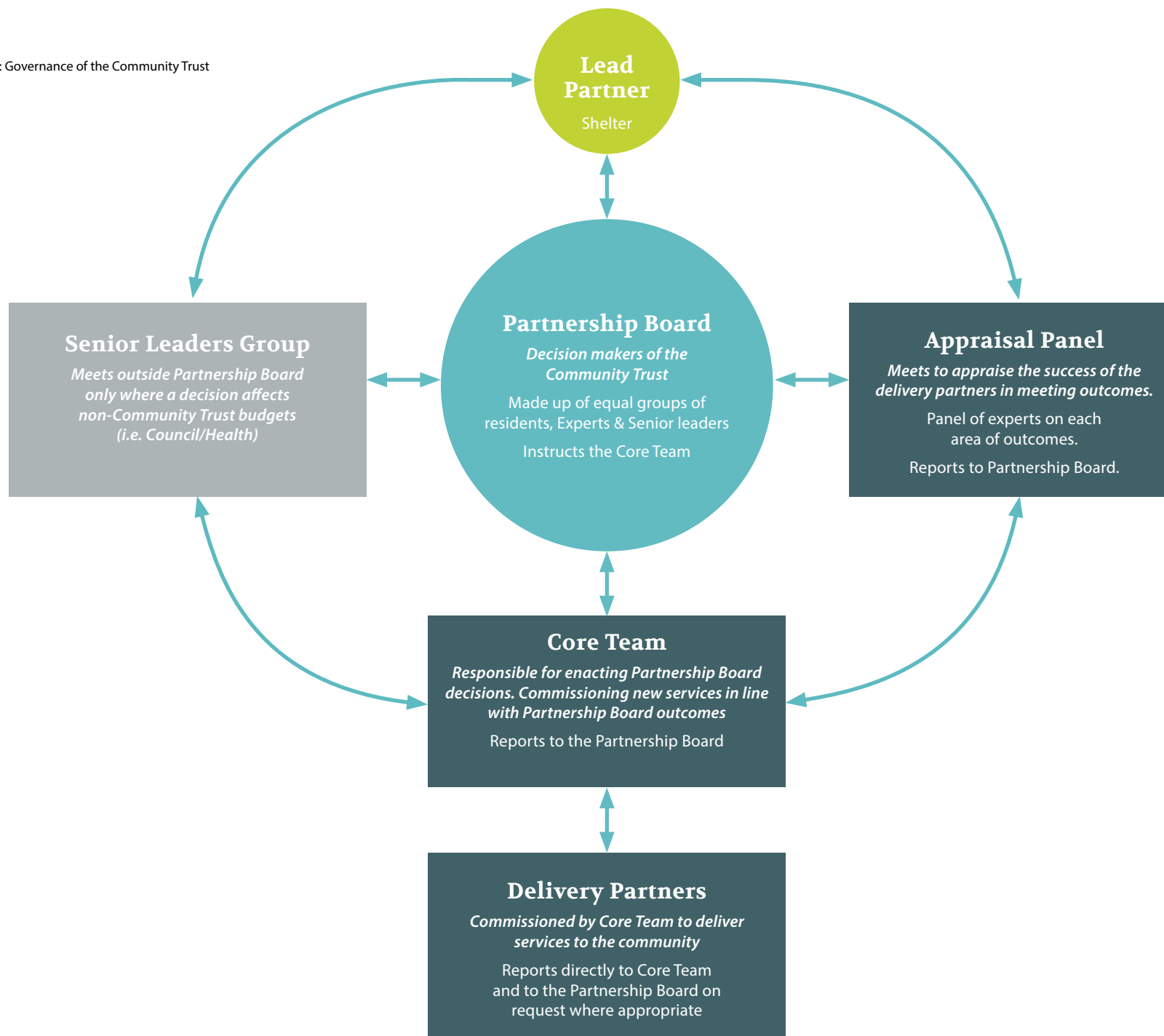
Governance of the Trust

The governance arrangements and partnership structure around the Community Trust will ensure the Trust meets its objective of delivering community benefit through co-production.

The partnership structure will consist of:

- A lead partner:
 - A resident investment company led by Shelter, with control of the Trust funds
- A Partnership Board with responsibility for strategic decision making. To ensure a diverse set of interests and voices are involved in decision-making, this will be a tripartite Board made up of:
 - **Residents:** The ‘future residents’ scheme will be used initially to recruit the initial Board members. Then, once the community is established, the recruitment strategy will ensure diverse representation from wards across Stoke Harbour.
 - **Businesses:** Companies with a prominent role in the development will be invited to join the Board, such as Laing O Rourke. Local businesses will also be represented.
 - **Public bodies:** This will include Medway Council (e.g. the Leader of the council and the cabinet member for regeneration), the Clinical Commissioning Group, the police, the fire service and the local Medway Maritime hospital.
- A **Senior Leaders Group** made up of senior representatives from organisations with budgets that might be affected by decisions taken by the Partnership Board (e.g. Medway Council). The Senior Leaders Group will have veto powers over decisions made by the Partnership Board where their budgets are affected. Through this group the Partnership Board can align with existing boards that already exist e.g. Health and Wellbeing board.
- The **Core Team** would be a professional team responsible for managing the commissioning process, delivery, and day to day budget management.
- The **Appraisal Panel** will appraise outcomes from the initiatives funded by the Community Trust. These teams will change over the lifetime of the Trust according to what is being funded and who is most appropriate to provide scrutiny. Appraisal teams will be made up of residents from the community affected by the outcome as well as specialists.

Figure 50: Governance of the Community Trust



The background of the slide is a composite of three aerial photographs. The top half shows a wide, flat landscape with a winding river or road cutting through it. The bottom left shows a coastal area with a large body of water, a winding river, and a city skyline in the background. The bottom right shows a city skyline with a large body of water in the foreground. The word "APPENDICES" is centered in the middle of the slide, overlaid on a solid teal background.

APPENDICES

Appendix I - Notes on our interpretation of the prize question

The prize rules require all proposals to 'avoid relying on a single penny of public money and be self-financing.' Of course, any new settlement must have a financial relationship with the state in which it is located, including contributions (typically taxes) and public expenditure. We therefore understand the rule to mean that the **capital cost** of building our town, including its social infrastructure, must be paid for from the wealth generated by the town itself. But we allow for state revenue spending supporting those services. For example, highways built and paid for under our proposal may be adopted by the local authority, and the running and staffing costs of new public health facilities may be covered by the NHS. In some cases, this includes rental payments by public bodies to provide income streams for the investors that provided the capital investment.

No proposition can guarantee approval by 100% of the population. The prize question defines popularity as meaning that 'proposals set out would stand a good chance of winning a local referendum' – which we interpret to mean **a majority of the votes cast in a referendum of all the existing residents of the local authority who are eligible to vote**. We define the locality for these purposes as the local authority,

as this aligns with local democratic processes and the planning system. In the absence of legislative reform or national government intervention, any garden city proposal will need to secure permission from the local planning authority, under the democratic oversight of the local council. To this end the benefits must clearly outweigh the costs for the local council as well as for local people themselves. The peculiar circumstances of a hypothetical competition like this presents few benefits to balance the very real political and administrative risks of supporting such a proposal. Land allocations and planning decisions are often highly contentious, and supporting hypothetical proposals may risk undermining the planning arguments for current live applications. While we are confident that our proposals offer many benefits to the local authority (as outlined in Part III), while the proposal remains a hypothetical proposition it would be irresponsible for the authority to publically support our submission and we have not requested that support.

We have sought to make our proposals deliverable without legal or regulatory change or national government action, relying instead on incentives and argument to win the support and co-operation required. However, some aspects of our proposal could be delivered more easily if certain reforms were put in place.

Land allocations in the local plan

Under the National Planning Policy Framework, local planning authorities must identify 'a supply of specific deliverable sites sufficient to provide five years worth of housing against their housing requirements' and 'a supply of specific, developable sites or broad locations for growth, for years 6-10 and, where possible, for years 11-15'.¹

The essence of this policy is that local plans should meet existing local need and no more. In any location, a new garden city would constitute more than five years of future supply – unless it simply replaced almost all other development in the area, in which case it would not be adding to overall supply.

If garden cities are to make a real contribution to resolving the housing shortage they must provide some degree of additionality – meaning that the local planning process would need to allocate land and grant permission in excess of that required under the NPPF. While this may in theory be possible under the current regulations², amending the planning guidance to recognise the contribution a new garden city could make, and the special circumstances of its creation, would help speed up the process and reduce the chances of legal objections.

¹ National Planning Policy Framework, DLCE, 2012 (Ch.6, S.46)

² NPPF (Ch.6, S52) states: "The supply of new homes can sometimes be best achieved through planning for larger scale development, such as new settlements or extensions to existing villages and towns that follow the principles of Garden Cities."

Land acquisition (Compulsory Purchase Orders)

Our strategy is to incentivise large landowners to invest their land to secure strong returns over the long run, and offer small landowners generous terms to sell. In the event that some small landowners refuse any offer, compulsory purchase may be required. Existing law gives the local authority the power to enact compulsory purchase, but case law enshrines the principle of hope value in the price that must be paid.³ It is likely that any hope value payable would not be excessive – but it is theoretically possible that it could be sufficient to undermine the viability of the entire scheme. If this was to occur, and the land in question was vital to the proposal, regulatory reform may be required.

Specifically, it would be necessary to amend the basis of the assessment of compensation for the compulsory acquisition of land set out in rule (2) of section 5 of the 1961 Act and also to amend the planning assumptions in sections 14 and 15 of that Act, so as to exclude hope value from the calculation

of compensation. This would also need to be accompanied by a clear statement of local planning policy as set out above with regards to updating the NPPF and also a Local Development Order by the relevant local authority, in order to avoid further legal challenge under the European Convention on Human Rights.

Planning Process

There are several options for navigating the planning system for a development on the scale of Stoke Harbour, including using existing national policy such as the New Towns Act⁴ or applying for a planning permission using the usual local authority planning process. However, for a development on the scale of a garden city we believe that there needs to be a route through the planning system which achieves the following aims:

1. Is not perceived as being a top-down imposition on the local community. There is a risk that any national policy intervention would be perceived poorly by local people, local landowners and local authorities, risking our model in particular which relies upon co-investment and co-operation between parties.⁵

2. Is perceived by the local community to be democratic, transparent and fair.

3. Allows for due process of planning policy and proper scrutiny of the masterplan and design guide by professional planners.

4. Allows for sufficient flexibility for local people to feel ownership over design and for the garden city to develop at a fast rate.

³ *Myers v Milton Keynes Development Corporation (1970).*

⁴ *As advocated in Urbed, Uxcester Garden City, 2014*

⁵ *While a local referendum could trigger land acquisition as per the New Towns Act, our preferred route would be one which gains a local mandate followed by locally implemented planning policy.*

We therefore suggest the following high-level process, but believe that further work is needed to fully refine how this would work in practice and identify alternative options:

- Local authority and promoter agree to the terms of a referendum and the conditions that would be imposed on Local Development Orders (LDOs) that will be granted in the event of the referendum being won. Conditions would include the requirement to conduct a full Environmental Impact Assessment, the requirement to develop the full masterplan and design guide with the input and policies of the local authority fully reflected and the requirement that the local authority holds key positions in governance structures, such as in the Infrastructure Partnership.
- A single LDO would be used for the full Stoke Harbour site and future extensions. An LDO would also be granted for Grain, but a separate referendum in Gravesham would be required for the LDO for Hoo Junction at Higham.
- The main Stoke Harbour LDO will have the condition that for each sub-development (i.e. a school, zoned housing development) within the masterplan, detailed planning approval must be agreed with the dedicated planning team, against the garden city master-plan, agreed guidance and other relevant policy.
- The local authority can impose additional conditions on LDOs in agreement with the promoter in advance of the referendum.
- If the referendum is won, the LDOs are granted, with conditions as agreed. The LDOs in effect give certainty to all parties. The local authority modifies their Local Plan to include the garden city, or includes it in the new Local Plan as it is being drafted.
- Masterplanning with community participation. Each zone or sub-development is planned along with all relevant stakeholders and the community. A dedicated planning team of 8 planners (which is financed within our model) must give final approval subject to the detailed plan meeting the conditions of the LDO, the masterplan and all other relevant policy.
- Phase 1 construction begins and detailed planning begins on subsequent zones.

Appendix II – Literature review: Financial incentives

Normally, one would expect cash transfers to have a straightforward impact on behaviour. Basic economic theory suggests that paying someone would increase motivation to do something or willing to accept an unwelcome proposal. However, evidence from the field of behavioural economics suggests that, under some circumstances, there may be results that appear not to fit this expected pattern. Under some conditions, people may not act like straight forward 'self-interested maximisers'.

It has been suggested since at least the 1970s that financially incentivising certain form of 'altruistic' behaviour like blood donations can in fact lead to a fall in that behaviour.⁶ This hypothesis has been borne out by numerous studies of such behaviour.⁷ There are two suggestions as to why this might be the case. First, the intrinsic motivation to do a perceived public good due to a sense of civic duty is being 'crowded out' by being offered a bribe or incentive, reducing the feeling that the act is being done for good reasons and therefore the intrinsic motivation to do it.⁸ Second, people take clues from their environment about which course of action they

take when facing a decision. Putting a financial incentive against a course of action could implicitly suggest that the activity is not something that they should want to do without a financial incentive. It suggests that the activity is bad for them and therefore must be compensated. It therefore reduces their likelihood to do it.⁹

The empirical evidence on reactions to financial incentives does not just cover acts of kindness or altruism. Frey and Oberholzer-Gee tested the controversial "NIMBY" (not in my back yard) scenario of whether people would accept a nuclear waste dump within their hometown. This wasn't just hypothetical; it was based on an actual site that the residents had to vote on in a referendum shortly after. When people were asked straightforwardly whether they would accept the development (with no compensation) just over 50% said yes. This was despite the widespread belief that the dump would be a heavy burden on the community. However when a financial compensation was introduced of between \$2,000 and \$6,000 (in 1993 dollars) the level of acceptance fell by half to just under 25% of all participants. Everyone who rejected the compensation first time around was then made a better offer (~50% increase in compensation) but only one participant changed their mind as a result. The researchers conclude that "the use of price incentives needs to be reconsidered in all areas where intrinsic motivation can be empirically shown to be important."

Was the level of compensation tested by Frey and Oberholzer-Gee simply too low? Some evidence suggests that financial incentives must be particularly large in order to fully compensate for the crowding out of the intrinsic motivation caused by offering a bribe. In other words, a "small compensation is worse than no compensation at all".¹⁰ The trick with financial incentives is to find people's price to be willing to accept the development and frame it in such a way that people's intrinsic motivations are not being crowded out.

⁶ Titmuss R, *The Gift Relationship*, 1970.

⁷ Kamenica E, *Behavioural Economics and the Psychology of Incentives*, 2012

⁸ Frey and Oberholzer-Gee, *The cost of price incentives: an empirical analysis of motivation crowding-out*. *Am. Econ. Rev.* 87:746–55, 1997

⁹ Benabou and Tirole, *Intrinsic and Extrinsic Motivation*, *Review of Economic Studies*, 2003

¹⁰ Gneezy U, Rustichini A, *Pay enough or don't pay at all*. *Q. J. Econ.* 115:791–810, 2000

The empirical evidence on financial incentives is mixed however. Some evidence also suggests that certain forms of financial incentive can be effective in changing behaviour. For example, testing has also been done on whether financial incentives can increase the propensity of citizens to vote. Raja and Schaffner at the University of Massachusetts tested whether lotteries or very small (\$1) direct compensation would increase the propensity of 1000 people to vote in an election.¹¹ They found that the flat financial compensation of a dollar decreased people's propensity to vote. However lotteries structured so that there were many winners of non-trivial amounts (i.e. 100,000 winners of \$2,200 dollars each) had positive impacts on voter turnout, especially among groups who had a low prior propensity to vote. Lotteries with few winners did little better than direct financial compensation.

The literature from behavioural economics suggests that financial incentives should be seen with a degree of nuance. The framing of how compensation is awarded seems important: lotteries not offering a certain pay-out but with a good chance of success are more motivating than a small but certain pay-out.

People are de-motivated from donating blood or supporting a local waste dump if their intrinsic motivations to do so are reduced. It seems that a whole host of psychological factors enter into the individual cost-benefit analysis preceding a decision.

The design of incentives, bribes or compensation for a garden city must reflect these nuances if they are to successfully motivate. We also believe that new primary research would be extremely beneficial in this area.

¹¹ Raja J and Schaffner B, *Buying Votes: the effect of financial incentives on intentions to vote*, APSA 2012 Annual Meeting Paper, 2012

Appendix III - Constraints summary



Figure 1 Environmentally sensitive zone



Figure 2 Birds area RPBS reserves



Figure 3 Flood risk



Figure 4 Marine coastal



Figure 5 Ramsar



Figure 6 Special landscape area



Figure 7 Special protection area



Figure 8 Topography



Figure 9 Wetlands

Appendix IV – Case study: Community Choice Aggregation (CCA) for energy bill savings

In 2003 in the Belgian province of Limburg a charity set up an energy brokerage firm along with residents with the aim of achieving savings for its members equivalent to the economies that can be achieved by large corporate clients.¹²

Through the use of community meetings, grass roots action and door to door campaigning, take up of 75% was achieved in some areas, with a total of 15,000 members signing up. Savings of 15-20% off bills, or 250 Euros per household were reported.

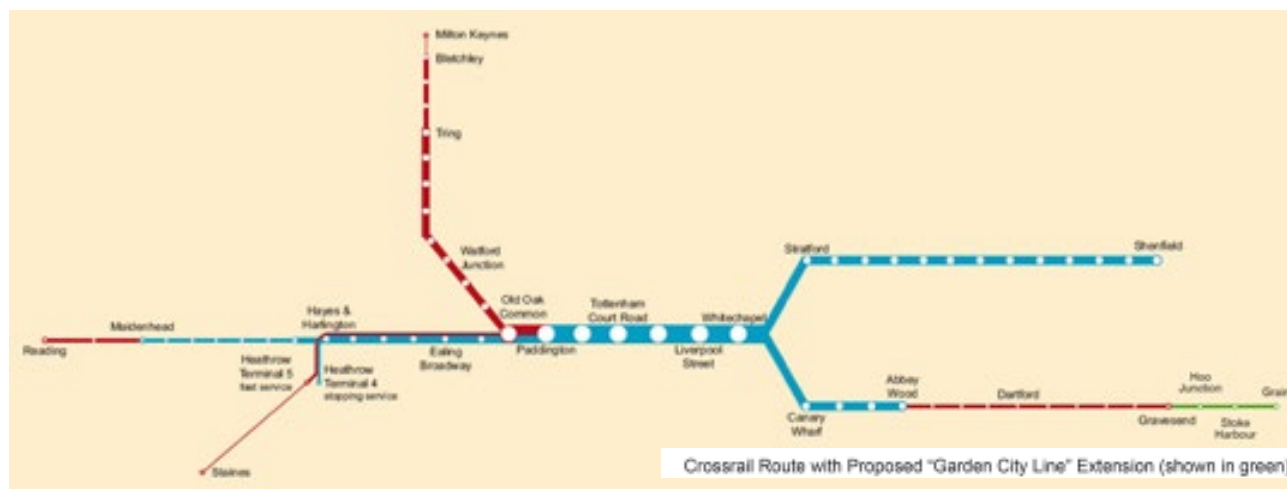
In addition to collectively purchasing power, the community energy charity in Limburg now works with communities to purchase insulation, solar thermal and photovoltaic generation facilities.

¹² Conaty, *A co-operative green economy, Co-operatives UK, 2011*

Appendix V – Transport strategy supporting analysis

Proposed Crossrail extension and support for returning passenger services to the Hoo Peninsula

Figure 10 RUS 2011, Route utilisation strategies, Network Rail



The TOC for passenger services from Kent to London is Southeastern Railways Ltd, which currently operates a number of smaller lines, including 'SwaleRail' (Sittingbourne to Sheerness). The location of SwaleRail is shown in the map opposite. It is a good comparator because it is of a similar length to the proposed service and also carries freight from the port of Sheerness.

Figure 11 Southeastern railway network map extract - <https://www.southeasternrailway.co.uk/your-journey/network-map/>



Our demand projections for passenger journeys consisting of the existing Hoo Peninsula demand and future Stoke Harbour population predicts 1.3 million passenger entries and exits (2.6 million individual journeys) per year, 3.38 times the passenger journeys made on SwaleRail in 2011/12. Figure [16] shows how these journeys are predicted to increase throughout the construction phases. Initial demand is provided by the existing residents of the Hoo Peninsula: with a small additional population at Stoke Harbour this will quickly exceed the demand for SwaleRail.

Table 1 Estimated swalerail annual passenger journey figures 2011/12

	Entries Full	Entries Reduced	Entries Season	Entries Total	Exits Full	Exits Reduced	Exits Season	Exits Total	2011-12 Entries & Exits
Kemsley	24,119	12,856	31,250	68,225	24,119	12,856	31,250	68,225	136,450
Swale	26,426	20,692	23,780	70,898	26,426	20,692	23,780	70,898	141,796
Queensborough	65,463	94,099	77,043	236,605	65,463	94,099	77,043	236,605	473,210
Sheerness	836	505	1,659	3,000	836	505	1,659	3,000	<u>6,000</u>
Total									757,456

Source: 2013, May, *Estimated station usage 2011/12*, Office of the Rail Regulator Official Statistics

[Accessed at <http://www.rail-reg.gov.uk/server/show/nav.1529> 19.02.14]

Table 2 Estimated stoke harbour - Gravesend passenger journey figures projection

Year	1	2	3	4	5	6	7	8	9	10	11	12
Existing Hoo Peninsula resident demand	266,424	266,424	266,424	266,424	266,424	266,424	266,424	266,424	266,424	266,424	266,424	266,424
Stoke Harbour projected population	2,329	5,241	8,658	13,225	16,322	19,382	22,493	25,530	28,590	31,466	33,939	36,000
Stoke Harbour predicted demand	<u>65,467</u>	<u>147,313</u>	<u>243,344</u>	<u>371,707</u>	<u>458,746</u>	<u>544,737</u>	<u>632,197</u>	<u>717,548</u>	<u>803,549</u>	<u>884,388</u>	<u>953,886</u>	<u>1,011,811</u>
Total passenger entries	<u>331,892</u>	<u>413,737</u>	<u>509,769</u>	<u>638,132</u>	<u>725,170</u>	<u>811,161</u>	<u>898,621</u>	<u>983,973</u>	<u>1,069,973</u>	<u>1,150,812</u>	<u>1,220,311</u>	<u>1,278,236</u>
Total passenger journeys (based on 100% returns)	663,784	827,475	1,019,537	1,276,263	1,450,341	1,622,323	1,797,242	1,967,946	2,139,947	2,301,625	2,440,622	2,556,471

Assumptions				
	General	Hoo	Stoke	Notes
Existing Hoo Peninsula population living West of High Halstow and Hoo St Werburg (and including these settlements)		13,824	n/a	From census figures for parishes
Working population %		50%	50%	Medway census data shows 54% aged 20-60 and 4% unemployment rate
% Commute to London or Gravesend estimate		20%	25%	
% who would travel by rail estimate		60%	70%	
Commuting days per year	240			
Leisure journeys	34%			Based on SwaleRail reduced price journeys

Table 3 Anticipated transport infrastructure expenditure

Year	0	1	2	3	4	5	6	7	8	9	10	11	12	
Infrastructure works														Total
<i>Rail</i>														
1 mile central passing point	£6m	-												£6m
Stoke Harbour station	£0.5m	£1m	£1m							£1.5m	£1.5m			£5.5m
Gravesend station upgrades	£0.5m	£0.5m	£0.5m											£1.5m
Signalling	£1m	£1m	£1m			-	£2m							£5m
4 x level crossings	£1m	-	£1m			£1m	£1m							£4m
Adding twin track										£14m	£14m	£14m		£42m
														<i>Rail</i> £64m
<i>Road</i>														
Fly-through and Four Elms Hill upgrade	-	£11m	£11m											£22m
Upgrade A228 and roundabouts							£5m	£5m	£5m					£15m
Relief Road										£40m	£40m	£40m	£40m	£160m
														<i>Road</i> £197m
Total	£9m	£13.5m	£14.5m			£1m	£8m	£5m	£5m	£55.5m	£55.5m	£54m	£40m	£261m

Appendix VI - Infra LLP transport infrastructure financing

a) Hybrid debt financing solution

The nature of the income streams from the commercial property and timing of additional equity from infrastructure levies being contributed by SHLP, are such that there are opportunities for capital to be repaid, which would reduce borrowing costs. Therefore, when choosing a debt solution, flexibility is important as well as low borrowing cost.

Given the differing characteristics of the types of available debt, it is likely that the best solution would be a blend of a couple of the sources outlined in Part I d), i.e., either bond or pension fund finance combined with bank lending may give a good blend of cost and flexibility.

We can summarise the estimated transport infrastructure spending requirements as £37m in the first three years, £19m in years 0-2 in years 5-8 and then £205m spread relatively evenly over years 9-12. Infrastructure finance is generally by bank debt for borrowing

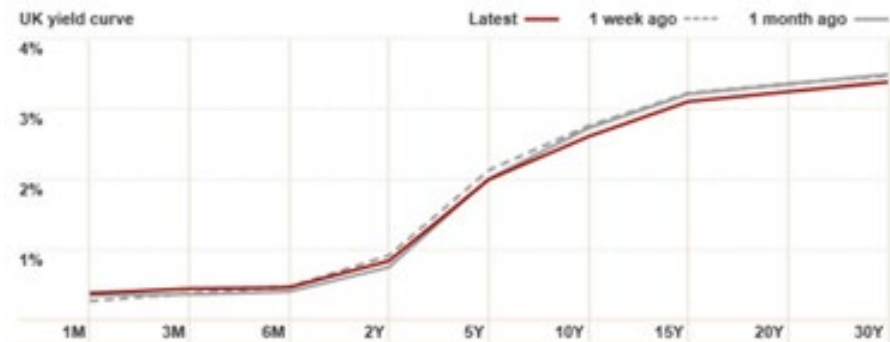
requirements less than, £80m, because of the limited market, even by private placement, for smaller bonds. We would therefore envisage that Infra LLP would be financed by bank debt until year 9, at which point a bond could be issued.

When deciding what financing to choose in years 9-12 there will be a number of options available for Infra LLP, such as bonds, institutional debt or further bank debt, but also index linking, the term of the debt etc, that would need to be explored properly at the time, taking account of prevailing market conditions to ensure Infra LLP gets best value. In order to get the best price bank debt Infra LLP would consider running a funding competition when required.

Treasury will be asked to provide a legal guarantee for the payment of interest and principal on any bonds issued by Infra LLP, with the fee for the guarantee determined by Infrastructure UK so that State Aid rules are not breached.

Infra LLP's credit rating will be assessed prior to the public placement, which is anticipated to be in year 9 of the construction period. Factors that may

Figure 12 UK Gilt yields, ft.com, (<http://markets.ft.com/research/markets/bonds> - accessed 11.07.2014)



help Infra LLP in its shadow credit rating would be the commercial property assets it owns, its gearing ratio, the expectancy that after the construction period has completed the commercial leases will move away from turnover rents and have annual RPI increases, thus providing some measure of an inflation hedge, and a parental guarantee for a capital call if interest cover falls below 1.1.

For modelling purposes, our assumed hybrid debt solution for Infra LLP is as follows:

Year 0-9:

- Debt is bank lending, at an average interest rate of 10-year LIBOR plus 2.5% (5.3% total).

Year 9:

- A £100m, 15 year Government guaranteed bond is issued by Infra LLP. The coupon is the 15 year UK Gilt rate plus 100 basis points (3.20% total) drawn down in 4 x £25m annual tranches. Based on Mersey Gateway case study, projected gearing and parent guarantee, we have assumed a Government guarantee fee of 1%.
- The remainder of the debt is bank lending, on the terms outlined above.

b) Project risk analysis

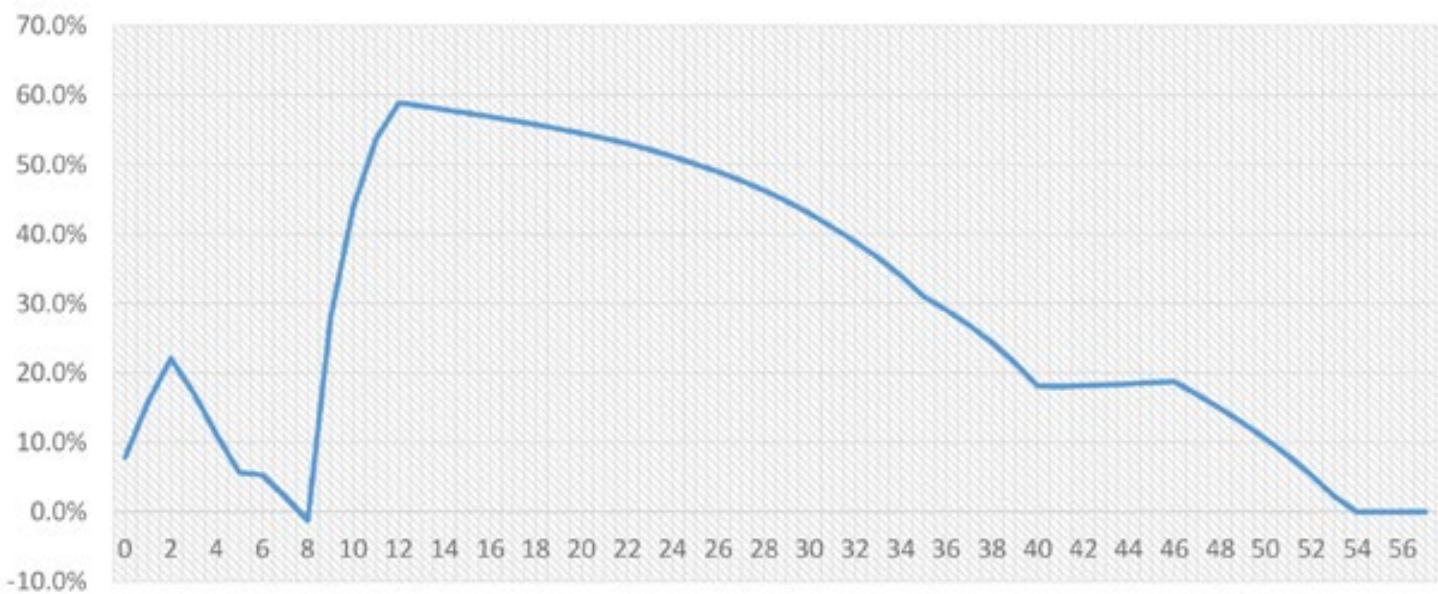
As outlined above, our expectation is that bond finance will not be required until year 9, at which point Infra LLP will have had a history of rental income, therefore the risk profile should be well understood. Furthermore, if house-building and market absorption is running behind schedule, Infra LLP can delay the infrastructure expenditure scheduled for years 9-12 until the relevant population triggers have been met.

The projected transport infrastructure financing considers Stoke Harbour on a standalone basis and does not model any potential extension (areas for a further 10,000 homes have been identified) or contributions to transport infrastructure from any of the other proposed settlements of the Hoo Peninsula Garden City. All of the above would be expected to yield further transport infrastructure levies, but also user tolling and growth in commercial rents and floorspace.

The tables below show the projected gearing and interest cover.

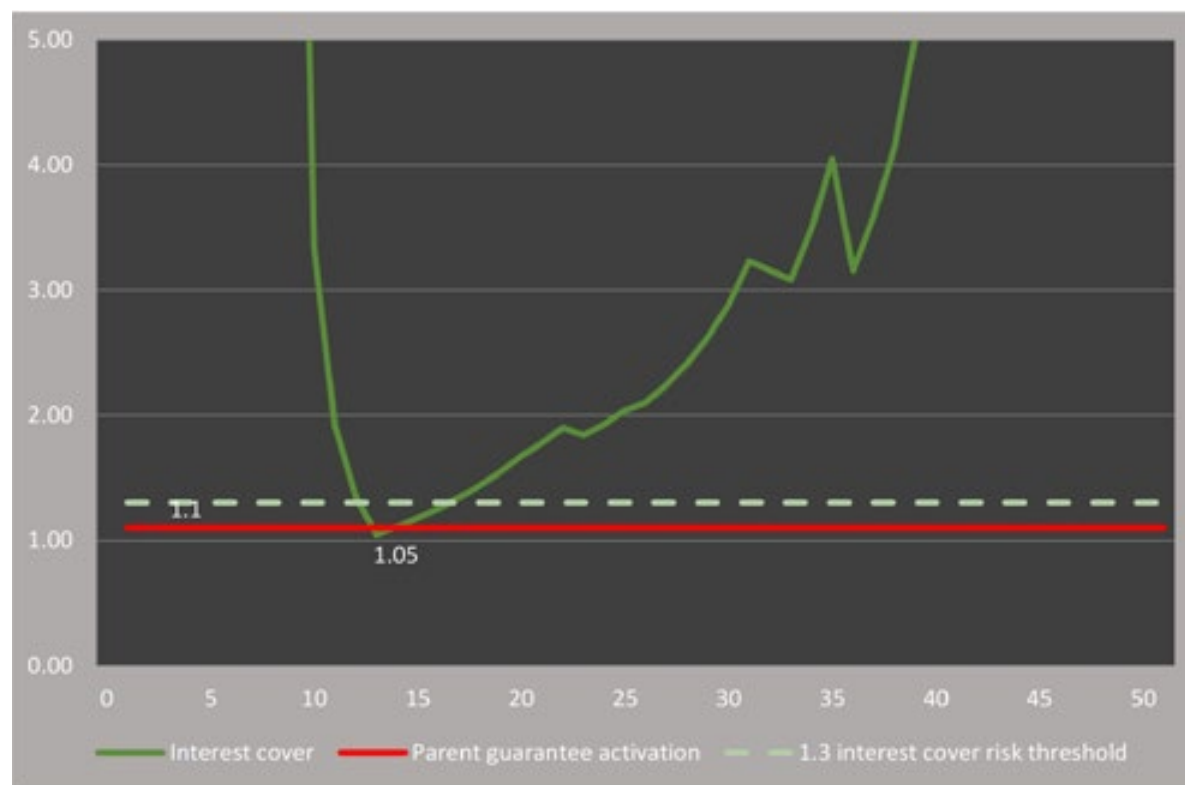
The gearing peaks at 60% in year 12, with debt measured against the NPV of property assets held by Infra LLP. Based on this gearing profile, we have assumed that all lending would be senior lending secured against property assets.

Figure13 Gearing ratio for transport infrastructure financing solution



The interest cover position shows that between years 12 and 18 income is projected to be less than 1.3 x the interest payments. These are the years of greatest risk and SHLLP will need to monitor Infra LLP's cashflows closely during this time and react quickly if the interest cover falls below 1.1, when its parental guarantee would be activated. SHLLP would have a number of potential levers at its disposal, for example, it could hand over more of the Stoke Harbour car-park rents or a portion of the head rents it receives, permit development on the extension zones identified or, if this anticipated during the construction phases, it could add a small increase in the transport infrastructure levy phase by phase.

Figure 14 Interest cover ratio



c) Assumptions

Debt assumptions:

- Bank debt at LIBOR plus 2.5% is used up until year 9. A bank debt facility at this rate is used throughout the 60 year borrowing period. Each debt facility is assumed to last ten years before a soft refinancing is forced through a step-up in interest rates.
- A 15 year Government guaranteed bond is issued for £100m in year 9, with four staged £25m annual draw-downs over years 9-12. Interest is at UK gilts plus 100 basis points, totalling 3.20% at 17 July 2014 rates. The Government guarantee premium is assumed to be 1%. The bond is assumed to be re-issued on the same terms after 15 years, but with no Government guarantee required due to the Infra LLP income history, therefore the project should not become a contingent liability on treasury's balance sheet. The interest rate is assumed to increase by 0.5% to take into account the loss of the guarantee.
- After the second bond has expired, £40m of it will be refinanced with 15-year institutional lending at 3.80%. The remaining £60m will be repaid increased bank debt. On expiry the 15-year institutional loan of £40m will be repaid via increased bank debt.

- Debt is not indexed linked.
- All debt is senior debt secured against commercial property, valued on an NPV basis at a 5% discount rate. This has been assumed as the maximum loan-to-value of the debt is 59%, which is currently (and historically) within the market limits for senior borrowing.

Income assumptions:

- The profit split of commercial rents between the investor and SHLLP is 67%/33%, based on construction cost: deemed land value.
- Occupation is assumed at 75% during the 12 year construction period, and then to grow at 2.5% a year to 92.5% occupation. Average rents are assumed to grow from £75/sqm to £100/sqm through the 12 year construction period, up to £200/sqm in year 23, and then by 0.5% a year from then. We have empirically tested Medway commercial rents and found the average to be £155-£160/sqm. Our commercial space will benefit from single strategic management, good infrastructure and connectivity, and the planned environment and therefore will be able to exceed this average in the long run.

- SHLLP contributes £5,000 (on average) as a transport infrastructure levy for each residential land unit except social housing. The build out is modelled as taking place over 12 years.
- Stoke Harbour is designated an enterprise zone and Infra LLP is able to retain business rates via contributions from Medway Council for 35 years.
- Business rates are based on the anticipated economic floor space build out rates and the [average Medway business rate of £123 per square metre¹³.
- User tolling through a levy of 5p on non-London train tickets and 25p on London train tickets can be implemented via the Train Operating Company. Our assumptions re: passenger numbers and percentage of commuters are detailed in Appendix V.
- Parking fees generated from the rail station car park are retained by Infra LLP. 10% of users are assumed to use the car park and daily parking rates are assumed to rise from £1/day to £5/day over the 12 year construction period.

¹³ Medway commercial land rateable value as per VOA Business Floorspace Statistics, accessed at http://www.voa.gov.uk/corporate/statisticalReleases/120517_CRLFloorspace.html 24 July 2014.

- Parking fees from the other Stoke Harbour car parks are contributed to Infra LLP for the first 15 years and then split 50/50 between Infra LLP and the Community Trust for the next 10 years. After that all income passes to the Community Trust. We have assumed that 50% of the car park spaces are occupied for 2-3 hours once a day, at a charge of £1.50, and that 50% of the income is spent on overheads.

Risk assumptions:

- We have assumed that should the interest cover ratio fall below 1.1, then a parental guarantee would kick in, requiring a capital call to raise funds to meet this ratio.
- We have modelled LIBOR, Gilt and other rates as at 17 July 2014 and assumed no change over the life of the project. There is clearly a risk that these rates will be different at the date of raising debt and move when refinancing is required. The parent guarantee above, would mean that SHLLP would need to consider which of its other income streams/assets to contribute to Infra LLP.

Investment assumptions

- The purpose of Medway and Gravesend Council's initial equity is not as a commercial investment, but rather a commitment to the project. As such, we have modelled that it is repaid with a 2% cost of capital. This rate could be increased if Infra LLP's income assumptions are found to be overly prudent and debt is repaid faster.

CASE STUDY (transport financing): The Mersey Gateway:

The Mersey Gateway is an innovative 30-year public-private partnership to deliver a new six-lane toll bridge over the river Mersey (the first new road bridge over the Mersey since 1961) that achieved financial close in March 2014. The project is part of a nationally important corridor that has been procured by Hatton Borough Council to alleviate congestion and act as a catalyst for much needed regeneration in the region. The project carries a capital value of £600m including land acquisitions.

The 30-year partnership delivers a new six-lane toll bridge and is the first greenfield project to utilise the Infrastructure UK guarantees program on the bond element of the financing. A Project Company was set up funded by private sector equity, which entered into a design, build, finance and operate agreement with the local authority.

The project is financed as follows:

- IUK-guaranteed bond: £257m at 4.892% including 1.05% IUK guarantee fee
- Term bank loan: £143m at 5.779%
- Grant bridge loan: £103m at 3.577%
- Mezzanine finance: £50m
- Sub debt and equity: £52m

Appendix VII - Detailed Stoke Harbour growth plan

This Appendix increases the detail on the growth plan outlined in Part III: Viability.

1. Pre-planning permission

The planning of Stoke Harbour's financing and construction is critical to its success. SHLLP and its advisers will talk to potential investors, construction partners, developers, major food retailers, other retail and commercial occupiers and public sector stakeholders during the planning process and negotiate agreements in principle that form an investment waterfall through to the completion of Phase I and hopefully further.

Key to this process will be the Government and local authorities demonstrating their clear support for the growth plan up to and beyond Phase III. This will help provide confidence to private sector funders/ developers that even if the market absorption is slower than projected, that their investments will come good over the medium term. This commitment would be demonstrated at meetings during the pre-planning phase, by public statements of policies to support garden cities, and most importantly through the NHS and DfE pre-agreeing leases, subject to successful planning, on schools and hospitals. These are the services that existing residents want

and there is some existing demand for, and will therefore help to meet the popularity hurdle, but would be being built with excess capacity to meet future need.

SHLLP will also set up the Community Trust during the pre-planning stage, as this will allow engagement with existing Hoo residents. This should help with planning of the first social infrastructure to be provided (for example, gathering local opinion on what youth-targeted facilities would be most beneficial) and will also help to create the community feel that helps new arrivals engage with their new surroundings and is attractive to prospective residents.

The first milestone for Stoke Harbour is anticipated to be the end of Phase I, when 5,000 units would have been built. Build out rates and market absorption would be assessed against projections on a monthly basis such that any required interventions, for example, increased central marketing spend, can be implemented at in a timely manner.

The masterplan is also very important and all construction in Stoke Harbour will be controlled by the masterplan. Management of the leasehold areas of the estate will be undertaken by SHLLP and funded by a service charge.

2. The first days: putting the building blocks in place

The granting of planning permission will trigger the first steps of the investment waterfall, which finances the initial building of a social infrastructure hub (NHS polyclinic providing GP surgery, dentist, pharmacy and opticians, nursery/primary school, small secondary school and child/youth facilities) and a 3,000 square metre regional food store, which is justifiable from existing Hoo Peninsula demand (there is no regional foodstore on the Peninsula) and would represent an attractive opportunity for a developer and investor due to the lease length (typically c.20 years) and low credit risk of the tenant (a large food retailer). This would be pre-let with an agreement negotiated at the pre-planning stage, contingent on planning permission.

It will also trigger the first house building, which will consist of detached and semi-detached low density larger residences based around the fringe of the settlement on existing roads. Self-build plots will also be offered in accessible areas.

Other actions that will be completed in these first days are:

- i. SHLLP will set up Infra LLP the transport infrastructure JV with Medway Council and Gravesend Council.
- ii. SHLLP will fund the construction of the first new road, the cost of which is estimated at £10m, from a mixture of cash reserves, the social infrastructure levy part of the upfront premium paid by developers and self-builders, and short term bridging finance. SHLLP will also fund the preliminary works such as services and drainage works and provide the first community facilities, eg a park and playground.
- iii. SHLLP will have c.£70m of land assets at this point and will be permitted to borrow to a maximum 25% gearing at this stage so as to allow forward funding of infrastructure. The 25% limit has been set at a level that should ensure SHLLP's assets are not placed in jeopardy by the need to service interest payments.
- iv. As specific zoning takes place, SHLLP will grant leases over the commercial zones to Infra LLP, funding transport infrastructure and the commercial land strategy outlined below. This

will allow Infra LLP to use commercial rents for 75 years to fund transport infrastructure and also will provide it with assets to borrow against.

- v. The first of these zones to be identified will be the central town square.
- vi. Once Infra LLP has been seeded with its first land assets it will activate the pre-agreement with Network Rail and South Eastern to construct a temporary station and car park at Stoke Harbour, add a central passing point and make the minimum upgrades required to signalling and Gravesend station for a shuttle service to run. This will create a step change in Stoke Harbour and the Hoo Peninsula's connectivity for a relatively small upfront cost.

3. The first four years: creating an identity, fostering community and getting to critical mass fast

It is important that the speed of growth for a new garden city is high. This is not only important for the economics (financing infrastructure requires that the settlement grows to the expected population and any use of debt becomes more expensive over time) but continued population growth, construction and perceived popularity creates a sense of momentum and confidence that it should be possible to investors, future potential residents and the businesses and retailers required to make a functioning local economy.

While house-building underpins the potential for population growth, it is equally important that the social and community aspects of the new settlement are not overlooked. The new garden city needs to nourish its residents and provide them with healthy and sociable communities, leisure opportunities, open space and room for interaction with the natural realm, in order to enable it to be an enriching home.

There are therefore a number of aims which should be afforded equal priority during Stoke Harbour's first years and the growth plan should reflect this balance.

4. Years 1 and 2

- i. Housing development of the higher value, lower density 4 and 5 bedroom houses and self-build in the accessible rural fringe will continue so as to maintain the flow of infrastructure and transport levies as well as profit shares in the sale proceeds to SHLLP.
- ii. The first terraced housing will also be constructed along the new A228-link road towards the town centre, including specialist residences for the elderly. This will help increase the price points and demographics that properties are available to sell to, thus increasing market absorption.

iii. Once an agreed set of contingency triggers has been met, eg, the first 200 residences and first new road have been completed, construction of the first commercial area will commence. This is anticipated to be one half of the town square, which is a development priority as the urban core will be a principle driver in creating Stoke Harbour's identity and character. Where possible this commercial space, in particular the retail space, will be pre-let prior to construction, on turnover based rents with ratchets for certain construction milestones being met as this will allow the occupier to spread some of its sales risk to the developer and SHLLP. Given the fledgling nature of the settlement at this point it is likely this risk sharing would be required in order to attract retailers. As the only significant commercial space on the Hoo Peninsula, this should benefit from footfall from existing Hoo Residents both based on its convenience and the 'new' factor. Therefore, additional car-parking is planned to cater for this.

iv. The construction of the first medium rise buildings in the main town square will give the opportunity for the first medium rise apartments at the periphery of the town centre, as the town centre will have created the necessary massing and building heights/

lines that allow the apartments to fit in with the surroundings. In any case, the existing power station provides a dominant backdrop which gives sufficient freedom for multi-floor development without unnecessarily disturbing the panorama.

- v. At least 20% of the first sets of apartments will be zoned as PRS, with some shared intermediate/shared ownership. This will increase the available tenures and therefore market absorption, but also provide the very necessary flexibility for people to move to Stoke Harbour without needing to buy a home.
- vi. Construction would also start on the Laing O'Rourke offsite construction factory as well as the recruitment of local employees and apprentices and their training, which would provide a big boost to the Medway region and the Hoo Peninsula in particular. This would be sited on land adjacent to the railway and the existing Kingsnorth industrial estate, to take advantage of the opportunity to transport materials and constructed units via freight rail, increasing the factory's future regional reach. Kingsnorth industrial estate should benefit over time from Laing O'Rourke's presence, with complimentary industries looking to set up nearby, which in turn should benefit

Stoke Harbour due to the employment opportunities. This factory should take c. 1 year to construct and will then allow offsite construction to accelerate build out rates.

- vii. SHLLP in conjunction with the Community Trust builds parks further parks and play areas in the inhabited areas and starts cultivating new ecological areas. Both bodies also implement the planning undertaken in collaboration with the RSPB, Natural England and the Wildfowl and Wetlands Trust in respect of the monitoring and mitigation of the impact of human interactions with the existing areas of natural interest, and the and involvement of the residents with the natural world on their doorstep.
- viii. Infra LLP begins the programme of further upgrades to Stoke Harbour station, Gravesend station, and signalling, as well as upgrade work on the A228 and Four Elms roundabout, using debt finance and the transport levies collected to date to do so, in line with the transport infrastructure financing plan.
- ix. SHLLP starts the upgrade of Stoke Road and extension to the A228 to give a N/S route through Stoke Harbour, which opens up new areas for house-building.

- x. A shared emergency services hub will be constructed on Stoke Road adjacent to the industrial estate.

5. Years 3-4

The next phase of the growth plan sees the settlement start to develop into a city, with social infrastructure, transport and new homes.

- i. Three community hubs will be constructed, one at each of the three neighbourhoods that are most formed. At this stage these are anticipated to be one at the Upper Stoke end of the settlement and the other towards Ropers Green Lane. Each hub will include a GP surgery and dentist, community hall, a nursery/primary school, park and play area, sports facilities, local sized library (with town wide index and book and lend programme), conservation and allotment/cultivation areas and youth targeted activities/facilities. These will be funded by infrastructure levy contributions to SHLLP and managed by SHLLP in conjunction with the Community Trust.
- ii. The existing small secondary school would be extended and a further small secondary school built in the Upper Stoke neighbourhood.
- iii. To help form and give opportunities for adding definition and density to the neighbourhoods the smaller side roads will start being constructed. These will be funded by infrastructure levy contributions to SHLLP.
- iv. House-building and self-build will continue linearly along the main roads, but also in more nucleated forms around the neighbourhood community hubs. The first social housing apartments, terraces and semi-detached houses would be built as would further PRS and shared ownership offerings. Specialist elderly and wheelchair access homes will be constructed across all tenures. Construction should now be happening across all tenures and price points and at sites with different characteristics, which should maximise market absorption.
- v. In year 3 we anticipate that SHLLP will start the harbour construction, working with the RSPB, Natural England and the Wildfowl and Wetlands Trust and the newly formed Stoke Harbour Conservancy Agency to mitigate and control impact on existing marine life and habitats. We anticipate that the harbour construction may take a number of years, starting with the main harbour front, protecting walls and the waterfront properties, and then working back from there year by year to produce the 'canal' area. The harbourside and canal properties would be a mixed development consisting of premium properties and retail and commercial opportunities, therefore a suitable development partner would be found with experience of this type of development. Waterfront is a prized asset in the UK and utilising this correctly and making it accessible will form a big part of Stoke Harbour's character and also its regional identity.
- vi. Mixed use developments would be added on the road between the rail station and the town centre, to add to the existing retail space.

6. End of Phase 1 construction milestone review

At the end of Phase I there should be c.5,000 homes constructed, two major through routes running broadly SW-NE and NW-SE, the start of a harbour area, hugely improved physical connectivity through the rail station and Four Elms roundabout upgrades as well as the following social infrastructure:

- NHS primary care centre
- A regional food store
- 2 x other GP surgeries
- 2 x small secondary schools
- 3 x nursery/primary schools
- 2 x local libraries
- 3 x community halls
- An emergency services hub
- Sports facilities
- 3 x youth centres with facilities, eg a skate park

- A number of parks and play areas
 - Allotments and conservation areas
 - Half of the town square regional comparison retail area
 - 2 x neighbourhood hubs and a town centre hub
 - An offsite construction manufacturing facility
- Market absorption will have been tested on a monthly basis and adjustments made to marketing spend and also to the tenure mix to allow construction to meet demand, especially in respect of the release of land for self-build. This should be reviewed at this stage and if market absorption is say, less than 60%, then consideration should be given to slowing down the future construction rate. However, momentum is the key and if market absorption is above this rate and there is felt to be sufficient demand based on viewings/enquiries/properties under offer etc then consideration should be given to maintaining the construction programme.

Throughout Phase I SHLLP should have been furthering the investment waterfall, such that the 60% hurdle, or something similar triggers the continuation of the investment and construction process into Phase II.

The work of the Community Trust and the community and social schemes should also be assessed and feedback sought from the community so that social infrastructure priorities for Phase II can be adjusted accordingly.

Phase II, Phase III and the future

The rapid growth through Phase I is to be continued for Phases II and III, each averaging construction of 5,000 units over a four year period. The projected build out rate and population growth of Stoke Harbour is shown in Part III: Viability. This assumes an initial occupation rate of 75% during Phase I, growing to full occupation in year 17.

Appendix VIII – Modelled SHLLP returns and sensitivity testing

SHLLP returns modelling assumptions:

- The Co-Promoter sells at 200% of their contribution after a successful referendum.
- Each Core Development Investor sells after 7 years.
- The Long Term investor acquires the partnership interest from Core Development Investor (2) once construction is completed but before full occupancy.
- Costs are the 'expected' costs as per our cost estimates in Appendix IX.
- SHLLP partner returns in the main body of the report have been modelled using scenario 4, which we consider to be conservative but the best fit to SHLLP's business plan.

Scenario modelling assumptions

Scenario 1:

All properties are sold at the "low"/minimum sales price stipulated by SHLLP. Broadly, this would mean that Stoke Harbour properties were priced at the same level as the lowest priced properties in the Medway area.

Scenario 2:

For scenario 2, 30% of the properties are sold at the low/minimum sales price stipulated by SHLLP, 35% of properties have a sales price 10% above this figure, 15% of properties have a sales price 20% above the minimum sales price, and 20% of properties are sold at the median value. This would mean that 80% of properties are sold within the existing Medway affordability ranges.

Scenario 3:

The third scenario models 20% of the properties being sold at the low/minimum sales price stipulated by SHLLP, 25% at the minimum sales price plus 10%, 25% at the minimum sales price plus 20%, and then 20% of properties at the median price and a further 10% at a price that exceeds the median by 10%. This takes into account the aspirations that Stoke Harbour will be able to achieve a living environment and level of connectivity that meets (and hopefully exceeds) that of the current Medway towns, and therefore there will be demand for properties at higher than

average price points. It also demonstrates SHLLP's commitment to a majority of properties being sold at prices that make them attainable for existing Medway residents.

Scenario 4:

The final scenario closest resembles SHLLP's anticipated business plan. For the first six years 25% of the properties are sold at the low/minimum sales price stipulated by SHLLP, 25% at the minimum sales price plus 10%, and 50% at the median sales price. This reflects that for the first six years a lot of the properties being sold will be the larger properties at the rural fringe at an expected price point above that of the Medway average.

For the next six years, after Stoke Harbour has established itself and there is more confidence in market absorption we have modelled a sales mix of 15% of properties at the low/minimum sales price stipulated by SHLLP, 20% at the minimum sales price plus 10%, 30% at the minimum sales price plus 20%, 20% at the median sales price, 10% at the median price plus 10%, and 5% at the "high" sales price, reflecting the development of waterfront and harbour/canal district properties.

Table 4 Cash return through construction and occupation period

SHLLP Investor	Initial contribution	Profit Share	Cash return - sale of partnership interest	Cash return from build out and occupation period (15 years)			
				SCENARIO1	SCENARIO 2	SCENARIO 3	SCENARIO 4
	(£m)		(£m)	(£m)	(£m)	(£m)	(£m)
Promoter	£1.5m	1.5%	n/a	£5.5m	£6.2m	£6.5m	£6.7m
Co-Promoter	£6.0m	n/a	£16.0m-£18.0m	n/a	n/a	n/a	n/a
Core Investor 1 (Development)	£33.0m	41%	£52.0m-£55.0m	£37.1m	£46.4m	£50.1m	£52.4m
Core Investor 2 (Development)	n/a	41%	£26.5m-£29.5m	£36.1m	£45.0m	£48.7m	£51.2m
Core Investor 3 (Long-term)	n/a	41%	n/a	£6.8m	£8.8m	£9.6m	£10.2m
Church Commissioners	£7.4m	56%	n/a	£92.9m	£120.2m	£131.6m	£139.1m
Medway Council	£0.5m	0.5%	n/a	£0.8m	£1.1m	£1.2	£1.2m
			TOTAL	£171.0m	£229.7m	£249.9m	£263.4m

NOTES

There is a priority profit share whereby the Promoter and Core Investor both also receive their initial cash contributions and a 100% risk fee as a first share of net income or gains.

Table 5 Annuity income return

SHLLP Investor	Asset contributed	Profit sharing ratio	Head rent annuity income (£m)	Annual yield in respect of initial investment
Promoter	Cash	1.5%	£0.05m	3.5%
Co-Promoter	Cash	n/a	n/a	n/a
Core Investor 1 (Development)	Cash	41%	n/a	n/a
Core Investor 2 (Development)	n/a	41%	n/a	n/a
Core Investor 3 (Long-term)	n/a	41%	£1.4m	7.0%
Church Commissioners	Land	56%	£1.9m	26.0%
Medway Council	Cash	0.5%	<u>£0.02</u>	3.5%
			£3.4m	

Table 6 IRR calculations for SHLLP investors using “expected” costs and Scenario 4

	Acq. Price (£m)	Profit share	IRR	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Core Development Investor 1	£51.0	41.7%	16.5%	-£20.7	-£2.7	-£27.5	£3.2	£8.5	£11.9	£13.3	£75.1											
Core Development Investor 2	£55.0		14.2%								-£46.8	£7.4	£8.3	£7.4	£8.6	£7.4	£6.4	£43.4				
Long Term Investor	£29.5		7.0%															-£26.6	£2.9	£1.8	£1.5	£1.5

NOTES

The long term investor receives a £1.5m annuity.

Table 7 IRR calculations for SHLLP investors using “expected” costs and Scenario 1

	Acq. Price (£m)	Profit share	IRR	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Core Development Investor 1	£49.0	41.7%	13.4%	-£18.7	-£2.7	-£27.5	£2.2	£6.5	£9.9	£9.3	£67.1											
Core Development Investor 2	£52.0		9.7%								-£44.8	£5.4	£6.3	£5.4	£6.6	£5.4	£4.4	£38.4				
Long Term Investor	£26.5		7.0%															£-25.0	£1.4	£1.5	£1.5	£1.5

NOTES

The long term investor receives a £1.5m annuity.

Sensitivity testing of SHLLP investor returns

Impact of “high” construction costs

Table 8 Projected partnership returns based on scenario 4 and ‘high’ costs

SHLLP Investor	Asset contributed	Years of investment	Initial contribution (£m)	Deemed uplift / future contribution (£m)	Total (£m)	Profit share	Cash return (to end of build out) (£m)	Equity multiple	Estimated IRR	Target IRR	Annual yield
Promoter	Cash	All	£1.5m	-	£1.5m	1%	£5.4m	3.6			4%
Co-Promoter	Cash	3-4 up to LDO grant	£6.0m	-	£6.0m	n/a	£16.0m	2.7			n/a
Core Investor 1 (Development)	Cash	15 yrs (5-7 per investor)	£16.0m	£33.0m	£49.0m	41%	£107.0m	2.2	14.0%	15-20%	n/a
Core Investor 2 (Development)	n/a	15 yrs (5-7 per investor)	£62.0m	-	£62.0m	41%	£97.5m	1.6	11.1%	12-17%	n/a
Core Investor 3 (Long-term)	n/a	Long-term years 15+	£28.5m	-	£28.5m	41%	n/a	n/a	7.0%	6-10%	7.0%
Church Commissioners	Land	All	£7.5m	£44.0m	£51.5m	56%	£146.5m	19.5			26.0%
Medway Council	Cash	Medium term	£0.5m	-	£0.5m	0.5%	£1.3m	2.6			4%

Table 9 projected partnership returns based on Scenario 4 and 'low' costs

SHLLP Investor	Asset contributed	Years of investment	Initial contribution (£m)	Deemed uplift / future contribution (£m)	Total (£m)	Profit share	Cash return (to end of build out) (£m)	Equity multiple	Estimated IRR	Target IRR	Annual yield
Promoter	Cash	All	£1.5m	-	£1.5m	1%	£7.2m	4.8			4%
Co-Promoter	Cash	3-4 up to LDO grant	£6.0m	-	£6.0m	n/a	£18.0m	3.0			n/a
Core Investor 1 (Development)	Cash	15 yrs (5-7 per investor)	£18.0m	£33.0m	£51.0m	41%	£130.0m	2.5	23.7%	15-20%	n/a
Core Investor 2 (Development)	n/a	15 yrs (5-7 per investor)	£55.0m	-	£55.0m	41%	£104.5m	1.9	16.6%	12-17%	n/a
Core Investor 3 (Long-term)	n/a	Long-term years 15+	£31.5m	-	£31.5m	41%	n/a	n/a	7.0%	6-10%	7.0%
Church Commissioners	Land	All	£7.5m	£44.0m	£51.5m	56%	£156.5m	20.9			26.0%
Medway Council	Cash	Medium term	£0.5m	-	£0.5m	0.5%	£1.4m	2.8			4%

Impact of extended build out phases

If the build out phases do not proceed as fast as projected, SHLLP will need to react to this by reducing overheads and running costs, as the underlying capital value and returns will still exist but could be eroded by the running costs, if significant. In year 1 the anticipated excess of running costs over rental income is c.£2m, and by year 9 there is an excess of rental income over construction costs, therefore, for example, a 50% over run of construction time in any phase (so four years rather than six) could lead to a reduction in total profits of up to £4m. The

earlier in the process that the delay occurs, the more costly and impactful it would be. One measure that could be taken to reduce the financial impact of over-runs is to restrict the council tax rebate to ten years, thus saving £1.65m from the potential over-run costs.

The second impact is on the IRR of the Co-Promoter and Core Development Investors. In order to keep these high it is likely that a further investor would be added to the cycle, so that there were four investors who held partnership interests for 5-7 years each.

Appendix IX- Site specific development investor sensitivity testing

We have estimated land acquisition, infrastructure and construction costs on a three point scale (low, expected and high). Please see below for how the investor results are impacted by costs being higher or lower than the “expected” amounts.

Table 10 Site specific developer/investor results based on “high” cost estimates

Tenure	Expected category of investor	Required total investment (£m)	Target return	Estimated return based on expected costs			Notes
				Scenario 2	Scenario 3	Scenario 4	
Private sale	Developer	£942m (£828m)	15%-20%	£144m (£170m) (profit) 15.3% (20.5%)	£174m (£201m) 18.5% (24.5%)	£187m (£215m) 19.9% (26.0%)	Target is 15-20% as developer bears own finance costs, otherwise 10%-15%.
				Low	Median	High	
PRS	Institutional / real estate fund / sovereign wealth	£175m (£156m)	6%-9% (with uplift)	4.3%-6.1% (5.0%-6.7%)	5.2%-7.5% (5.9%-8.3%)	6.0%-8.9% (6.9%-9.8%)	RPI annual uplift expected plus reset to market value at the end of the tenancy
Shared ownership	Housing Association	£145m (£143m)	n/a	n/a	n/a	n/a	We have not modelled shared ownership returns due to the potential permutations.
Self-build	Owner occupier	£117m (£105m)	n/a	n/a	n/a	n/a	
Social housing	Housing Association / Medway Council / Institutional	£441m (£407m)	4% index linked	n/a	4% index-linked (institutional model)	n/a	Return will remain at 4% index linked. Build cost impacts allocations to social housing as the maximum rents are fixed. Please see Appendix XI for further details.
Schools and hospitals	Institutional	£100m (£90m)	4% index linked	n/a	4% index-linked (institutional model)	n/a	Return will be set at 4% index-linked on construction cost
Commercial	Institutional / real estate fund / sovereign wealth	£179m (£157m)	10%-15%	10.3%-11.9% (11.3%-14.9%)	12.5%-12.8% (12.5%-16.6%)	12.8%-13.2% (12.9%-17.0%)	Commercial land is held by Infra LLP
TOTAL		£2,098m (£1,886m)					

Impact on social housing

The social housing model is sensitive to cost increases as there is a maximum rent for social housing, therefore there is limited flexibility in increasing rents. Should all the land acquisition, social infrastructure and construction costs rise to the “high” level, then there would need to be a rebalancing of the allocation of social infrastructure costs away from social housing. Our model assumes a 45% discount per unit of social housing compared to private, and if costs increased to the top level then this discount would need increase to c.65%-75%. The resulting 15% social infrastructure premium for private properties has been modelled into the results outlined above.

If build costs are “high” then social housing rents would also need to increase from their modelled level by £3-£10pw, which would still be within permitted Medway social rent levels.

Impact on private sale

The increased in costs would mean that some of the minimum prices would have to rise, and the top sales prices would also have to be relaxed to 15% below the current Medway peak. The impact on the affordability analysis is shown in the table below, and the affordability of homes to median Medway earners remains strong even if costs rise, which should serve to keep local demand high.

Table 11 Updated affordability analysis for “high” construction costs

Single earner				1.5 earners						Dual earner		
£23,113				£34,670						£46,226		
Median Medway wage												
Mortgage 90%												
Dwelling type				Multiples of median wage								
				Single earner			1.5 earners			Dual earners		
	Low sale price	Low +10%	Median	Low sale price	Low +10%	Median	Low sale price	Low +10%	Median	Low sale price	Low +10%	Median
Apartments												
1 x Bedroom 2 x People	£83,000	£91,300	£115,875	3.23	3.56	4.51	2.15	2.37	3.01	1.62	1.78	2.26
2B4P	£110,000	£121,000	£146,375	4.28	4.71	5.70	2.86	3.14	3.80	2.14	2.36	2.85
3B4P	£135,000	£148,500	£186,500	5.26	5.78	7.26	3.50	3.85	4.84	2.63	2.89	3.63
3B5P Duplex	£163,000	£179,300	£209,000	6.35	6.98	8.14	4.23	4.65	5.43	3.17	3.49	4.07
Houses												
2B4P Terrace	£135,000	£148,500	£165,250	5.26	5.78	6.43	3.50	3.85	4.29	2.63	2.89	3.22
3B5P Terrace	£163,000	£179,300	£198,375	6.35	6.98	7.72	4.23	4.65	5.15	3.17	3.49	3.86
4B6P Terrace	£183,000	£201,300	£212,625	7.13	7.84	8.28	4.75	5.23	5.52	3.56	3.92	4.14
3B5P Semi-d	£180,000	£198,000	£228,125	7.01	7.71	8.88	4.67	5.14	5.92	3.50	3.85	4.44
4B6P Semi-d	£200,000	£220,000	£248,750	7.79	8.57	9.69	5.19	5.71	6.46	3.89	4.28	4.84
4B6P Detached	£230,000	£253,000	£306,250	8.96	9.85	11.93	5.97	6.57	7.95	4.48	4.93	5.96
4B7P Detached	£300,000	£330,000	£413,500	11.68	12.85	16.10	7.79	8.57	10.73	5.84	6.42	8.05
5B7P Detached	£370,000	£407,000	£482,500	14.41	15.85	18.79	9.60	10.57	12.53	7.20	7.92	9.39

Table 12 Site specific developer/investor results based on "low" cost estimates

Tenure	Expected category of investor	Required total investment (£m)	Target return	Estimated return based on expected costs			Notes
				Scenario 2	Scenario 3	Scenario 4	
Private sale	Developer	£726m (£828m)	15%-20%	£232m (£170m) <i>(profit)</i> 32.0% (20.5%)	£258m (£201m) 35.5% (24.5%)	£274m (£215m) 37.7% (26.0%)	Target is 15-20% as developer bears own finance costs, otherwise 10%-15%.
				Low	Median	High	
PRS	Institutional / real estate fund / sovereign wealth	£137m (£156m)	6%-9% (with uplift)	5.7%-7.5% (5.0%-6.7%)	6.8%-9.2% (5.9%-8.3%)	7.9%-11.3% (6.9%-9.8%)	RPI annual uplift expected plus reset to market value at the end of the tenancy
Shared ownership	Housing Association	£143m (£143m)	n/a	n/a	n/a	n/a	We have not modelled shared ownership returns due to the potential permutations.
Self-build	Owner occupier	£95m (£105m)	n/a	n/a	n/a	n/a	
Social housing	Housing Association / Medway Council / Institutional	£360m (£407m)	4% index linked	n/a	4% index-linked (institutional model)	n/a	Return will remain at 4% index linked. Build cost impacts allocations to social housing as the maximum rents are fixed. Please see Appendix XI for further details.
Schools and hospitals	Institutional	£79m (£90m)	4% index linked	n/a	4% index-linked (institutional model)	n/a	Return will be set at 4% index-linked on construction cost
Commercial	Institutional / real estate fund / sovereign wealth	£138m (£157m)	10%-15%	12.6%-16.6% (11.3%-14.9%)	16.6%-16.9% (12.5%-16.6%)	16.9%-17.2% (12.9%-17.0%)	Commercial land is held by Infra LLP
TOTAL		£1,678m (£1,886m)					

Appendix X – Further details on Stoke Harbour’s commercial land strategy

KPMG’s recent “Hope for the High Street” report into the future of traditional British High Streets highlights the need for “collective urban spaces where people can meet, communicate, eat, drink, work and spend time out of the home”. It also outlines a number of factors that commercial areas that have managed to successfully evolve have in common. These include:

- A balance between commercial and residential uses.
- Food and beverage outlets and a diversity of entertainment venues.
- A mix of independent as well as national multiple retailers and service providers occupying a range of unit sizes.
- Ample car parking, convenient public transport and easy accessibility.
- On-street wi-fi access.
- Cultural and education facilities as well as other demographically-relevant infrastructure.
- Clean, safe and interesting physical environments and public spaces.

As well as the factors that prevent high streets from adapting:

- Inadequate long-term high street planning.
- Mismatch of planning usage.
- Lack of commercial leadership and incentives between business and communities.

As a new city, Stoke Harbour should be able plan for the ‘good’ factors, and to avoid the ‘bad’ factors. In particular, a commercial area under sole management benefits from the constant attention of that manager, and their focus on achieving, as outlined above, the right mix of retailers, food and beverage outlets and entertainment venues, but also the ability to specific target operators, get the split between national and independent businesses (for example, setting aside 25% of retail space for small businesses), their locations, the size and shape of the units they occupy and their opening hours, all in order to create the best offering to suit the potential customers and to achieve the buzz and energy created by having an area that trades together and creates the desired atmosphere.

A sole manager can also react quickly as the patterns of use of the public realm, retailing, commerce and needs of the catchment population evolve. SHLLP would appoint an experienced commercial property manager for all its commercial areas, paid for via service charges from the occupiers. SHLLP and the property manager would consult regularly with the other key local stakeholders: the Community Trust, the wider community, Medway Council so that the resident’s attitudes to the town centre, harbourfront and other commercial areas can be gauged and reacted to.

SHLLP will also ask existing Hoo residents about their aspirations and hopes for Stoke Harbour’s commercial areas and public realm prior to construction. This valuable feedback will help shape the commercial areas that have a sphere of influence extending across the Hoo and to Medway, which will allow occupiers the benefits of much greater footfall than could be expected from Stoke Harbour’s initial population.

¹⁴ September 2013, “Hope for the High Street”, KPMG LLP, Stephen Barter

Appendix XI– Cost estimate supporting information

Stoke Harbour				
Order of Construction Cost Estimate				
OVERALL SUMMARY				
<u>Description</u>	£ Low	£ Expected	%	£ High
Pre-planning	4,250,000	6,500,000	0.4%	11,000,000
Planning and land acquisition	26,486,050	46,358,868	2.6%	61,426,740
Site clearance, enabling works, preliminaries, services and drainage	26,065,646	31,555,516	1.7%	36,974,741
Surfaces and green spaces	10,710,000	14,280,000	0.8%	18,130,000
Social infrastructure, including commercial and industrial	454,038,600	526,474,293	29.1%	593,617,650
Housing	1,063,125,135	1,181,250,150	65.4%	1,306,928,940
Total estimated construction cost	1,585,014,961	1,806,418,826	100%	2,028,078,071
Total rounded construction cost		1,810,000,000		
<u>Notes</u>				
Please note that contingencies of 30% for unknown ground conditions and 10% for price movement in labour and materials have been included				
Please refer to the cost breakdown for further detail				

Land acquisition cost summary								
	Quantity	Unit	Rate			£		
	70%		Low	Expected	High	Low	Expected	High
Land owned by the Church Commissioners	367.85	ha	£7,000,000	£7,357,000	£8,500,000		-	
Option cost of land not owned by Church Commissioners	157.65	ha	£10,000	£20,000	£30,000	£1,576,500	£3,153,000	£4,729,500
Option exercise cost (4 x option premium)	157.65	ha	£40,000	£80,000	£120,000	£6,306,000	£12,612,000	£18,918,000
Assumed SDLT	4%		£14,882,500	£23,122,000	£32,147,500	£595,300	£924,880	£1,285,900
Assumed professional fees (10%)	10%		£8,477,800	£16,689,880	£24,933,400	£847,780	£1,668,988	£2,493,340
Planning cost						£2,000,000	£5,000,000	£10,000,000
Promoter fee						£4,250,000	£6,500,000	£11,000,000
Compensation fund for existing farm residents						£7,000,000	£10,000,000	£13,000,000
						£22,575,580	£39,858,868	£61,426,740
Estimated total land acquisition costs						£26,825,580	£46,358,868	£72,426,740

Land acquisition cost summary	
<i>Notes and assumptions</i>	
Option cost of land not owned by Church Commissioners	<i>Option premium = 20% of total cost</i>
Option exercise cost (4 x option premium)	<i>Existing use value estimated at £20.2k/ha, £100k/ha assumed acquisition price</i>
Assumed SDLT	<i>Assumed on full existing use land value</i>
Assumed professional fees (10%)	<i>On full land acquisition cost</i>
Planning cost	<i>Estimated cost</i>
Promoter fee	<i>Promoter fee equal to pre-planning costs</i>
Compensation fund for existing farm residents	<i>150% of value of home or £100k, plus relocation expenses when required during construction</i>

Preliminaries cost summary								
	Quantity	Unit	Rate			£		
			Low	Expected	High	Low	Expected	High
Drainage	177	ha	£5,700	£6,500	£7,400	£1,006,466	£1,147,724	£1,306,640
Sustainable Urban Drainage System						£4,000,000	£5,000,000	£6,000,000
Remediation/abnormals						£8,000,000	£10,000,000	£12,000,000
Site preparation	177	ha	£21,000	£24,000	£27,000	£3,708,031	£4,237,750	£4,767,469
Service connections	24	km	£139,000	£162,000	£182,000	£3,336,000	£3,888,000	£4,368,000
						£20,050,497	£24,273,474	£28,442,108
Unexpected ground conditions (30% contingency)	30%					£6,015,149	£7,282,042	£8,532,632
						£26,065,646	£31,555,516	£36,974,741

Preliminaries cost summary	
<i>Notes and assumptions</i>	
Drainage	<i>Assume all land requires some drainage work</i>
Sustainable Urban Drainage System	<i>Estimated cost</i>
Remediation/abnormals	<i>Estimated cost - none known to be required</i>
Site preparation	<i>Soil preparation</i>
Service connections	<i>Estimated length of service runs</i>

Surfaces and green spaces								
	Quantity	Unit	Rate			£		
			Low	Expected	High	Low	Expected	High
Paved areas (brick)	10	ha	£570,000	£650,000	£740,000	£5,700,000	£6,500,000	£7,400,000
Town square (granite/stone)	2	ha	£900,000	£1,000,000	£1,700,000	£1,800,000	£2,000,000	£3,400,000
Trees		4000	£50	£70	£120	£200,000	£280,000	£480,000
Shrubs	10	ha	£151,000	£380,000	£495,000	£1,510,000	£3,800,000	£4,950,000
Green fringe	100	ha	£15,000	£17,000	£19,000	£1,500,000	£1,700,000	£1,900,000
						£10,710,000	£14,280,000	£18,130,000
						10,710,000	14,280,000	18,130,000

Surfaces and green spaces

Notes and assumptions

Paved areas (brick)	10 hectares
Town square (granite/stone)	2 hectares
Trees	Existing trees retained where possible
Shrubs	10 hectares
Green fringe	Assume 50% requires initial works

Social infrastructure								
	GIA (sqm)	Quantity/unit	Rate			£		
<i>Education</i>			Low	Expected	High	Low	Expected	High
Nursery and primary schools	2500	7.5	£1,400	£1,575	£1,750	£26,250,000	£29,531,250	£32,812,500
Secondary schools	10000	3	£1,525	£1,725	£1,925	£45,750,000	£51,750,000	£57,750,000
Further Education	2500	1	£960	£1,150	£1,200	£2,400,000	£2,875,000	£3,000,000
<i>Healthcare</i>						£74,400,000	£84,156,250	£93,562,500
GP surgeries	50	20	£880	£1,000	£1,100	£880,000	£1,000,000	£1,100,000
Community hospital	4000	1	£1,775	£2,000	£2,250	£7,100,000	£8,000,000	£9,000,000
<i>Community facilities</i>						£7,980,000	£9,000,000	£10,100,000
Community centres	31	36	£880	£980	£1,100	£982,080	1,093,680	£1,227,600
Libraries	31	36	£920	£1,050	£1,150	£1,026,720	1,171,800	£1,283,400
Emergency services	1333	1.5	£1,100	£1,275	£1,400	£2,199,450	2,549,363	£2,799,300
<i>Employment</i>						4,208,250	4,814,843	5,310,300
B1 - Town centre mixed use	84000		£740	£870	£1,000	£62,160,000	£73,080,000	£84,000,000
B1 - Business Park	21000		£880	£980	£1,100	£18,480,000	£20,580,000	£23,100,000
B2 - Light industrial	30000		£520	£550	£650	£15,600,000	£16,500,000	£19,500,000
<i>Retail</i>						96,240,000	110,160,000	126,600,000
Regional food store 1	3000	1	£440	£500	£560	£1,320,000	£1,500,000	£1,680,000
Regional food store 2	2000	1	£440	£500	£560	£880,000	£1,000,000	£1,120,000
Comparison retail	5000		£530	£600	£670	£2,650,000	£3,000,000	£3,350,000
<i>Hotels</i>						4,850,000	5,500,000	6,150,000
Country House Hotel 1	8000	1	£1,300	£1,475	£1,650	£10,400,000	£11,800,000	£13,200,000
Country House Hotel 2	7500	1	£1,300	£1,475	£1,650	£9,750,000	£11,062,500	£12,375,000
Urban business hotel, mid market	10200	1	£1,625	£1,825	£2,025	£16,575,000	£18,615,000	£20,655,000
						36,725,000	41,477,500	46,230,000
<i>Total carried forward to next page</i>						£224,403,250	£255,108,593	£287,952,800

	GIA (sqm)	Quantity /unit	Rate			£		
			Low	Expected	High	Low	Expected	High
<i>Total brought forward from previous page</i>						£224,403,250	£255,108,593	£287,952,800
<i>Services</i>								
Service compounds	5.715	ha	£6,500,000	£7,500,000	£9,000,000	£47,147,500	£52,862,500	£61,435,000
Broadband provision						£1,000,000	£1,000,000	£1,000,000
Primary transport network	9.89	ha	£14,000,000	£16,500,000	£18,000,000	£138,460,000	£163,185,000	£178,020,000
Harbour and canals						£10,000,000	£15,000,000	£20,000,000
Train station		1						
Bus station	150	1	£1,875	£2,100	£2,375	£281,250	£315,000	£356,250
Multi-storey car park at station								
3 x multi-storey car parks	7920	3	£285	£320	£360	£6,771,600	£7,603,200	£8,553,600
20 x landscape parking courtyards	5000	20	£79	£89	£99	£7,900,000	£8,900,000	£9,900,000
<i>Open space</i>						£211,560,350	£248,865,700	£279,264,850
Outdoor formal sports provision	17000	15	40	£50	£60	£10,200,000	£12,750,000	£15,300,000
Children's play spaces equipped	2000	15	175	£200	£220	£5,250,000	£6,000,000	£6,600,000
Children's play spaces informal	5000	15	35	£50	£60	£2,625,000	£3,750,000	£4,500,000
						£18,075,000	£22,500,000	£26,400,000
Sub total						£454,038,600	£526,474,293	£593,617,650
Funded by commercial investors						137,565,000	157,012,500	178,630,000
Funded by institutional investors using separate model						79,100,000	89,281,250	99,562,500
Funded by New Homes Bonus						£44,985,958	£44,985,958	£44,985,958
Funded by SHLP						£192,387,642	£235,194,584	£270,439,192
Professional fees (10%)					10%	19,238,764	23,519,458	27,043,919
Contingency - price movement in labour and materials					10%	18,238,764	19,238,764	23,519,458
						£230,865,170	£282,233,501	£324,527,030

Social infrastructure	
Notes and Assumptions	
<i>Education</i>	
Nursery and primary schools	7.5 in total, 2.5 per 5,000 dwellings @2,500 square metres Gross Internal Area ("GIA")
Secondary schools	3 in total, 1 per 5,000 dwellings @10,000 square metres GIA
Further Education	Medway University satellite @2,500 sqm GIA
<i>Healthcare</i>	
GP surgeries	20 GP surgeries in total, 1 per 1,800 population, GP surgeries grouped into PCT's @ 500 sqm per PCT
Community hospital	4,000 sqm GIA
<i>Community facilities</i>	
Community centres	31 sqm per 1,000 population
Libraries	31 sqm per 1,000 population
Emergency services	0.5 per 5,000 dwellings @1,333 GIA
<i>Employment</i>	
B1 - Town centre mixed use	84,000 sqm GIA
B1 - Business Park	21000 sqm GIA
B2 - Light industrial	40000 sqm GIA
<i>Retail</i>	
Regional food store 1	3,000 sqm GIA
Regional food store 2	2,000 sqm GIA
Comparison retail	5,000 sqm GIA
<i>Hotels</i>	
Country House Hotel 1	100 keys, 8,000 sqm GIA
Country House Hotel 2	100 keys, 7,500 sqm GIA
Urban business hotel, mid market	150 keys, 10,200 sqm GIA

Notes and assumptions continued...*Services*

Service compounds	11.43ha, assume 50% built
Broadband provision	
Primary transport network	9.89ha, includes bus stops etc
Harbour and canals	Costs based on South Ayrshire Maidens Harbour feasibility study [accessed 20.02.14]
Train station	Cost included in transport infrastructure model
Bus station	GIA 150 sqm
Multi-storey car park at station	Cost included in transport infrastructure model
3 x multi-storey car parks	23,760 sqm GIA
20 x landscape parking courtyards	100,000 sqm GIA
<i>Open space</i>	
Outdoor formal sports provision	1.7ha per 1,000 dwellings
Children's play spaces equipped	0.2ha per 1,000 dwellings
Children's play spaces informal	0.5ha per 1,000 dwellings

Sub total

Funded by commercial investors

Funded by institutional investors using separate model

Funded by New Homes Bonus	Assume 50/50 sharing ratio agreed with Medway Council
Funded by SHLP	
Professional fees (10%)	
Contingency - price movement in labour and materials	

Table 13 Dwelling construction costs

Construction costs	Dwelling Size M2 GIA	Build Cost £/m2			Build cost per unit (£)			Total units	Total build cost (£)		
		Low	Expected	High	Low	Expected	High		Low	Expected	High
<i>Apartments</i>						A					
1 x Bedroom 2 x People	50	£1,080	£1,200	£1,320	£54,000	£60,000	£66,000	3,007	£162,357,750	£180,397,500	£198,437,250
2B4P	70	£1,080	£1,200	£1,320	£75,600	£84,000	£92,400	2,154	£162,804,600	£180,894,000	£198,983,400
3B4P	86	£1,080	£1,200	£1,320	£92,880	£103,200	£113,520	997	£92,566,530	£102,851,700	£113,136,870
3B5P Duplex	96	£1,080	£1,200	£1,320	£103,680	£115,200	£126,720	324	£33,540,480	£37,267,200	£40,993,920
<i>Houses</i>											
2B4P Terrace	83	£810	£900	£1,000	£67,230	£74,700	£83,000	2,045	£137,468,543	£152,742,825	£169,714,250
3B5P Terrace	102	£810	£900	£1,000	£82,620	£91,800	£102,000	2,320	£191,709,383	£213,010,425	£236,678,250
4B6P Terrace	113	£810	£900	£1,000	£91,530	£101,700	£113,000	751	£68,739,030	£76,376,700	£84,863,000
3B5P Semi-d	105	£810	£900	£1,000	£85,050	£94,500	£105,000	815	£69,294,488	£76,993,875	£85,548,750
4B6P Semi-d	112	£810	£900	£1,000	£90,720	£100,800	£112,000	792	£71,872,920	£79,858,800	£88,732,000
4B6P Detached	135	£810	£900	£1,000	£109,350	£121,500	£135,000	635	£69,409,913	£77,122,125	£85,691,250
4B7P Detached	180	£810	£900	£1,000	£145,800	£162,000	£180,000	620	£90,359,550	£100,399,500	£111,555,000
5B7P Detached	220	£810	£900	£1,000	£178,200	£198,000	£220,000	545	£97,074,450	£107,860,500	£119,845,000
						Total		15,003	£1,247,197,635	£1,385,775,150	£1,534,178,940
						Less: self build			-£184,072,500	-£204,525,000	-£227,250,000
									£1,063,125,135	£1,181,250,150	£1,306,928,940

Table 14 Social and transport infrastructure levy per unit based on expected costs

Infrastructure costs per unit	Total footprint M2	Social infra cost (£)	Social infra cost per unit (£)	Social housing 45% reduction (£)	Private housing 10.5% levy (£)	Transport infra levy for private sale (£)	Transport infra levy for shared ownership (£)
<i>Apartments</i>			G	C	D	E	F
1 x Bedroom 2 x People	37,583	9,688,185	3,222	1,772	3,561	1,500	750
2B4P	37,686	9,714,849	4,511	2,481	4,985	2,500	1,250
3B4P	21,427	5,523,615	5,542	3,048	6,124	3,500	1,750
3B5P Duplex	15,528	4,002,844	12,374	6,805	13,673	4,000	2,000
<i>Houses</i>							
2B4P Terrace	169,714	43,749,335	21,396	11,768	23,643	3,000	1,500
3B5P Terrace	236,678	61,011,471	26,294	14,462	29,055	4,200	2,100
4B6P Terrace	84,863	21,876,182	29,129	16,021	32,188	5,250	2,625
3B5P Semi-d	85,549	22,052,956	27,067	14,887	29,909	5,750	2,875
4B6P Semi-d	88,732	22,873,542	28,872	15,879	31,903	6,750	3,375
4B6P Detached	85,691	22,089,690	34,801	19,140	38,455	7,700	3,850
4B7P Detached	111,555	28,756,908	46,401	25,520	51,273	8,750	4,375
5B7P Detached	119,845	30,893,924	56,712	31,192	62,667	10,500	5,250
	1,094,852	282,233,501					

Table 15 Land cost per unit for expected costs

Land costs per unit	Dwelling Size M2 GIA	No. Dwellings/ floor/ ha	No. Floors	Dwellings / Hectare	Footprint per unit	Total footprint M2	Land cost (£)	Land cost per unit (£)
<i>Apartments</i>								B
1 x Bedroom 2 x People	50	58	4	232	12.50	37,583	3,387,867	1,127
2B4P	70	40	4	160	17.50	37,686	3,397,191	1,578
3B4P	86	36	4	144	21.50	21,427	1,931,556	1,938
3B5P Duplex	96	29	2	58	48.00	15,528	1,399,757	4,327
<i>Houses</i>								
2B4P Terrace	83	60	1	60	83.00	169,714	15,298,728	7,482
3B5P Terrace	102	50	1	50	102.00	236,678	21,335,134	9,195
4B6P Terrace	113	50	1	50	113.00	84,863	7,649,894	10,186
3B5P Semi-d	105	34	1	34	105.00	85,549	7,711,710	9,465
4B6P Semi-d	112	34	1	34	112.00	88,732	7,998,661	10,096
4B6P Detached	135	28	1	28	135.00	85,691	7,724,556	12,169
4B7P Detached	180	28	1	28	180.00	111,555	10,056,019	16,226
5B7P Detached	220	24	1	24	220.00	119,845	10,803,313	19,832
						1,094,852	98,694,384	

Table 16 Total acquisition and construction

Construction costs	Total unit cost (social) (£)	Total unit cost (PRS) (£)	Total unit cost (private sale) (£)	Total unit cost (Shared ownership) (£)	Total unit cost (Self build) (£)
	A+B+C	A+B+D+E	A+B+D+E	A+B+F+G	B+D+E
<i>Apartments</i>					
1 x Bedroom 2 x People	£62,899	£66,187	£66,187	£65,099	£6,187
2B4P	£88,059	£93,062	£93,062	£91,339	£9,062
3B4P	£108,186	£114,762	£114,762	£112,430	£11,562
3B5P Duplex	£126,332	£137,200	£137,200	£133,900	£22,000
<i>Houses</i>					
2B4P Terrace	£93,950	£108,824	£108,824	£105,078	£34,124
3B5P Terrace	£115,456	£134,249	£134,249	£129,388	£42,449
4B6P Terrace	£127,907	£149,324	£149,324	£143,641	£47,624
3B5P Semi-d	£118,852	£139,624	£139,624	£133,907	£45,124
4B6P Semi-d	£126,776	£149,549	£149,549	£143,143	£48,749
4B6P Detached	£152,810	£179,824	£179,824	£172,320	£58,324
4B7P Detached	£203,746	£238,249	£238,249	£229,002	£76,249
5B7P Detached	£249,023	£290,999	£290,999	£279,794	£92,999

Notes

References to A, B, C, D etc, refer to columns in the preceding tables that specify land acquisition cost, social infrastructure levy and transport infrastructure levy.

Appendix XII – Profit analysis per tenure

Private Sale

Table 17 Gross profit analysis on 'expected' cost

	Total unit cost (£)	Assumed sales margin (2%)	Minimum sales price (£)	Profit (low) sales value (£)	Gross profit (low)	GP (low+10%)	GP (low+20%)	GP (median)	GP (median +10%)	GP (high)
<i>Apartments</i>										
1 x Bedroom 2 x People	£66,187	£1,324	£67,511	£12,489	18.5%	30.3%	48.1%	62.9%	79.2%	107.4%
2B4P	£93,062	£1,861	£94,924	£5,076	5.3%	15.9%	31.7%	43.3%	57.6%	81.2%
3B4P	£114,762	£2,295	£117,058	£12,942	11.1%	22.2%	38.8%	51.2%	66.3%	91.4%
3B5P Duplex	£137,200	£2,744	£139,944	£10,056	7.2%	17.9%	34.0%	39.3%	53.3%	71.5%
<i>Houses</i>										
2B4P Terrace	£108,824	£2,176	£111,001	£6,999	6.3%	16.9%	32.9%	36.0%	49.6%	65.8%
3B5P Terrace	£134,249	£2,685	£136,934	£8,066	5.9%	16.5%	32.4%	33.3%	46.6%	60.7%
4B6P Terrace	£149,324	£2,986	£152,311	£17,689	11.6%	22.8%	39.5%	30.7%	43.7%	49.7%
3B5P Semi-d	£139,624	£2,792	£142,417	£32,583	22.9%	35.2%	53.6%	52.7%	68.0%	82.6%
4B6P Semi-d	£149,549	£2,991	£152,540	£47,460	31.1%	44.2%	63.9%	57.3%	73.1%	83.6%
4B6P Detached	£179,824	£3,596	£183,421	£46,579	25.4%	37.9%	56.7%	60.8%	76.9%	96.3%
4B7P Detached	£238,249	£4,765	£243,014	£36,986	15.2%	26.7%	44.0%	59.7%	75.6%	104.1%
5B7P Detached	£290,999	£5,820	£296,819	£53,181	17.9%	29.7%	47.4%	53.3%	68.6%	88.7%

Notes

Sales prices refer to Table 3, Vision

Social housing

	Total unit cost (social) (£)	Annual rental yield (£)	Medway social housing rents + service charge (£)		Discounted head rent	Net return after head rent	Medway Housing Benefit cap (£)		Required yield as % of Net return
	(from above)	5.75%	weekly	Annual (£)	£35	(£)	pcm	annual	
<i>Apartments</i>									
1 x Bedroom 2 x People	£62,899	£3,617	£80	£4,160	£35	£4,125	£467	£5,598	87.7%
2B4P	£88,059	£5,063	£100	£5,200	£70	£5,130	£583	£6,997	98.7%
3B4P	£108,186	£6,221	£125	£6,500	£105	£6,395	£645	£7,740	97.3%
3B5P Duplex	£126,332	£7,264	£140	£7,280	£105	£7,175	£645	£7,740	101.2%
<i>Houses</i>									
2B4P Terrace	£93,950	£5,402	£115	£5,980	£70	£5,910	£583	£6,997	91.4%
3B5P Terrace	£115,456	£6,639	£135	£7,020	£105	£6,915	£645	£7,740	96.0%
4B6P Terrace	£127,907	£7,355	£145	£7,540	£140	£7,400	£862	£10,344	99.4%
3B5P Semi-d	£118,852	£6,834	£150	£7,800	£105	£7,695	£645	£7,740	88.8%
4B6P Semi-d	£126,776	£7,290	£155	£8,060	£140	£7,920	£862	£10,344	92.0%

Notes

Net return is the return to the investor after paying the head rent to SHLLP

PRS

	Estimated unit cost	Estimated market rent	Estimated market rent (£) annual		Head rent (£200	Reduction for head rents		Adjustment for 10% running costs		annual rental yield (£)			95% occupancy		
	(£)	(£) pcm	Low	High	/bedroom)	Low	High	Low	High	Low	High	Mean	Mean	Low	High
<i>Apartments</i>															
1 x Bedroom 2 x People	£66,187	450-650	£5,400	£7,800	£200	£5,200	£7,600	£4,680	£6,840	7.1%	10.3%	8.7%	8.3%	6.7%	9.8%
2B4P	£93,062	550-800	£6,600	£9,600	£400	£6,200	£9,200	£5,580	£8,280	6.0%	8.9%	7.4%	7.1%	5.7%	8.5%
3B4P	£114,762	700-1000	£8,400	£12,000	£600	£7,800	£11,400	£7,020	£10,260	6.1%	8.9%	7.5%	7.2%	5.8%	8.5%
3B5P Duplex	£137,200	750-1000	£9,000	£12,000	£600	£8,400	£11,400	£7,560	£10,260	5.5%	7.5%	6.5%	6.2%	5.2%	7.1%
<i>Houses</i>															
2B4P Terrace	£108,824	600-900	£7,200	£10,800	£400	£6,800	£10,400	£6,120	£9,360	5.6%	8.6%	7.1%	6.8%	5.3%	8.2%
3B5P Terrace	£134,249	700-950	£8,400	£11,400	£600	£7,800	£10,800	£7,020	£9,720	5.2%	7.2%	6.2%	5.9%	5.0%	6.9%
4B6P Terrace	£149,324	900-1100	£10,800	£13,200	£800	£10,000	£12,400	£9,000	£11,160	6.0%	7.5%	6.8%	6.4%	5.7%	7.1%
3B5P Semi-d	£139,624	750-1100	£9,000	£13,200	£600	£8,400	£12,600	£7,560	£11,340	5.4%	8.1%	6.8%	6.4%	5.1%	7.7%
4B6P Semi-d	£149,549	950-1500	£11,400	£18,000	£800	£10,600	£17,200	£9,540	£15,480	6.4%	10.4%	8.4%	7.9%	6.1%	9.8%
4B6P Detached	£179,824	1200-1600	£14,400	£19,200	£800	£13,600	£18,400	£12,240	£16,560	6.8%	9.2%	8.0%	7.6%	6.5%	8.7%
4B7P Detached	£238,249	1300-2000	£15,600	£24,000	£800	£14,800	£23,200	£13,320	£20,880	5.6%	8.8%	7.2%	6.8%	5.3%	8.3%
5B7P Detached	£290,999	1500-2200	£18,000	£26,400	£1,000	£17,000	£25,400	£15,300	£22,860	5.3%	7.9%	6.6%	6.2%	5.0%	7.5%

Self-build

	Total unit cost	Self build sale price		Profit per unit	
	(£)	(cost + 15%) (£)	(cost + 35%) (£)	(cost + 15%) (£)	(cost + 35%) (£)
<i>Apartments</i>					
1 x Bedroom 2 x People	n/a	n/a	n/a	n/a	n/a
2B4P	n/a	n/a	n/a	n/a	n/a
3B4P	n/a	n/a	n/a	n/a	n/a
3B5P Duplex	n/a	n/a	n/a	n/a	n/a
<i>Houses</i>					
2B4P Terrace	£34,124	£39,243	£46,068	£5,119	£11,944
3B5P Terrace	£42,449	£48,817	£57,307	£6,367	£14,857
4B6P Terrace	£47,624	£54,768	£64,293	£7,144	£16,668
3B5P Semi-d	n/a	n/a	n/a	n/a	n/a
4B6P Semi-d	n/a	n/a	n/a	n/a	n/a
4B6P Detached	£58,324	£67,073	£78,738	£8,749	£20,413
4B7P Detached	£76,249	£87,686	£102,936	£11,437	£26,687
5B7P Detached	£92,999	£106,948	£125,548	£13,950	£32,550

Shared ownership

	Total unit cost (£)	Shared ownership sale price "low+10%" sales value - 95%	Profit per unit (£)
<i>Apartments</i>			
1 x Bedroom 2 x People	£65,099	£83,600	23,600
2B4P	£91,339	£104,500	20,500
3B4P	£112,430	£135,850	32,650
3B5P Duplex	£133,900	£156,750	41,550
<i>Houses</i>			
2B4P Terrace	£105,078	£123,310	48,610
3B5P Terrace	£129,388	£151,525	59,725
4B6P Terrace	£143,641	£177,650	75,950
3B5P Semi-d	£133,907	£182,875	88,375
4B6P Semi-d	n/a	n/a	n/a
4B6P Detached	n/a	n/a	n/a
4B7P Detached	n/a	n/a	n/a
5B7P Detached	n/a	n/a	n/a

Appendix XIII – SHLLP cash flow model

Pre – construction and Phase I											
Year	-6	-5	-4	-3	-2	-1	0	1	2	3	4
Occupation % assumption							80%	80%	80%	80%	80%
Private sale and self build receipts											
<i>Scenario 1)</i>							£1,333,384	£6,275,861	£8,244,484	£10,897,211	£13,930,447
<i>Scenario 2)</i>							£2,281,352	£8,949,131	£11,720,367	£14,897,637	£17,937,192
<i>Scenario 3)</i>							£2,675,081	£10,059,446	£13,164,039	£16,559,172	£19,601,352
<i>Scenario 4)</i>							£2,915,566	£10,737,614	£14,045,817	£17,574,018	£20,617,802

Phases II and III											
Year	5	6	7	8	9	10	11	12	13	14	15
Occupation % assumption	83%	83%	85%	85%	88%	88%	90%	90%	93%	95%	100%
Private sale and self build receipts											
<i>Scenario 1)</i>	£8,856,520	£8,020,097	£9,127,886	£8,161,658	£9,552,570	£8,952,707	£9,244,695	£7,804,306	£1,671,475	£1,671,476	£3,342,952
<i>Scenario 2)</i>	£12,769,654	£11,278,738	£13,160,306	£11,519,045	£13,881,230	£12,408,842	£13,634,973	£9,816,369	£2,889,614	£2,889,616	£5,779,233
<i>Scenario 3)</i>	£14,394,933	£12,632,180	£14,835,129	£12,913,501	£15,679,093	£13,844,310	£15,458,429	£10,652,058	£3,395,556	£3,395,558	£6,791,117
<i>Scenario 4)</i>	£15,387,635	£13,584,537	£16,013,628	£13,894,717	£16,944,170	£14,854,386	£16,741,514	£11,240,095	£3,751,564	£3,751,567	£7,503,134

Head rental income											
Year	-6	-5	-4	-3	-2	-1	0	1	2	3	4
Occupation % assumption							80%	80%	80%	80%	80%
PRS - units							0	200	200	250	200
Cumulative units								200	400	650	850
Occupied units								160	320	520	680
Head rents								£69,920	£139,840	£227,240	£297,160
social housing - units							0	68	125	225	275
Cumulative units								68	193	418	693
Head rents								£4,972	£14,112	£30,565	£50,673
Private sale - units							150	423	550	633	634
Cumulative units							150	573	1123	1756	2390
Occupied units							120	458	898	1,405	1,912
Head rents							£34,478	£131,704	£258,122	£403,617	£549,342
Shared ownership - units							0	50	75	125	175
Cumulative units								50	125	250	425
Occupied units								40	100	200	340
Head rents								£9,200	£23,000	£46,000	£78,200
Self build - units							50	169	184	181	258
Cumulative units							50	219	403	583	842
Occupied units							40	175	322	467	673
Head rents							£13,166	£57,579	£106,029	£153,601	£221,625
Head rents from social infra								£79,500	£109,300	£127,800	£140,300
Total head rent annuity income							£47,643	£352,875	£650,403	£988,822	£1,337,299

Head rental income											
Year	5	6	7	8	9	10	11	12	13	14	15
Occupation % assumption	83%	83%	85%	85%	88%	88%	90%	90%	93%	95%	100%
PRS – units	200	200	150	100	0	0	0	0	0	0	0
Cumulative units	1050	1250	1400	1500	1500	1500	1500	1500	1500	1500	1500
Occupied units	866.25	1031.25	1190	1275	1312.5	1312.5	1350	1350	1387.5	1425	1500
<i>Head rents</i>	£378,551	£450,656	£520,030	£557,175	£573,563	£573,563	£589,950	£589,950	£606,338	£622,725	£655,500
social housing - units	275	315	350	400	500	550	650	767			
Cumulative units	968	1283	1633	2033	2533	3083	3733	4500	4500	4500	4500
<i>Head rents</i>	£70,781	£93,814	£119,406	£148,655	£185,215	£225,432	£272,960	£329,044	£329,044	£329,044	£329,044
Private sale – units	528	500	500	500	500	500	467	283			
Cumulative units	2918	3418	3918	4418	4918	5418	5885	6168	6168	6168	6168
Occupied units	2,407	2,820	3,330	3,755	4,303	4,741	5,297	5,551	5,705	5,860	6,168
<i>Head rents</i>	£691,662	£810,178	£956,837	£1,078,945	£1,236,378	£1,362,077	£1,521,751	£1,594,929	£1,639,233	£1,683,536	£1,772,144
Shared ownership – units	75	75	75	75	75	100	100	125			
Cumulative units	500	575	650	725	800	900	1000	1125	1125	1125	1125
Occupied units	413	474	553	616	700	788	900	1,013	1,041	1,069	1,125
<i>Head rents</i>	£94,875	£109,106	£127,075	£141,738	£161,000	£181,125	£207,000	£232,875	£239,344	£245,813	£258,750
Self build - units	175	175	175	175	175	133	33	42			
Cumulative units	1017	1192	1367	1542	1717	1850	1883	1925	1925	1925	1925
Occupied units	839	983	1,162	1,310	1,502	1,619	1,695	1,733	1,781	1,829	1,925
<i>Head rents</i>	£276,071	£323,591	£382,358	£431,318	£494,404	£532,805	£557,902	£570,245	£586,085	£601,925	£633,606
Head rents from social infra	£183,800	£257,500	£288,500	£332,000	£372,500	£423,500	£454,500	£473,250	£473,250	£473,250	£473,250
Total head rent annuity income	£1,695,740	£2,044,846	£2,394,206	£2,689,830	£3,023,059	£3,298,500	£3,604,063	£3,790,293	£3,873,293	£3,956,293	£4,122,293

ANNUAL CASH FLOW NOT INCLUDING SALES PROCEEDS											
Year	-6	-5	-4	-3	-2	-1	0	1	2	3	4
Total head rent annuity income (above)							£47,643	£352,875	£650,403	£988,822	£1,337,299
<i>Premium income: Private sale</i>							£5,667,615	£15,982,676	£20,781,257	£23,917,337	£23,955,121
PRS								£4,296,049	£4,296,049	£5,370,061	£4,296,049
Social housing								£678,291	£1,246,859	£2,244,346	£2,743,090
Shared ownership								£1,199,607	£1,799,411	£2,999,018	£4,198,625
Self-build							£2,560,212	£8,636,448	£9,421,579	£9,250,899	£13,227,761
Total premium income							£8,227,827	£30,793,070	£37,545,154	£43,781,661	£48,420,646
Total income not including sales proceeds	£0	£0	£0	£0	£0	£0	£8,275,471	£31,145,945	£38,195,557	£44,770,483	£49,757,945
EXPENDITURE											
Transport infrastructure levy								-£4,083,333	-£4,857,500	-£5,630,833	-£5,899,167
Council tax rebate								-£1,650,000	-£1,650,000	-£1,650,000	-£1,650,000
Partnership running costs	-£1,000,000	-£1,000,000	-£1,000,000	-£1,000,000	-£1,000,000	-£1,000,000	-£1,000,000	-£1,000,000	-£1,000,000	-£1,000,000	-£1,000,000
Donations to Community Trust						-£500,000	-£500,000	-£500,000	-£500,000	-£500,000	-£500,000
<i>Pre-construction costs: Referendum costs</i>			-£500,000								
Option cost of land not owned by Church Commissioners		-£3,153,000									
Option exercise cost (4 x option premium)						-£12,612,000					
Assumed SDLT		-£420,400				-£504,480					
Assumed professional fees (10%)	£0	-£357,340	£0	£0	£0	-£1,311,648					
Compensation fund for existing farm residents						-£10,000,000					
Planning				-£1,666,667	-£1,666,667	-£1,666,667					
<i>Preliminary costs</i>							-£2,629,626	-£2,629,626	-£2,629,626	-£2,629,626	-£2,629,626
<i>Surfaces and green spaces</i>							-£1,190,000	-£1,190,000	-£1,190,000	-£1,190,000	-£1,190,000
<i>Social infrastructure</i>							-£23,519,458	-£23,519,458	-£23,519,458	-£23,519,458	-£23,519,458
Total expenditure not including interest	-£1,000,000	-£4,930,740	-£1,500,000	-£2,666,667	-£2,666,667	-£27,594,795	-£28,839,085	-£34,572,418	-£35,346,585	-£36,119,918	-£36,388,251
Net cash flow, not including sales proceeds	-£1,000,000	-£4,930,740	-£1,500,000	-£2,666,667	-£2,666,667	-£27,594,795	-£20,563,614	-£3,426,473	£2,848,972	£8,650,565	£13,369,693
Short-term bridging loan interest @7%							-£1,439,453	-£1,679,306	-£1,479,878	-£874,338	
Net cash flow	-£1,000,000	-£4,930,740	-£1,500,000	-£2,666,667	-£2,666,667	-£27,594,795	-£22,003,067	-£5,105,779	£1,369,094	£7,776,227	£13,369,693

ANNUAL CASH FLOW NOT INCLUDING SALES PROCEEDS											
Year	5	6	7	8	9	10	11	12	13	14	15
Total head rent annuity income (above)	£1,695,740	£2,044,846	£2,394,206	£2,689,830	£3,023,059	£3,298,500	£3,604,063	£3,790,293	£3,873,293	£3,956,293	£4,122,293
<i>Premium income: Private sale</i>	£19,950,006	£18,892,051	£18,892,051	£18,892,051	£18,892,051	£18,892,051	£17,645,176	£10,692,901			
PRS	£4,296,049	£4,296,049	£3,222,036	£2,148,024	£0	£0	£0	£0			
Social housing	£2,743,090	£3,142,085	£3,491,205	£3,989,949	£4,987,436	£5,486,180	£6,483,667	£7,650,727			
Shared ownership	£1,799,411	£1,799,411	£1,799,411	£1,799,411	£1,799,411	£2,399,215	£2,399,215	£2,999,018			
Self-build	£8,960,741	£8,960,741	£8,960,741	£8,960,741	£8,960,741	£6,827,231	£1,706,808	£2,133,510			
Total premium income	£37,749,297	£37,090,337	£36,365,445	£35,790,177	£34,639,639	£33,604,677	£28,234,865	£23,476,156			
Total income not including sales proceeds	£39,445,037	£39,135,183	£38,759,651	£38,480,006	£37,662,699	£36,903,177	£31,838,928	£27,266,449	£3,873,293	£3,956,293	£4,122,293
EXPENDITURE											
Transport infrastructure levy	-£4,702,500	-£4,562,500	-£4,312,500	-£4,062,500	-£3,562,500	-£3,416,667	-£2,751,667	-£1,935,833	£0		
Council tax rebate	-£1,650,000	-£1,650,000	-£1,650,000	-£1,650,000	-£1,650,000	-£1,650,000	-£1,650,000	-£1,650,000			
Partnership running costs	-£1,000,000	-£1,000,000	-£1,000,000	-£1,000,000	-£1,000,000	-£1,000,000	-£1,000,000	-£1,000,000	-£500,000	-£500,000	-£500,000
Donations to Community Trust	-£500,000	-£500,000	-£500,000	-£500,000	-£500,000	-£500,000	-£500,000	-£500,000	-£200,000	-£200,000	-£200,000
<i>Pre-construction costs: Referendum costs</i>											
Option cost of land not owned by Church Commissioners											
Option exercise cost (4 x option premium)											
Assumed SDLT											
Assumed professional fees (10%)											
Compensation fund for existing farm residents											
Planning											
<i>Preliminary costs</i>	-£2,629,626	-£2,629,626	-£2,629,626	-£2,629,626	-£2,629,626	-£2,629,626	-£2,629,626				
<i>Surfaces and green spaces</i>	-£1,190,000	-£1,190,000	-£1,190,000	-£1,190,000	-£1,190,000	-£1,190,000	-£1,190,000				
<i>Social infrastructure</i>	-£23,519,458	-£23,519,458	-£23,519,458	-£23,519,458	-£23,519,458	-£23,519,458	-£23,519,458				
Total expenditure not including interest	-£35,191,585	-£35,051,585	-£34,801,585	-£34,551,585	-£34,051,585	-£33,905,751	-£33,240,751	-£5,085,833	-£700,000	-£700,000	-£700,000
Net cash flow, not including sales proceeds	£4,253,452	£4,083,598	£3,958,066	£3,928,422	£3,611,114	£2,997,426	-£1,401,824	£22,180,615	£3,173,293	£3,256,293	£3,422,293
Short-term bridging loan interest @7%											
Net cash flow	£4,253,452	£4,083,598	£3,958,066	£3,928,422	£3,611,114	£2,997,426	-£1,401,824	£22,180,615	£3,173,293	£3,256,293	£3,422,293

CUMULATIVE CASH FLOW											
Year	-6	-5	-4	-3	-2	-1	0	1	2	3	4
Occupation % assumption							80%	80%	80%	80%	80%
Net cash flow (from above)	-£1,000,000	-£4,930,740	-£1,500,000	-£2,666,667	-£2,666,667	-£27,594,795	-£22,003,067	-£5,105,779	£1,369,094	£7,776,227	£13,369,693
Cumulative cash flow	-£1,000,000	-£5,930,740	-£7,430,740	-£10,097,407	-£12,764,073	-£40,358,868	-£62,361,935	-£67,467,714	-£66,098,620	-£58,322,393	-£44,952,700
Private sale and self build receipts											
Scenario 1)							£1,333,384	£6,275,861	£8,244,484	£10,897,211	£13,930,447
Scenario 2)							£2,281,352	£8,949,131	£11,720,367	£14,897,637	£17,937,192
Scenario 3)							£2,675,081	£10,059,446	£13,164,039	£16,559,172	£19,601,352
Scenario 4)							£2,915,566	£10,737,614	£14,045,817	£17,574,018	£20,617,802
Net cash flow scenario 1	-£1,000,000	-£4,930,740	-£1,500,000	-£2,666,667	-£2,666,667	-£27,594,795	-£20,669,683	£1,170,082	£9,613,578	£18,673,438	£27,300,140
Cumulative scenario 1	-£1,000,000	-£5,930,740	-£7,430,740	-£10,097,407	-£12,764,073	-£40,358,868	-£61,028,551	-£59,858,469	-£50,244,891	-£31,571,453	-£4,271,313
Net cash flow scenario 2	-£1,000,000	-£4,930,740	-£1,500,000	-£2,666,667	-£2,666,667	-£27,594,795	-£19,721,715	£3,843,352	£13,089,462	£22,673,864	£31,306,886
Cumulative scenario 2	-£1,000,000	-£5,930,740	-£7,430,740	-£10,097,407	-£12,764,073	-£40,358,868	-£60,080,583	-£56,237,230	-£43,147,769	-£20,473,905	£10,832,981
Net cash flow scenario 3	-£1,000,000	-£4,930,740	-£1,500,000	-£2,666,667	-£2,666,667	-£27,594,795	-£19,327,986	£4,953,667	£14,533,133	£24,335,398	£32,971,045
Cumulative scenario 3	-£1,000,000	-£5,930,740	-£7,430,740	-£10,097,407	-£12,764,073	-£40,358,868	-£59,686,854	-£54,733,187	-£40,200,054	-£15,864,655	£17,106,390
Net cash flow scenario 4	-£1,000,000	-£4,930,740	-£1,500,000	-£2,666,667	-£2,666,667	-£27,594,795	-£19,087,501	£5,631,835	£15,414,912	£25,350,245	£33,987,495
Cumulative scenario 4	-£1,000,000	-£5,930,740	-£7,430,740	-£10,097,407	-£12,764,073	-£40,358,868	-£59,446,369	-£53,814,534	-£38,399,623	-£13,049,378	£20,938,117

CUMULATIVE CASH FLOW											
Year	-6	-5	-4	-3	-2	-1	0	1	2	3	4
Occupation % assumption							80%	80%	80%	80%	80%
Net cash flow (from above)	-£1,000,000	-£4,930,740	-£1,500,000	-£2,666,667	-£2,666,667	-£27,594,795	-£22,003,067	-£5,105,779	£1,369,094	£7,776,227	£13,369,693
Cumulative cash flow	-£1,000,000	-£5,930,740	-£7,430,740	-£10,097,407	-£12,764,073	-£40,358,868	-£62,361,935	-£67,467,714	-£66,098,620	-£58,322,393	-£44,952,700
Private sale and self build receipts											
Scenario 1)							£1,333,384	£6,275,861	£8,244,484	£10,897,211	£13,930,447
Scenario 2)							£2,281,352	£8,949,131	£11,720,367	£14,897,637	£17,937,192
Scenario 3)							£2,675,081	£10,059,446	£13,164,039	£16,559,172	£19,601,352
Scenario 4)							£2,915,566	£10,737,614	£14,045,817	£17,574,018	£20,617,802
Net cash flow scenario 1	-£1,000,000	-£4,930,740	-£1,500,000	-£2,666,667	-£2,666,667	-£27,594,795	-£20,669,683	£1,170,082	£9,613,578	£18,673,438	£27,300,140
Cumulative scenario 1	-£1,000,000	-£5,930,740	-£7,430,740	-£10,097,407	-£12,764,073	-£40,358,868	-£61,028,551	-£59,858,469	-£50,244,891	-£31,571,453	-£4,271,313
Net cash flow scenario 2	-£1,000,000	-£4,930,740	-£1,500,000	-£2,666,667	-£2,666,667	-£27,594,795	-£19,721,715	£3,843,352	£13,089,462	£22,673,864	£31,306,886
Cumulative scenario 2	-£1,000,000	-£5,930,740	-£7,430,740	-£10,097,407	-£12,764,073	-£40,358,868	-£60,080,583	-£56,237,230	-£43,147,769	-£20,473,905	£10,832,981
Net cash flow scenario 3	-£1,000,000	-£4,930,740	-£1,500,000	-£2,666,667	-£2,666,667	-£27,594,795	-£19,327,986	£4,953,667	£14,533,133	£24,335,398	£32,971,045
Cumulative scenario 3	-£1,000,000	-£5,930,740	-£7,430,740	-£10,097,407	-£12,764,073	-£40,358,868	-£59,686,854	-£54,733,187	-£40,200,054	-£15,864,655	£17,106,390
Net cash flow scenario 4	-£1,000,000	-£4,930,740	-£1,500,000	-£2,666,667	-£2,666,667	-£27,594,795	-£19,087,501	£5,631,835	£15,414,912	£25,350,245	£33,987,495
Cumulative scenario 4	-£1,000,000	-£5,930,740	-£7,430,740	-£10,097,407	-£12,764,073	-£40,358,868	-£59,446,369	-£53,814,534	-£38,399,623	-£13,049,378	£20,938,117

CUMULATIVE CASH FLOW											
Year	5	6	7	8	9	10	11	12	13	14	15
Occupation % assumption	83%	83%	85%	85%	88%	88%	90%	90%	93%	95%	100%
Net cash flow (from above)	£4,253,452	£4,083,598	£3,958,066	£3,928,422	£3,611,114	£2,997,426	-£1,401,824	£22,180,615	£3,173,293	£3,256,293	£3,422,293
Cumulative cash flow	-£40,699,248	-£36,615,650	-£32,657,584	-£28,729,162	-£25,118,048	-£22,120,622	-£23,522,445	-£1,341,830	£1,831,463	£5,087,756	£8,510,048
Private sale and self build receipts											
Scenario 1)							£1,333,384	£6,275,861	£8,244,484	£10,897,211	£13,930,447
Scenario 2)							£2,281,352	£8,949,131	£11,720,367	£14,897,637	£17,937,192
Scenario 3)							£2,675,081	£10,059,446	£13,164,039	£16,559,172	£19,601,352
Scenario 4)							£2,915,566	£10,737,614	£14,045,817	£17,574,018	£20,617,802
Net cash flow scenario 1	£13,109,972	£12,103,695	£13,085,953	£12,090,079	£13,163,684	£11,950,133	£7,842,871	£29,984,922	£4,844,768	£4,927,769	£6,765,245
Cumulative scenario 1	£8,838,659	£20,942,354	£34,028,306	£46,118,386	£59,282,070	£71,232,203	£79,075,074	£109,059,996	£113,904,764	£118,832,533	£125,597,778
Net cash flow scenario 2	£17,023,106	£15,362,336	£17,118,373	£15,447,467	£17,492,344	£15,406,267	£12,233,149	£31,996,984	£6,062,907	£6,145,909	£9,201,526
Cumulative scenario 2	£27,856,087	£43,218,423	£60,336,795	£75,784,262	£93,276,606	£108,682,873	£120,916,023	£152,913,007	£158,975,914	£165,121,824	£174,323,350
Net cash flow scenario 3	£18,648,385	£16,715,778	£18,793,196	£16,841,922	£19,290,207	£16,841,736	£14,056,605	£32,832,673	£6,568,849	£6,651,851	£10,213,410
Cumulative scenario 3	£35,754,775	£52,470,553	£71,263,748	£88,105,671	£107,395,878	£124,237,614	£138,294,219	£171,126,893	£177,695,741	£184,347,592	£194,561,002
Net cash flow scenario 4	£19,641,087	£17,668,135	£19,971,695	£17,823,139	£20,555,284	£17,851,812	£15,339,690	£33,420,711	£6,924,857	£7,007,860	£10,925,427
Cumulative scenario 4	£40,579,204	£58,247,340	£78,219,034	£96,042,173	£116,597,457	£134,449,270	£149,788,960	£183,209,671	£190,134,528	£197,142,388	£208,067,815

Cash flow modelling assumptions

- Social infrastructure, preliminaries and surface and green space costs are incurred in an even manner over the construction period.
- Council tax rebates of £150 per annum for 11,000 homes are paid throughout the construction period.

- Sales proceeds and rental income are modelled on a per unit basis, using an average profit/head rent per unit figure.
- Construction takes place within the 3 x 4 year phases as anticipated with tenure mix as per the expected phasing plan.
- Developers pay the lease premium upfront.

- For prudence, in our indicative model we have assumed that the 30% of land not owned by the Church Commissioners is acquired at 500% of existing use value rather than other land owners joining SHLLP, although we expect that SHLLP would prefer them to join the partnership in order to reduce the upfront cash outlay.

Appendix XIV – Extracts from the transport infrastructure financing cash flow model

Year	0	1	2	3	4	5	6	7	8	9	10
Total infrastructure expenditure	-£9,000,000	-£13,500,000	-£14,500,000	£0	£0	-£1,000,000	-£8,000,000	-£5,000,000	-£5,000,000	-£55,500,000	-£55,500,000
1. Government guaranteed bond									3.20%	3.20%	3.20%
Balance b/f									£0	£0	£25,000,000
Drawdowns										£25,000,000	£25,000,000
Interest @ 4%									£0	£400,000	£1,200,000
Interest payment									£0	-£400,000	-£1,200,000
Repayments									£0	£0	£0
Balance c/f									£0	£25,000,000	£50,000,000
Total % gov guaranteed debt of senior debt	0%	0%	0%	0%	0%	0%	0%	0%	0%		
2. Bank loan debt	5.30%	5.30%	5.30%	5.30%	5.30%	5.30%	5.30%	5.30%	5.30%	5.30%	5.30%
Balance b/f	£0	£7,185,500	£16,617,500	£26,042,500	£19,814,500	£12,508,500	£6,213,500	£6,052,500	£2,562,500	-£1,373,500	£20,852,500
Drawdowns	£9,000,000	£13,500,000	£14,500,000	£0	£0	£1,000,000	£8,000,000	£5,000,000	£5,000,000	£30,500,000	£30,500,000
Interest @ LIBOR + 2%-3%	£185,500	£630,780	£1,130,490	£1,215,211	£856,560	£496,133	£325,049	£228,298	£31,509	£516,194	£1,744,124
Interest payment		-£630,780	-£1,130,490	-£1,215,211	-£856,560	-£496,133	-£325,049	-£228,298	-£31,509	-£516,194	-£1,744,124
Repayments	-£2,000,000	-£4,068,000	-£5,075,000	-£6,228,000	-£7,306,000	-£7,295,000	-£8,161,000	-£8,490,000	-£8,936,000	-£8,274,000	-£6,389,000
Balance c/f	£7,185,500	£16,617,500	£26,042,500	£19,814,500	£12,508,500	£6,213,500	£6,052,500	£2,562,500	-£1,373,500	£20,852,500	£44,963,500
LIBOR assumption	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%
Additional element assumption	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Total debt/profit	-£7,185,500	-£16,617,500	-£26,042,500	-£19,814,500	-£12,508,500	-£6,213,500	-£6,052,500	-£2,562,500	£1,373,500	-£45,852,500	-£94,963,500
Cash in: Initial equity contribution	£2,000,000										
Business rates - equity contribution from Medway		£434,874	£749,283	£978,584	£1,207,152	£1,434,987	£1,866,911	£2,093,280	£2,318,917	£2,600,071	£2,824,242
Commercial and industrial rents		£20,925	£360,277	£492,338	£624,400	£1,074,356	£1,338,650	£1,516,477	£1,699,330	£2,214,549	£2,429,188
User charging - rail ticket levy		£119,940	£149,644	£184,424	£224,516	£255,669	£286,845	£317,739	£348,595	£379,375	£409,052
Railway station car park income		£33,511	£41,810	£103,055	£125,458	£214,299	£240,431	£266,326	£292,189	£423,985	£457,152
Stoke Harbour other car park income		£6,844	£47,906	£54,750	£82,125	£109,500	£191,625	£212,156	£246,375	£260,063	£297,703
SHLP infrastructure levy equity contributions		£4,083,333	£4,857,500	£5,630,833	£5,899,167	£4,702,500	£4,562,500	£4,312,500	£4,062,500	£3,562,500	£3,416,667
Total cash in	£2,000,000	£4,699,428	£6,206,420	£7,443,984	£8,162,818	£7,791,310	£8,486,962	£8,718,478	£8,967,906	£9,440,543	£9,834,004
1. First bond interest	£0	£0	£0	£0	£0	£0	£0	£0	£0	-£400,000	-£1,200,000
First bond guarantee premium	£0	£0	£0	£0	£0	£0	£0	£0	£0	-£250,000	-£500,000
2. Bank loan interest	£0	-£630,780	-£1,130,490	-£1,215,211	-£856,560	-£496,133	-£325,049	-£228,298	-£31,509	-£516,194	-£1,744,124
Total interest + guarantee	£0	-£630,780	-£1,130,490	-£1,215,211	-£856,560	-£496,133	-£325,049	-£228,298	-£31,509	-£1,166,194	-£3,444,124
Total cash available for repayment	£2,000,000	£4,068,648	£5,075,930	£6,228,774	£7,306,258	£7,295,177	£8,161,913	£8,490,181	£8,936,397	£8,274,350	£6,389,880
Principal repaid	£2,000,000	£4,068,000	£5,075,000	£6,228,000	£7,306,000	£7,295,000	£8,161,000	£8,490,000	£8,936,000	£8,274,000	£6,389,000
Interest cover		7.45	5.49	6.13	9.53	15.70	26.11	38.19	284.62	10.30	3.34

Year	11	12	13	14	15	16	17	18	19	20
Total infrastructure expenditure	-£54,000,000	-£40,000,000								
1. Government guaranteed bond	3.20%	3.20%	3.20%	3.20%	3.20%	3.20%	3.20%	3.20%	3.20%	3.20%
Balance b/f	£50,000,000	£75,000,000	£100,000,000	£100,000,000	£100,000,000	£100,000,000	£100,000,000	£100,000,000	£100,000,000	£100,000,000
Drawdowns	£25,000,000	£25,000,000	£0	£0	£0	£0	£0	£0	£0	£0
Interest @ 4%	£2,000,000	£2,800,000	£3,200,000	£3,200,000	£3,200,000	£3,200,000	£3,200,000	£3,200,000	£3,200,000	£3,200,000
Interest payment	-£2,000,000	-£2,800,000	-£3,200,000	-£3,200,000	-£3,200,000	-£3,200,000	-£3,200,000	-£3,200,000	-£3,200,000	-£3,200,000
Repayments	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
Balance c/f	£75,000,000	£100,000,000	£100,000,000	£100,000,000	£100,000,000	£100,000,000	£100,000,000	£100,000,000	£100,000,000	£100,000,000
2. Bank loan debt	5.30%	5.30%	5.30%	5.30%	5.30%	5.30%	5.30%	5.30%	5.30%	5.30%
Balance b/f	£44,963,500	£70,101,500	£83,666,500	£84,311,500	£84,467,500	£84,089,500	£83,128,500	£81,534,500	£79,253,500	£76,228,500
Drawdowns	£29,000,000	£15,000,000	£0	£0	£0	£0	£0	£0	£0	£0
Interest @ LIBOR + 2%-3%	£3,049,223	£4,074,852	£4,451,417	£4,472,644	£4,466,761	£4,431,277	£4,363,570	£4,260,882	£4,120,273	£3,938,669
Interest payment	-£3,049,223	-£4,074,852	-£4,451,417	-£4,472,644	-£4,466,761	-£4,431,277	-£4,363,570	-£4,260,882	-£4,120,273	-£3,938,669
Repayments	-£3,862,000	-£1,435,000	£645,000	£156,000	-£378,000	-£961,000	-£1,594,000	-£2,281,000	-£3,025,000	-£3,828,000
Balance c/f	£70,101,500	£83,666,500	£84,311,500	£84,467,500	£84,089,500	£83,128,500	£81,534,500	£79,253,500	£76,228,500	£72,400,500
LIBOR assumption	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%
Additional element assumption	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Total debt/profit	-£145,101,500	-£183,666,500	-£184,311,500	-£184,467,500	-£184,089,500	-£183,128,500	-£181,534,500	-£179,253,500	-£176,228,500	-£172,400,500
Business rates - equity contribution from Medway	£3,047,680	£3,270,386	£3,379,398	£3,488,411	£3,597,424	£3,706,437	£3,815,450	£3,924,463	£4,033,476	£4,142,488
Commercial and industrial rents	£2,625,398	£2,796,426	£3,178,604	£3,579,425	£3,998,889	£4,436,996	£4,893,745	£5,369,137	£5,863,173	£6,375,851
User charging - rail ticket levy	£433,927	£457,498	£457,498	£457,498	£457,498	£457,498	£457,498	£457,498	£457,498	£457,498
Railway station car park income	£484,951	£511,294	£639,118	£639,118	£639,118	£639,118	£639,118	£639,118	£639,118	£639,118
Stoke Harbour other car park income	£318,234	£338,766	£352,453	£352,453	£352,453	£352,453	£352,453	£352,453	£352,453	£352,453
SHLP infrastructure levy equity contributions	£2,751,667	£1,935,833								
Total cash in	£9,661,857	£9,310,203	£8,007,071	£8,516,905	£9,045,382	£9,592,502	£10,158,264	£10,742,669	£11,345,717	£11,967,408
1. First bond interest	-£2,000,000	-£2,800,000	-£3,200,000	-£3,200,000	-£3,200,000	-£3,200,000	-£3,200,000	-£3,200,000	-£3,200,000	-£3,200,000
First bond guarantee premium	-£750,000	-£1,000,000	-£1,000,000	-£1,000,000	-£1,000,000	-£1,000,000	-£1,000,000	-£1,000,000	-£1,000,000	-£1,000,000
2. Bank loan interest	-£3,049,223	-£4,074,852	-£4,451,417	-£4,472,644	-£4,466,761	-£4,431,277	-£4,363,570	-£4,260,882	-£4,120,273	-£3,938,669
Total interest + guarantee	-£5,799,223	-£7,874,852	-£8,651,417	-£8,672,644	-£8,666,761	-£8,631,277	-£8,563,570	-£8,460,882	-£8,320,273	-£8,138,669
Total cash available for repayment	£3,862,635	£1,435,351	-£644,346	-£155,738	£378,622	£961,225	£1,594,695	£2,281,787	£3,025,444	£3,828,740
Principal repaid	£3,862,000	£1,435,000	-£645,000	-£156,000	£378,000	£961,000	£1,594,000	£2,281,000	£3,025,000	£3,828,000
Interest cover	1.91	1.35	1.05	1.11	1.18	1.26	1.34	1.44	1.55	1.68

Year	21	22	23	24	25	26	27	28	29	30
Total infrastructure expenditure										
1. Government guaranteed bond	3.20%	3.20%	3.70%	3.70%	3.70%	3.70%	3.70%	3.70%	3.70%	3.70%
Balance b/f	£100,000,000	£100,000,000	£100,000,000	£100,000,000	£100,000,000	£100,000,000	£100,000,000	£100,000,000	£100,000,000	£100,000,000
Drawdowns	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
Interest @ 4%	£3,200,000	£3,200,000	£3,700,000	£3,700,000	£3,700,000	£3,700,000	£3,700,000	£3,700,000	£3,700,000	£3,700,000
Interest payment	-£3,200,000	-£3,200,000	-£3,700,000	-£3,700,000	-£3,700,000	-£3,700,000	-£3,700,000	-£3,700,000	-£3,700,000	-£3,700,000
Repayments	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
Balance c/f	£100,000,000	£100,000,000	£100,000,000	£100,000,000	£100,000,000	£100,000,000	£100,000,000	£100,000,000	£100,000,000	£100,000,000
2. Bank loan debt	5.30%	5.30%	5.30%	5.30%	5.30%	5.30%	5.30%	5.30%	5.30%	5.30%
Balance b/f	£72,400,500	£68,000,500	£62,996,500	£57,206,500	£51,101,500	£44,627,500	£38,126,500	£31,235,500	£23,931,500	£16,193,500
Drawdowns	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
Interest @ LIBOR + 2%-3%	£3,720,627	£3,471,421	£3,185,380	£2,870,162	£2,536,819	£2,192,981	£1,838,093	£1,461,926	£1,063,313	£641,035
Interest payment	-£3,720,627	-£3,471,421	-£3,185,380	-£2,870,162	-£2,536,819	-£2,192,981	-£1,838,093	-£1,461,926	-£1,063,313	-£641,035
Repayments	-£4,400,000	-£5,004,000	-£5,790,000	-£6,105,000	-£6,474,000	-£6,501,000	-£6,891,000	-£7,304,000	-£7,738,000	-£8,197,000
Balance c/f	£68,000,500	£62,996,500	£57,206,500	£51,101,500	£44,627,500	£38,126,500	£31,235,500	£23,931,500	£16,193,500	£7,996,500
LIBOR assumption	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%
Additional element assumption	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Total debt/profit	-£168,000,500	-£162,996,500	-£157,206,500	-£151,101,500	-£144,627,500	-£138,126,500	-£131,235,500	-£123,931,500	-£116,193,500	-£107,996,500
Business rates - equity contribution from Medway	£4,142,488	£4,142,488	£4,142,488	£4,142,488	£4,142,488	£4,142,488	£4,142,488	£4,142,488	£4,142,488	£4,142,488
Commercial and industrial rents	£6,730,065	£7,084,279	£7,084,279	£7,084,279	£7,119,700	£7,155,299	£7,191,075	£7,227,030	£7,263,166	£7,299,481
User charging - rail ticket levy	£457,498	£457,498	£457,498	£457,498	£457,498	£457,498	£457,498	£457,498	£457,498	£457,498
Railway station car park income	£639,118	£639,118	£639,118	£639,118	£639,118	£639,118	£639,118	£639,118	£639,118	£639,118
Stoke Harbour other car park income	£352,453	£352,453	£352,453	£352,453	£352,453					
SHLP infrastructure levy equity contributions										
Total cash in	£12,321,622	£12,675,836	£12,675,836	£12,675,836	£12,711,258	£12,394,403	£12,430,179	£12,466,135	£12,502,270	£12,538,586
1. First bond interest	-£3,200,000	-£3,200,000	-£3,700,000	-£3,700,000	-£3,700,000	-£3,700,000	-£3,700,000	-£3,700,000	-£3,700,000	-£3,700,000
First bond guarantee premium	-£1,000,000	-£1,000,000								
2. Bank loan interest	-£3,720,627	-£3,471,421	-£3,185,380	-£2,870,162	-£2,536,819	-£2,192,981	-£1,838,093	-£1,461,926	-£1,063,313	-£641,035
Total interest+guarantee	-£7,920,627	-£7,671,421	-£6,885,380	-£6,570,162	-£6,236,819	-£5,892,981	-£5,538,093	-£5,161,926	-£4,763,313	-£4,341,035
Total cash available for repayment	£4,400,996	£5,004,416	£5,790,457	£6,105,674	£6,474,439	£6,501,422	£6,892,086	£7,304,209	£7,738,957	£8,197,551
Principal repaid	£4,400,000	£5,004,000	£5,790,000	£6,105,000	£6,474,000	£6,501,000	£6,891,000	£7,304,000	£7,738,000	£8,197,000
Interest cover	1.78	1.90	1.84	1.93	2.04	2.10	2.24	2.42	2.62	2.89

Year	31	32	33	34	35	36	37	38	39	40
Total infrastructure expenditure										
1. Government guaranteed bond	3.70%	3.70%	3.70%	3.70%	3.70%	3.70%	3.70%	3.80%	3.80%	3.80%
Balance b/f	£100,000,000	£100,000,000	£30,000,000	£30,000,000	£30,000,000	£30,000,000	£30,000,000	£30,000,000	£30,000,000	£30,000,000
Drawdowns	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
Interest @ 4%	£3,700,000	£2,405,000	£1,110,000	£1,110,000	£1,110,000	£1,110,000	£1,110,000	£1,140,000	£1,140,000	£1,140,000
Interest payment	-£3,700,000	-£2,405,000	-£1,110,000	-£1,110,000	-£1,110,000	-£1,110,000	-£1,110,000	-£1,140,000	-£1,140,000	-£1,140,000
Repayments	£0	£70,000,000		£0	£0	£0			£0	£0
Balance c/f	£100,000,000	£30,000,000	£30,000,000	£30,000,000	£30,000,000	£30,000,000	£30,000,000	£30,000,000	£30,000,000	£30,000,000
2. Bank loan debt	5.30%	5.30%	5.30%	5.30%	5.30%	5.30%	5.30%	5.30%	5.30%	5.30%
Balance b/f	£7,996,500	-£684,500	£60,699,500	£52,151,500	£43,100,500	£33,518,500	£27,631,500	£21,385,500	£14,791,500	£7,799,500
Drawdowns	£0	£70,000,000	£0	£0	£0	£0	£0	£0	£0	£0
Interest @ LIBOR + 2%-3%	£193,768	£1,590,398	£2,990,552	£2,524,178	£2,030,404	£1,620,475	£1,298,951	£958,691	£598,662	£216,956
Interest payment	-£193,768	-£1,590,398	-£2,990,552	-£2,524,178	-£2,030,404	-£1,620,475	-£1,298,951	-£958,691	-£598,662	-£216,956
Repayments	-£8,681,000	-£8,616,000	-£8,548,000	-£9,051,000	-£9,582,000	-£5,887,000	-£6,246,000	-£6,594,000	-£6,992,000	-£7,412,000
Balance c/f	-£684,500	£60,699,500	£52,151,500	£43,100,500	£33,518,500	£27,631,500	£21,385,500	£14,791,500	£7,799,500	£387,500
LIBOR assumption	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%
Additional element assumption	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Total debt/profit	-£99,315,500	-£90,699,500	-£82,151,500	-£73,100,500	-£63,518,500	-£57,631,500	-£51,385,500	-£44,791,500	-£37,799,500	-£30,387,500
Business rates - equity contribution from Medway	£4,142,488	£4,142,488	£4,142,488	£4,142,488	£4,142,488					
Commercial and industrial rents	£7,335,979	£7,372,659	£7,409,522	£7,446,570	£7,483,802	£7,521,221	£7,558,828	£7,596,622	£7,634,605	£7,672,778
User charging - rail ticket levy	£457,498	£457,498	£457,498	£457,498	£457,498	£457,498	£457,498	£457,498	£457,498	£457,498
Railway station car park income	£639,118	£639,118	£639,118	£639,118	£639,118	£639,118	£639,118	£639,118	£639,118	£639,118
Stoke Harbour other car park income										
SHLP infrastructure levy equity contributions										
Total cash in	£12,575,083	£12,611,763	£12,648,626	£12,685,674	£12,722,907	£8,617,837	£8,655,443	£8,693,238	£8,731,221	£8,769,394
1. First bond interest	-£3,700,000	-£2,405,000	-£1,110,000	-£1,110,000	-£1,110,000	-£1,110,000	-£1,110,000	-£1,140,000	-£1,140,000	-£1,140,000
First bond guarantee premium										
2. Bank loan interest	-£193,768	-£1,590,398	-£2,990,552	-£2,524,178	-£2,030,404	-£1,620,475	-£1,298,951	-£958,691	-£598,662	-£216,956
Total interest+guarantee	-£3,893,768	-£3,995,398	-£4,100,552	-£3,634,178	-£3,140,404	-£2,730,475	-£2,408,951	-£2,098,691	-£1,738,662	-£1,356,956
Total cash available for repayment	£8,681,315	£8,616,366	£8,548,075	£9,051,496	£9,582,503	£5,887,362	£6,246,493	£6,594,547	£6,992,559	£7,412,438
Principal repaid	£8,681,000	£8,616,000	£8,548,000	£9,051,000	£9,582,000	£5,887,000	£6,246,000	£6,594,000	£6,992,000	£7,412,000
Interest cover	3.23	3.16	3.08	3.49	4.05	3.16	3.59	4.14	5.02	6.46

Year	41	42	43	44	45	46	47	48	49	50
Total infrastructure expenditure										
1. Government guaranteed bond	3.80%	3.80%	3.80%	3.80%	3.80%	3.80%	3.80%	3.80%	3.80%	3.80%
Balance b/f	£30,000,000	£30,000,000	£30,000,000	£30,000,000	£30,000,000	£30,000,000	£30,000,000	£0	£0	£0
Drawdowns	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
Interest @ 4%	£1,140,000	£1,140,000	£1,140,000	£1,140,000	£1,140,000	£1,140,000	£570,000	£0	£0	£0
Interest payment	-£1,140,000	-£1,140,000	-£1,140,000	-£1,140,000	-£1,140,000	-£1,140,000	-£570,000	£0	£0	£0
Repayments	£0	£0	£0	£0	£0	£0	-£30,000,000	£0	£0	£0
Balance c/f	£30,000,000	£30,000,000	£30,000,000	£30,000,000	£30,000,000	£30,000,000	£0	£0	£0	£0
2. Bank loan debt	5.30%	5.30%	5.30%	5.30%	5.30%	5.30%	5.30%	5.30%	5.30%	5.30%
Balance b/f	£387,500	£0	£0	£0	£0	£0	£0	£26,100,000	£22,200,000	£18,300,000
Drawdowns	£0	£0	£0	£0	£0	£0	£30,000,000	£0	£0	£0
Interest @ LIBOR + 2%-3%	£10,269	£0	£0	£0	£0	£0	£691,650	£1,279,950	£1,073,250	£866,550
Interest payment	-£10,269	£0	£0	£0	£0	£0	-£691,650	-£1,279,950	-£1,073,250	-£866,550
Repayments	-£387,500	£0	£0	£0	£0	£0	-£3,900,000	-£3,900,000	-£3,900,000	-£3,900,000
Balance c/f	£0	£0	£0	£0	£0	£0	£26,100,000	£22,200,000	£18,300,000	£14,400,000
LIBOR assumption	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%
Additional element assumption	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Total debt/profit	-£22,730,011	-£15,023,698	-£7,278,636	£505,368	£8,328,509	£16,190,983	£23,971,336	£31,773,116	£39,821,521	£48,116,752
Business rates - equity contribution from Medway										
Commercial and industrial rents	£7,711,142	£7,749,697	£7,788,446	£7,827,388	£7,866,525	£7,905,858	£7,945,387	£7,985,114	£8,025,039	£8,065,165
User charging - rail ticket levy	£457,498	£457,498	£457,498	£457,498	£457,498	£457,498	£457,498	£457,498	£457,498	£457,498
Railway station car park income	£639,118	£639,118	£639,118	£639,118	£639,118	£639,118	£639,118	£639,118	£639,118	£639,118
Stoke Harbour other car park income										
SHLP infrastructure levy equity contributions										
Total cash in	£8,807,758	£8,846,313	£8,885,062	£8,924,004	£8,963,141	£9,002,474	£9,042,003	£9,081,730	£9,121,655	£9,161,781
1. First bond interest	-£1,140,000	-£1,140,000	-£1,140,000	-£1,140,000	-£1,140,000	-£1,140,000	-£570,000	£0	£0	£0
First bond guarantee premium										
2. Bank loan interest	-£10,269	£0	£0	£0	£0	£0	-£691,650	-£1,279,950	-£1,073,250	-£866,550
Total interest+guarantee	-£1,150,269	-£1,140,000	-£1,140,000	-£1,140,000	-£1,140,000	-£1,140,000	-£1,261,650	-£1,279,950	-£1,073,250	-£866,550
Total cash available for repayment	£7,657,489	£7,706,313	£7,745,062	£7,784,004	£7,823,141	£7,862,474	£7,780,353	£7,801,780	£8,048,405	£8,295,231
Principal repaid	£387,500	£0	£0	£0	£0	£0	£3,900,000	£3,900,000	£3,900,000	£3,900,000
Interest cover	7.66	7.76	7.79	7.83	7.86	7.90	7.17	7.10	8.50	10.57

Year	51	52	53	54	55	56	57	58	59	60
Total infrastructure expenditure										
1. Government guaranteed bond	3.80%	3.80%	3.80%	3.80%	3.80%	3.80%	3.80%	3.80%	3.80%	3.80%
Balance b/f	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
Drawdowns	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
Interest @ 4%	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
Interest payment	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
Repayments	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
Balance c/f	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
2. Bank loan debt	5.30%	5.30%	5.30%	5.30%	5.30%	5.30%	5.30%	5.30%	5.30%	5.30%
Balance b/f	£14,400,000	£10,500,000	£6,600,000	£2,700,000	£0	£0	£0	£0	£0	£0
Drawdowns	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
Interest @ LIBOR + 2%-3%	£659,850	£453,150	£246,450	£71,550	£0	£0	£0	£0	£0	£0
Interest payment	-£659,850	-£453,150	-£246,450	-£71,550	£0	£0	£0	£0	£0	£0
Repayments	-£3,900,000	-£3,900,000	-£3,900,000	-£2,700,000	£0	£0	£0	£0	£0	£0
Balance c/f	£10,500,000	£6,600,000	£2,700,000	£0	£0	£0	£0	£0	£0	£0
LIBOR assumption	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%
Additional element assumption	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Total debt/profit	£56,659,008	£65,448,492	£74,485,406	£83,738,154	£93,103,590	£102,510,370	£111,958,701	£121,448,791	£130,980,848	£140,555,082
Business rates - equity contribution from Medway										
Commercial and industrial rents	£8,105,491	£8,146,018	£8,186,748	£8,227,682	£8,268,820	£8,310,164	£8,351,715	£8,393,474	£8,435,441	£8,477,618
User charging - rail ticket levy	£457,498	£457,498	£457,498	£457,498	£457,498	£457,498	£457,498	£457,498	£457,498	£457,498
Railway station car park income	£639,118	£639,118	£639,118	£639,118	£639,118	£639,118	£639,118	£639,118	£639,118	£639,118
Stoke Harbour other car park income										
SHLP infrastructure levy equity contributions										
Total cash in	£9,202,106	£9,242,634	£9,283,364	£9,324,298	£9,365,436	£9,406,780	£9,448,331	£9,490,090	£9,532,057	£9,574,234
1. First bond interest	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
First bond guarantee premium										
2. Bank loan interest	-£659,850	-£453,150	-£246,450	-£71,550	£0	£0	£0	£0	£0	£0
Total interest+guarantee	-£659,850	-£453,150	-£246,450	-£71,550	£0	£0	£0	£0	£0	£0
Total cash available for repayment	£8,542,256	£8,789,484	£9,036,914	£9,252,748	£9,365,436	£9,406,780	£9,448,331	£9,490,090	£9,532,057	£9,574,234
Principal repaid	£3,900,000	£3,900,000	£3,900,000	£2,700,000	£0	£0	£0	£0	£0	£0

Year	61	62	63	64	65	66	67	68	69	70
Total infrastructure expenditure										
1. Government guaranteed bond	3.80%	3.80%	3.80%	3.80%	3.80%	3.80%	3.80%	3.80%	3.80%	3.80%
Balance b/f	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
Drawdowns	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
Interest @ 4%	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
Interest payment	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
Repayments	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
Balance c/f	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
2. Bank loan debt	5.30%	5.30%	5.30%	5.30%	5.30%	5.30%	5.30%	5.30%	5.30%	5.30%
Balance b/f	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
Drawdowns	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
Interest @ LIBOR + 2%-3%	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
Interest payment	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
Repayments	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
Balance c/f	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
LIBOR assumption	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%
Additional element assumption	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Total debt/profit	£150,171,704	£159,830,927	£169,532,962	£179,278,024	£189,066,329	£198,898,092	£208,773,531	£218,692,864	£228,656,311	£238,664,091
Business rates - equity contribution from Medway										
Commercial and industrial rents	£8,520,006	£8,562,606	£8,605,419	£8,648,447	£8,691,689	£8,735,147	£8,778,823	£8,822,717	£8,866,831	£8,911,165
User charging - rail ticket levy	£457,498	£457,498	£457,498	£457,498	£457,498	£457,498	£457,498	£457,498	£457,498	£457,498
Railway station car park income	£639,118	£639,118	£639,118	£639,118	£639,118	£639,118	£639,118	£639,118	£639,118	£639,118
Stoke Harbour other car park income										
SHLP infrastructure levy equity contributions										
Total cash in	£9,616,622	£9,659,222	£9,702,035	£9,745,062	£9,788,305	£9,831,763	£9,875,439	£9,919,333	£9,963,447	£10,007,781
1. First bond interest	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
First bond guarantee premium										
2. Bank loan interest	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
Total interest+guarantee	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
Total cash available for repayment	£9,616,622	£9,659,222	£9,702,035	£9,745,062	£9,788,305	£9,831,763	£9,875,439	£9,919,333	£9,963,447	£10,007,781
Principal repaid	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0

Year	71	72	73	74	75
Total infrastructure expenditure					
1. Government guaranteed bond	3.80%	3.80%	3.80%		
Balance b/f	£0	£0	£0		
Drawdowns	£0	£0	£0		
Interest @ 4%	£0	£0	£0		
Interest payment	£0	£0	£0		
Repayments	£0	£0	£0		
Balance c/f	£0	£0	£0		
2. Bank loan debt	5.30%	5.30%	5.30%	5.30%	5.30%
Balance b/f	£0	£0	£0	£0	£0
Drawdowns	£0	£0	£0	£0	£0
Interest @ LIBOR + 2%-3%	£0	£0	£0	£0	£0
Interest payment	£0	£0	£0	£0	£0
Repayments	£0	£0	£0	£0	£0
Balance c/f	£0	£0	£0	£0	£0
LIBOR assumption	2.80%	2.80%	2.80%	2.80%	2.80%
Additional element assumption	2.50%	2.50%	2.50%	2.50%	2.50%
Total debt/profit	£248,716,428	£258,813,543	£268,955,661	£279,143,006	£289,375,805
Business rates - equity contribution from Medway					
Commercial and industrial rents	£8,955,721	£9,000,499	£9,045,502	£9,090,729	£9,136,183
User charging - rail ticket levy	£457,498	£457,498	£457,498	£457,498	£457,498
Railway station car park income	£639,118	£639,118	£639,118	£639,118	£639,118
Stoke Harbour other car park income					
SHLP infrastructure levy equity contributions					
Total cash in	£10,052,337	£10,097,115	£10,142,118	£10,187,345	£10,232,799
1. First bond interest	£0	£0	£0	£0	£0
First bond guarantee premium					
2. Bank loan interest	£0	£0	£0	£0	£0
Total interest+guarantee	£0	£0	£0	£0	£0
Total cash available for repayment	£10,052,337	£10,097,115	£10,142,118	£10,187,345	£10,232,799
Principal repaid	£0	£0	£0	£0	£0

Appendix XV - Tenure models

Developer model

The expected developer model is set out in more detail below, with reference to the following steps.

1. SHLLP will sell a long leasehold of land zoned for private sale/owner occupation to the developer in return for an premium and a profit share on future sale to the new resident, which is written into the lease. This will specify a geared profit share negotiated with the developer but based on a central template, specific to each type of property and designed to incentivise the behaviour wanted for each type of property, which might be speed of sale, affordability or profit maximisation depending on the property type.

The premium will consist of three amounts:

- Reimbursement of SHLLP's land acquisition costs;
- A social infrastructure levy to fund SHLLP's expenditure in this area; and
- A transport infrastructure levy, which is contributed to Infra LLP.

2. The developer will finance the construction of the property.

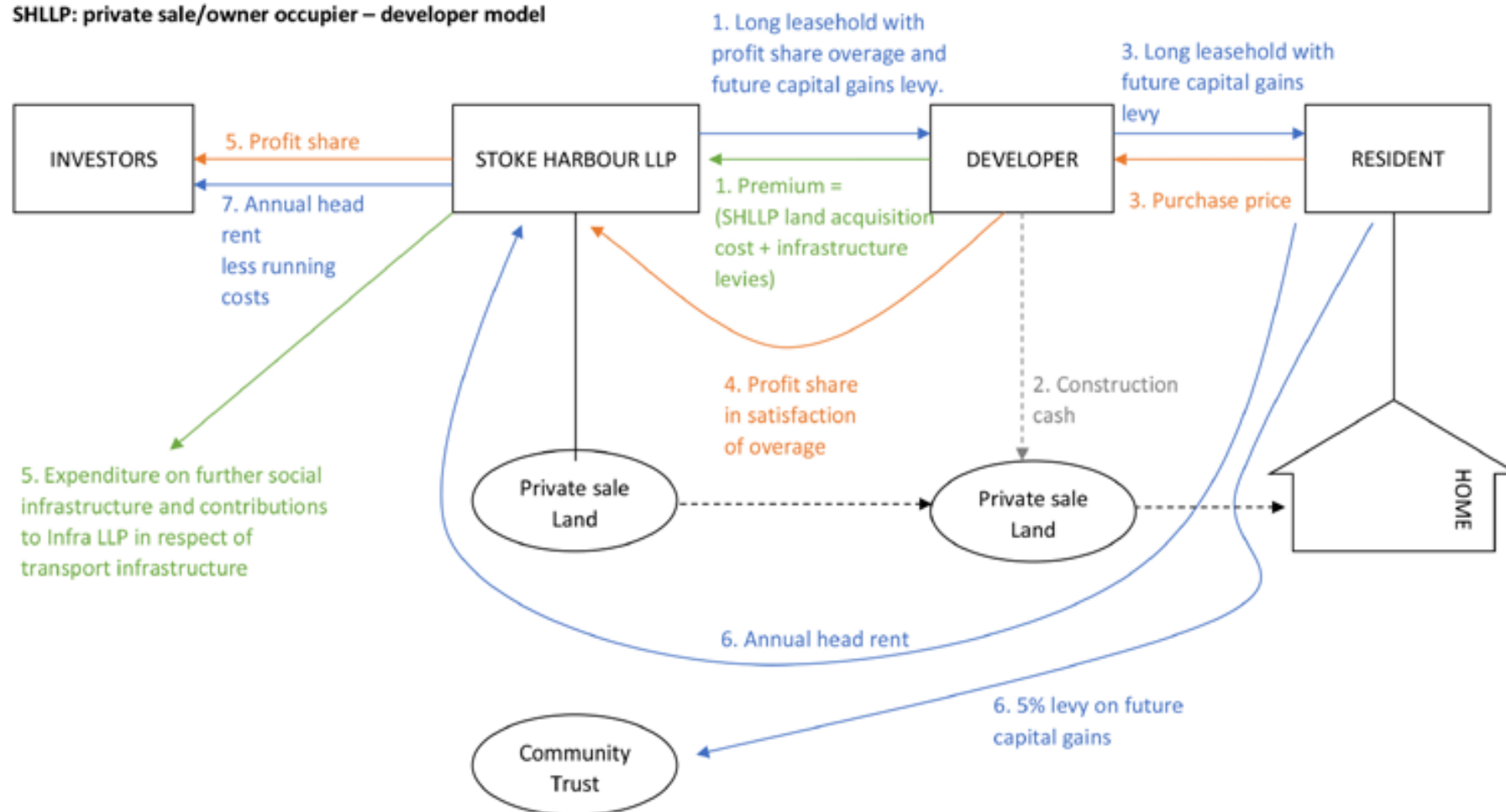
3. The developer markets the property and sells to a new resident within the specified price ranges. There will be restrictions specifying that the developer is not allowed to sell to an individual without a UK address (with the potential exception of waterfront properties in the later phases where maximising profit is the target) and not to an individual using a buy-to-let mortgage.

4. The developer makes the profit share payment to SHLLP and makes its profit on development. Given the developer has not had to take any planning or land assembly risk, we consider that the target profit should be in the range of 12%-15% (not including any sub-contractor and sales agent margins) when applied to Stoke Harbour as a whole, i.e., after the cross-subsidy/matching model.

5. SHLLP uses infrastructure levy to pay for the continued works required in creating Stoke Harbour contributes the transport infrastructure levy to Infra LLP to help meet repay capital and interest on its borrowings.

6. The new owner/occupier resident pays a small annual head rent of £100 to £500 SHLLP plus an estate service charge. If they realise any future gain on the resale of the property, then a covenant in the freehold means that this is subject to a 5% levy which is payable to the Community Trust (in effect a local restriction on Principal Private Residence tax relief). This allows the community to benefit from any future land value uplift, recognising that the wider community and setting has helped to create this value growth.

7. In respect of steps 5 and 6, SHLLP's aim is for any profit share element and the reimbursement of land acquisition costs to be returned to investors and, in the long term, for the head rent to cover the running costs of SHLLP and the Stoke Harbour estate. However, in the early stages it will be important to retain cash within SHLLP and therefore this "profit" may be reinvested rather than distributed.

SHLLP: private sale/owner occupier – developer model

S/M housebuilder licensing model

The expected small/medium housebuilder model is set out in more detail below, with reference to the following steps.

1. SHLLP will grant a license for the small/medium housebuilder to construct homes on a specific plot.

2. The housebuilder will construct the property and finance this themselves. A budget for construction costs, a small contingency and a normal contractor's margin will have been agreed prior to the grant of the license, therefore, the housebuilder will need to manage their construction costs accordingly.

3. The housebuilder will also act as the sales agent for the sale of the freehold, in line with the specified property price ranges. In return for this the S/M housebuilder will receive a fixed payment (this will be negotiated upfront and will be based on build costs, plus a margin) and a 2% sales agent fee.

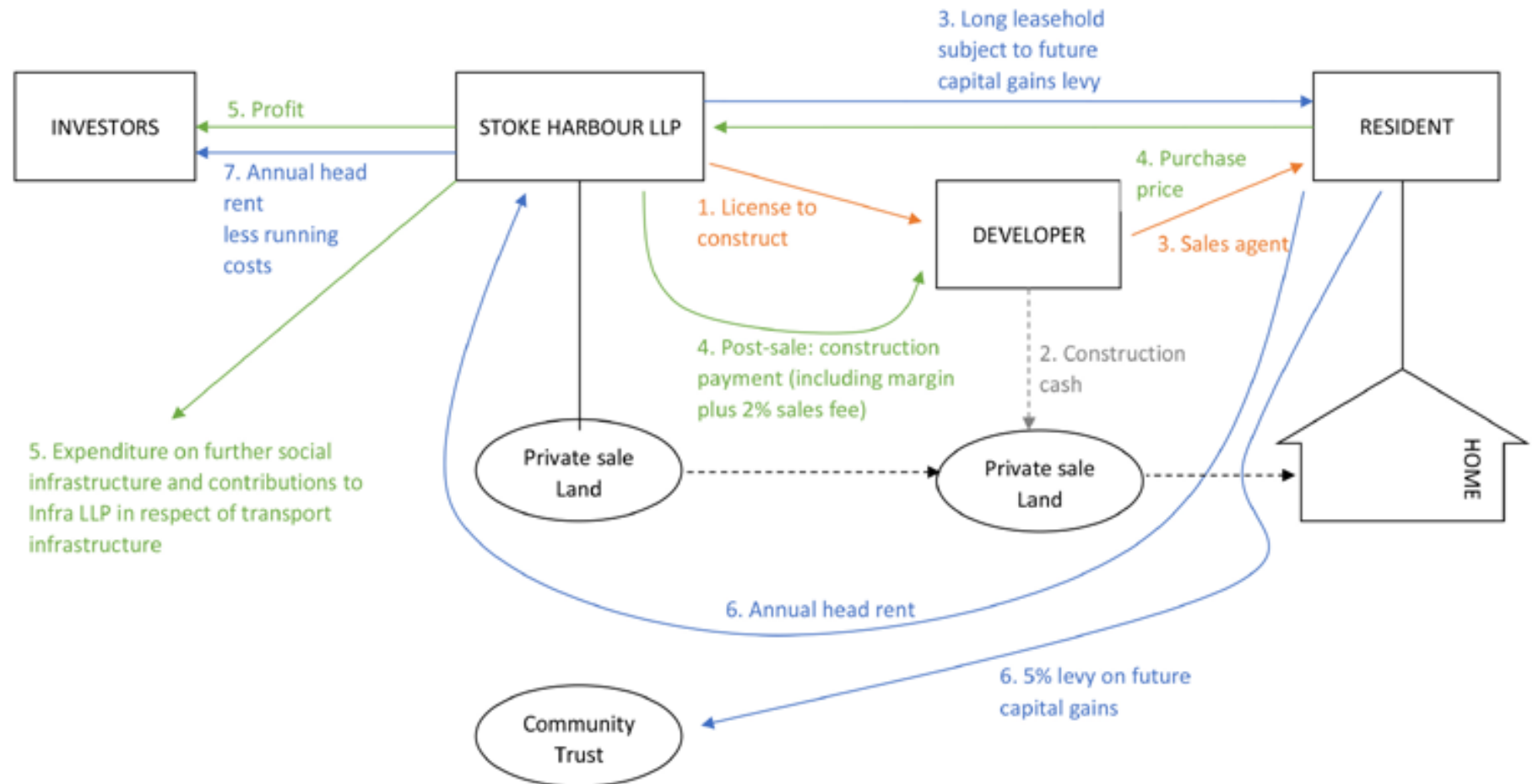
4. The purchaser will pay SHLLP the sales proceeds, and SHLLP will then pay the housebuilder. Recognising the importance of cash flow and minimising finance costs, SHLLP will have a target of payment within 15 working days and will suffer a penalty in favour of the builder if payment is not made within 30 days.

5, 6 & 7. As with the developer model, the proportion of the sales profit that relates to the social infrastructure levy and transport infrastructure levy will be utilised/passed on to Infra LLP and the residual profit passed to investors. As with the developer model, small annual head rents will be payable by the owner occupier to SHLLP and a future capital gain levy to the Community Trust.

This model means that the housebuilder will be expected to finance the construction, take the demand risk and the pre-agreed payment will incentivise them to control construction costs. It is envisaged that this model will encourage these smaller housebuilders to compete on quality and price and to build and sell quickly in order to minimise their finance costs, which matches SHLLP's goals of affordability and accelerated market absorption.

SHLLP also has a vested interest in maintaining quality and the reputation of Stoke Harbour with prospective residents, and therefore the builder's track record on quality, measured through post sales feedback collected by SHLLP, will determine whether they are considered for licenses on future plots. As part of this commitment to quality, it is not in SHLLP's interests to cut S/M housebuilders' margins to the bone. The construction payments will be agreed on a realistic basis and with a normal sub-contractors margin, with a small contingency built in, and the build costs modelled in our construction cost summary reflect this.

SHLLP: private sale/owner occupier – S/M house-builder model



PRS model

The expected small/medium housebuilder model is set out in more detail below, with reference to the following steps.

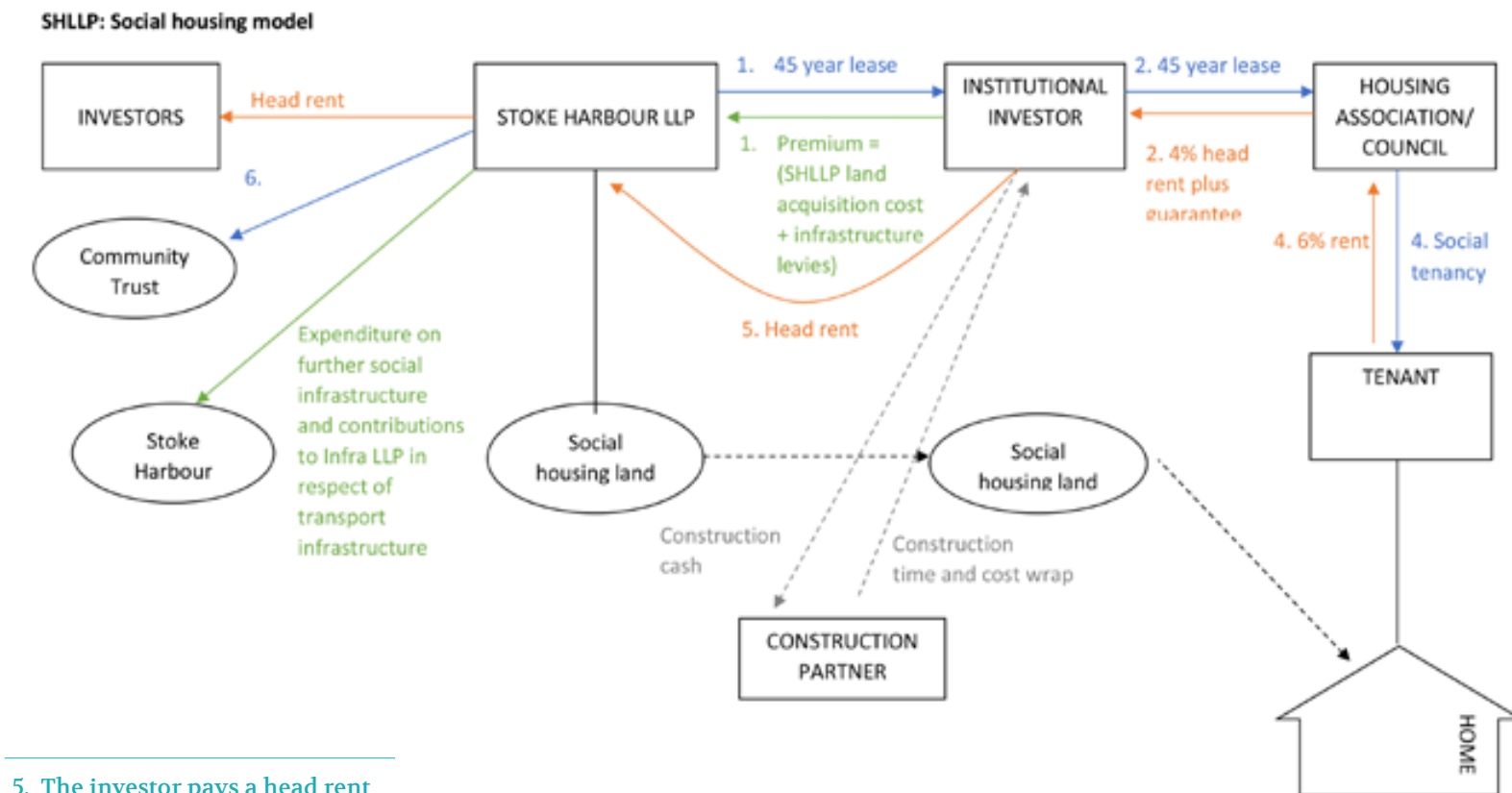
The expected PRS model is set out in more detail below, with reference to the following steps.

1. SHLLP will grant a long lease to an investor/developer to construct PRS homes in return for a premium.

2. The investor will fund the construction under a time and cost guarantee from the construction partner.

3. The investor will then grant a 5 year Assured Shorthold Tenancy to the tenant via a property manager, in line with Shelter's stable 5 year rental contract.

4. The tenant pays a rent and service charge to the property manager, who take a small commission (5%) and passes the rest of the income to the investor.



5. The investor pays a head rent and estate service charge to SHLLP.

6. The model will be flexible so that PRS and private sale stock can change from one to the other dependent on demand.

Social housing model

The expected social housing model is set out in more detail below, with reference to the following steps.

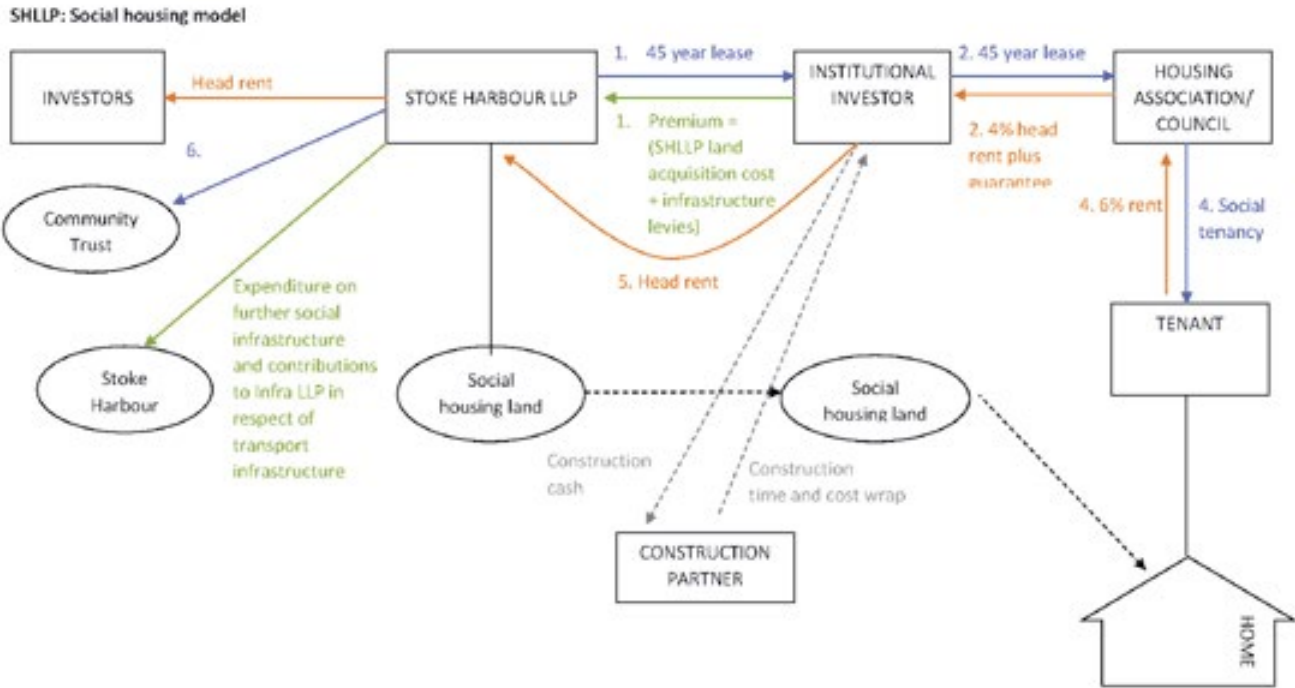
1. SHLLP will grant a 45 year lease to an institutional investor to construct social housing, in return for a premium.
2. The institutional investor will pay for the construction via a time and cost guarantee from the construction partner.
3. The institutional investor will then grant a 45 year lease to a housing association or Medway Council in return for a guarantee of 4%-4.25% index linked rents (based on land + construction cost) over the 45 year period.

4. Medway Council or the housing association will place residents into the housing, manage the buildings and will charge 6% index linked rent based on cost. This will be at or below the existing social rent levels for Medway. They will keep 2% towards maintenance, sinking fund and surplus.

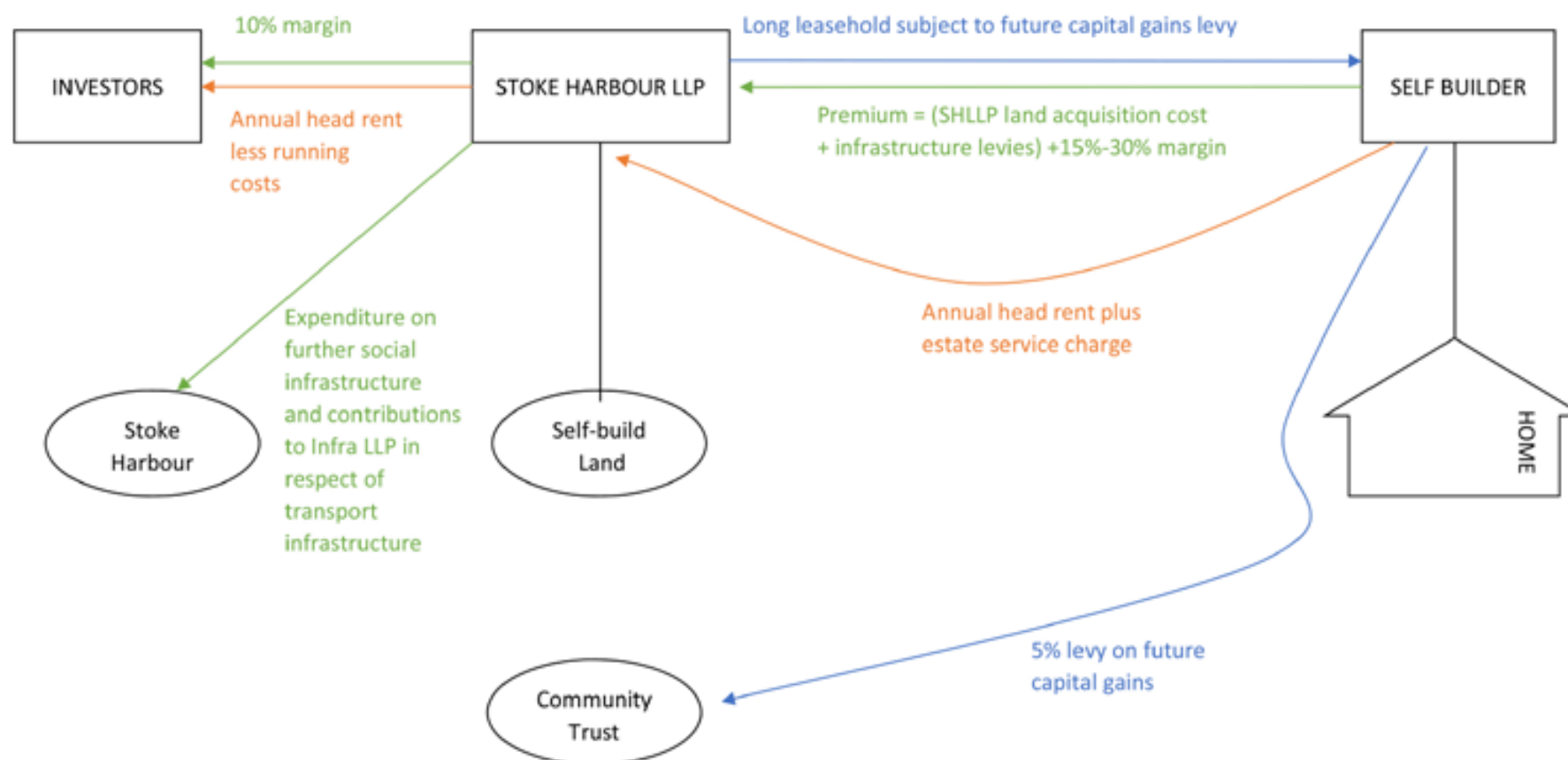
5. The institutional investor will pay SHLLP a small head rent of £35-£165 per home.

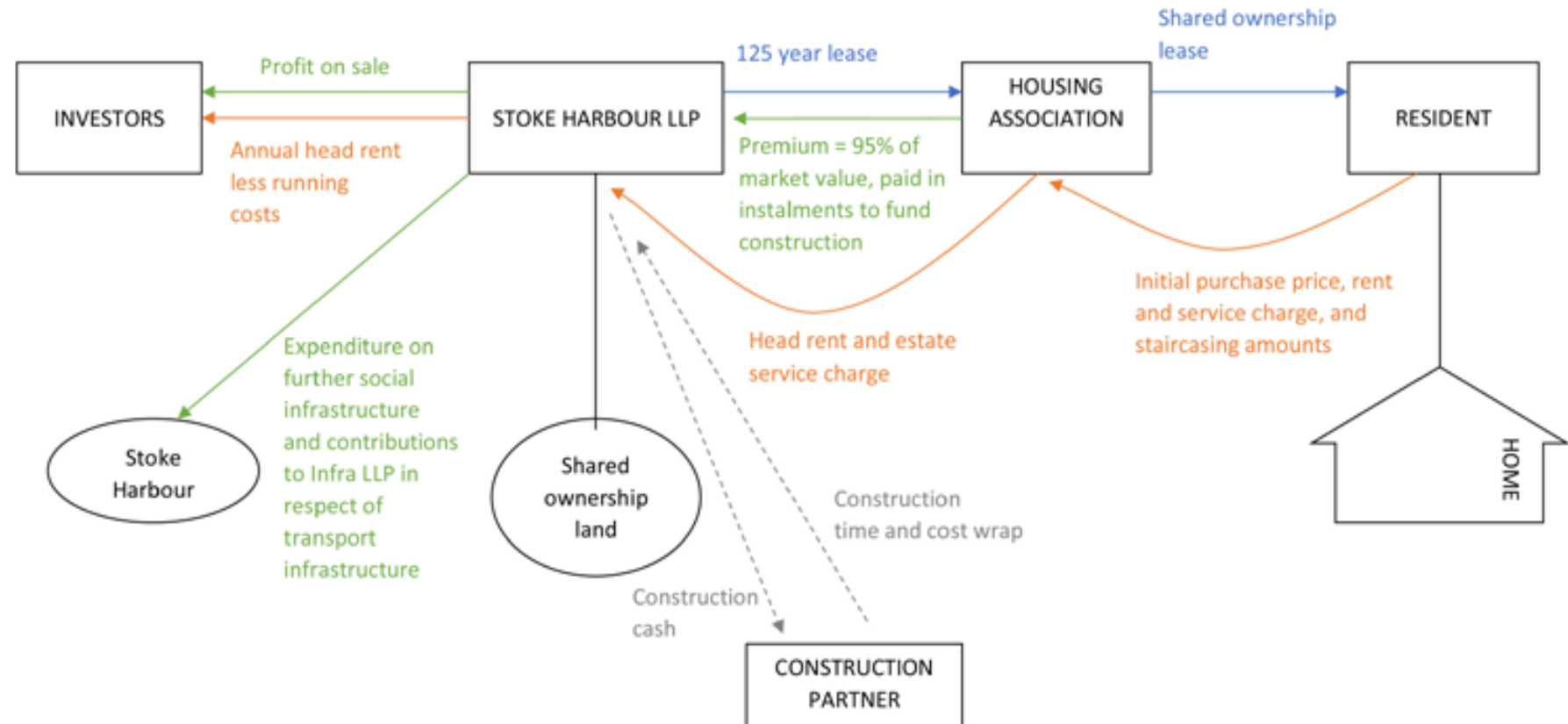
6. SHLLP will at a specified point in the future donate the freehold to the Community Trust so that it can benefit from this rental income and have control of the social housing in the future. It is likely that this will have a social housing covenant on the freehold.

A traditional housing association model whereby they acquire the long lease and fund construction will also be considered.



SHLLP: Self build model



SHLLP: Shared ownership model

Appendix XVI- Stoke Harbour Apprenticeship Training Agency (ATA)

(DRAFT) Business & Operational Plan

1. Executive Summary

Stoke Harbour Community Trust and Medway based higher education partners will establish a training agency for apprentices in Stoke Harbour for small and medium sized businesses in the Medway region and Hoo Peninsula to support recovery and growth. This will be a company limited by guarantee, jointly owned by the Trust and the partners, and will create new opportunities for local young people to secure employment and skills training and contribute to reducing the number of young people in the Medway region and Hoo Peninsula identified as Not in Education, Employment or Training (NEET).

The ATA will employ and match young people who want to find careers through apprenticeships with local businesses who want to grow their workforce. The jobs will be targeted at smaller, growing organisations in the construction, retail, financial and other sectors that will play an important role in driving Medway's economy over the next twenty years.

The Stoke Harbour ATA anticipates supporting a minimum of 100 micro (up to 10 employees) or SME businesses (up to 250 employees) and 200 young people to undertake a high quality apprenticeship over the first 5 years of its operation. This business plan establishes a framework for the operation and sustainable development of the Stoke Harbour ATA.

2. Mission Statement

The Stoke Harbour ATA will provide practical support to local businesses to achieve growth through apprenticeship opportunities aimed at nurturing the talent of local young people.

3. Aims and Objectives

The core function of the Stoke Harbour ATA will be the employment and development of apprentices in Medway, with a focus on Stoke Harbour and the Hoo Peninsula. The ATA will support the creation of new apprenticeship opportunities involving micro, small and medium sized (SME) employers that would otherwise be unable to take the business risk of employing an apprentice directly. Effectively operating as an employment agency, the ATA will seek to create genuine and new job opportunities primarily within the growth sectors of retail, business support and financial services.

‘Building many more high quality homes must be a strategic national priority. At KPMG, we hear from business leaders concerned about the growing cost of housing and the impact this is having on their ability to recruit and retain talented staff. In our own business, we hear from a hard working generation being priced out of an affordable home of their own.

We are very pleased to have helped Shelter and PRP develop their idea of a new garden city in the Hoo Peninsula. Shelter and PRP’s proposal addresses some of the most important questions for any garden city: how to finance infrastructure sustainably, how to generate growth and employment and how to provide a mix of homes affordable on a range of incomes. We hope to see this vision translate into new garden cities and the homes we desperately need.’

Jan Crosby
Director and Head of Housing
KPMG LLP

Laing O’Rourke is pleased to be supporting Shelter’s shortlisted entry to the prestigious Wolfson Economic Prize to deliver a new Garden City on the Hoo Peninsula.

‘We believe our vision to transform the construction process through the widespread adoption of offsite manufacturing will deliver higher quality, future-proofed housing and associated infrastructure in shorter time scales, at lower cost, and to the exacting environmental standards required. The approach will also create longer term local employment opportunities to help bridge the current skills gap that exists across our industry through the training and development of a new generation of construction technicians.’

Stephen Trusler
Accommodation Sector Leader for Europe
Laing O’Rourke

‘We need radical solutions to scale up supply speedily and we believe new garden settlements can be designed to achieve this. The UK has some of the best skills in the world that can deliver exemplary new settlements where people want to live, work and play, that will be popular and stand the test of time.

Our work with Shelter demonstrates that new settlements that are well sited, carefully designed to fit in with the context and that contain a mix of new homes for all can be financially, socially and environmentally deliverable.

By focussing on a specific location we have been able to isolate the issues that are perceived to be barriers to developments of this scale and demonstrate how these can be addressed. Our work provides a blueprint for garden settlements appropriate for the 21st century.’

Andy von Bradsky
Chairman
PRP

'We are delighted to have had the opportunity to work with Shelter on this submission for three reasons.

First, because housing provision is one of the most pressing issues the UK faces: we need 200,000 homes annually. The homes we need should be across all forms of tenure, for purchase, for rent, and for the affordable sector. They should be environmentally efficient, varied and specialised to suit different types of occupier, from students and single professionals, to key workers, families, and elderly 'last time buyers' who are crucial to freeing up scarce housing.

Second, the Garden City route is likely to be a big part of the solution – what has been modelled here is a version that could work in real life, with an economic model capable of attracting real investment. This goes way beyond just being an answer to an 'exam question'.

And third, because we know from experience and working with them that Shelter have the deep specialist knowledge and the practical experience to help bring a project to life. During this project I think we have learned at least as much from them about community engagement around developments as they have from us about the economic modelling – a terrific partnership exercise to deliver a great finished product.'

Nigel Wilson

Chief Executive, Legal & General