



Wolfson Economics Prize MMXIV

How would you deliver a new Garden City which is visionary, economically viable, and popular?

Shelter

Executive Summary

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Executive Summary

Our New Garden City

England desperately needs more homes. But our supply system is locked into a low output, low quality and high cost paradigm. Our New Garden City model transforms this dysfunctional system by delivering:

- Pension funds supporting large scale house building.
- 1,000+ homes built out per year per site.
- A viable, large scale off-site residential construction industry.
- A small and medium house builder renaissance.
- Quality homes affordable to the builders and architects who create them.
- Substantial self-build contribution to supply.
- A self-funding mechanism for transport infrastructure upgrades.
- Local people having vested interests in supporting development.
- Community ownership of assets funding exemplary local services.
- Zero public finance for development.

Our submission sets out how to make this vision a reality by building a New Garden City with a population of 150,000 on the Hoo Peninsula, Medway. With detailed analysis of Stoke Harbour - a self-sufficient town of 35,000-48,000 people that will be the seed settlement in a polycentric city - we show how our model can leverage massive new private investment into the provision of high quality homes, jobs, services and infrastructure.

We achieve this by prioritising speed and volume over margin to create an attractive, sustainable new place with a thriving economy in only 14 years – and by using preferential investment opportunities to win the support of local people from the start.

Our delivery and investment model acquires land at low cost and reduces development margins, preserving value in our city. This means we can make homes genuinely affordable, and transfer valuable assets to a Community Trust, while providing returns to investors –without relying on public spending.

Our Vision

As 'the city that built itself' our city will achieve scale at speed by mobilising resources and energy from land owners, major investors, self-builders, small firms, and local residents. It will foster a vibrant and diverse community from the start. Though well connected to Medway and London, it will not be a dormitory town but a place for working, with high quality infrastructure to support services, technical and creative start-ups and light industry.

- To attract residents, private sales will be at below market prices, with no 'new build premium'. We will create a healthy social mix by providing 37.5% genuinely affordable housing, homes designed for older people, and half of all units will be family-sized.
- Providing plots for self-build will encourage early movers from across the income spectrum, improve cash flow, and add diversity and character to our city inception.
- At the density of a typical Victorian town, our city will be on a human scale, centred on a vibrant town centre and a living harbour, with green space and waterways throughout. It will be served by excellent community facilities and transport – 45 minutes to London by train – funded by the town itself.
- A charitable Community Trust will own freeholds and assets giving it an estimated annual turnover of over £25m supporting excellent services, reducing demands on council revenues, and providing over £5m of education and training grants for residents each year.

Viability

Land will be secured at close to existing use value by offering landowners the opportunity to benefit from the regeneration effect of long term investment and development, either via co-investment or by taking an upfront payment and a share of future development profits.

- Both options will give landowners substantially more than the land would otherwise be worth.
- This will be backed by the credible threat of losing land value via planning designation as permanent Local Green Space, or compulsory acquisition as a last resort.

Our investment structure aligns investors' risks and returns with their investment objectives:

- Planning risk ring-fenced with a promoter who retains overall control during development to ensure unity of vision.
- Social and private rented housing funded by patient capital from pension funds and other institutional investors.
- Homes for private sale funded by shorter-term, risk-taking investors.

A rapid delivery model that will build out over 1,000 units per year by:

- Removing land acquisition costs and planning risk from house builders.
- Licensing multiple small and medium sized house builders to build out small land parcels, giving them subcontractor and sales margins on transactions, encouraging competition on price, quality and build out rate.
- Transferring construction risk to house builders and sharing sales risk.
- Using off-site construction to reduce construction time while retaining quality, traditional form and materials.

A rapid sales model that will overcome traditional market absorption limits by:

- Design focused on creating a sense of place from the start.
- Frontloading transport connectivity and social infrastructure investment.
- Segmenting our housing offer into multiple markets.
- Targeting early sales at underserved markets with untapped demand like self-builders and family-sized shared ownership.
- Pricing sales at below local market averages.

Popularity

- Unique opportunities and share-based incentives for local residents to invest in the development, with stronger incentives for the earliest investors, creating local constituencies with a real interest in the success of our town. An investment of £10,000 is modelled to grow to over £82,500 over the development.
- A collaborative, participatory approach to the pre-planning process that encourages existing residents, parish councils and community groups to actively shape the new settlement.
- New infrastructure and excellent services – including great new schools – benefiting the entire Hoo Peninsula.
- Our site avoids protected ecological areas and flood risk zones, and Local Green Space designations will reassure people that our town will never encroach on existing villages.
- A housing offer that responds to people's real needs and desires – affordable starter homes, larger family homes at reasonable prices, or high quality options designed for older people but embedded in the community.

Future

- Our community asset model will seed-fund a national Garden City Infrastructure Fund. This will use an innovative tax receipt-sharing agreement to fund transport infrastructure that unlocks sites for future Garden Cities, generating receipts for the Exchequer and growing the UK economy - without requiring further public borrowing.

PART I | VISION

1. A new Garden City for England

The problem we need to solve

England is in the midst of a worsening housing crisis. Property prices are making home ownership a distant dream for today's young people, and forcing many to spend more than half their earnings on rent. As a result, homeownership is falling for the first time in a century, while homelessness is rising. Meanwhile, millions of older people are stuck in homes that are too big and too expensive to run, with few decent options for later life. The heart of these complex problems is the failure of housing supply over recent decades. Current estimates are that England needs to build 250,000 homes a year in order to meet demand; current output is less than half this¹.

The UK development sector is locked into a low output, low quality and high cost model of production. This model makes house building a risky and protracted process that discourages innovation and alienates local communities. Opposition to development makes planning permission difficult to obtain. Low supply keeps house prices high, pricing out local people but delivering strong returns to landowners and encouraging speculative behaviour. We need a new approach.

Our vision: the city that builds itself

When Henry Ford revolutionised car manufacture and launched the era of mass produced consumer goods, he made it impossible for industry to go back to where it had been before. But he did not invent the motor car – or even the assembly line. By dramatically scaling up production capacity he made an existing product cheaper and better and simultaneously created the effective consumer demand for that product by paying his workers enough to afford to buy the cars they made. He created a new production paradigm of high output, high quality and low prices.

Innovation and affordability

Like the Model T, the economic model for our city is a combination of existing ideas and innovations that add up to a radically new approach. Improved product design, combined with a reimagining of the financial structure and short supply chains create a model of housing supply based on the rapid output of high quality homes, which gives people the chance to buy or rent at lower prices than they would pay elsewhere – without the need for government guaranteed mortgages. Our partnership can do this because we're different from the average developer. Led by a national charity, designed by the best architects, and financed by institutional investors, our aim is not realise speculative profits but to provide quality homes at affordable prices, while making reasonable, steady returns to support millions of British pension holders.

¹ DCLG [Housing Statistical Release](#), 20 February 2014

Viability

The economic principle underpinning our model is simple: the uplift in land value that comes from the creation of successful places should support the investment required to create it. Our model distinguishes between the gains made from land sales – which are typically high, but more volatile and uncertain – and more stable returns on rents, and assigns these returns to different categories of investor according to their investment priorities and risk appetites. Our primary institutional investors will get steady returns to match their pension liabilities; more risk-inclined investors can take medium term capital growth; home buyers can invest in the local housing market; and anyone living in the Hoo peninsula can boost their finances with an investment in the success of the town.

Design and infrastructure

Our proposal is for a true garden city: a network of new settlements, each big enough to sustain itself yet small enough to retain an intimate, neighbourly atmosphere, linked by strong transport connectivity and interspersed with open countryside – much like Ebenezer Howard's original vision for a 'Group of Slumless, Smokeless Cities'.

The city that builds itself will foster community and diversity by offering serviced plots for people to design and build their own home - or even to rent moorings for houseboats. Our city will have great new schools, supermarkets, a small hospital and other community facilities. There'll be plenty of open and green space, active streets and waterways throughout, and a new harbour linking our city to the Medway and the sea. It will be connected to jobs and services by new transport links, putting it just 45 minutes from central London, while providing new jobs and businesses locally. And to assuage fears that our city will grow too far into the countryside, we will designate a swathe of land around each settlement as permanent local green space.

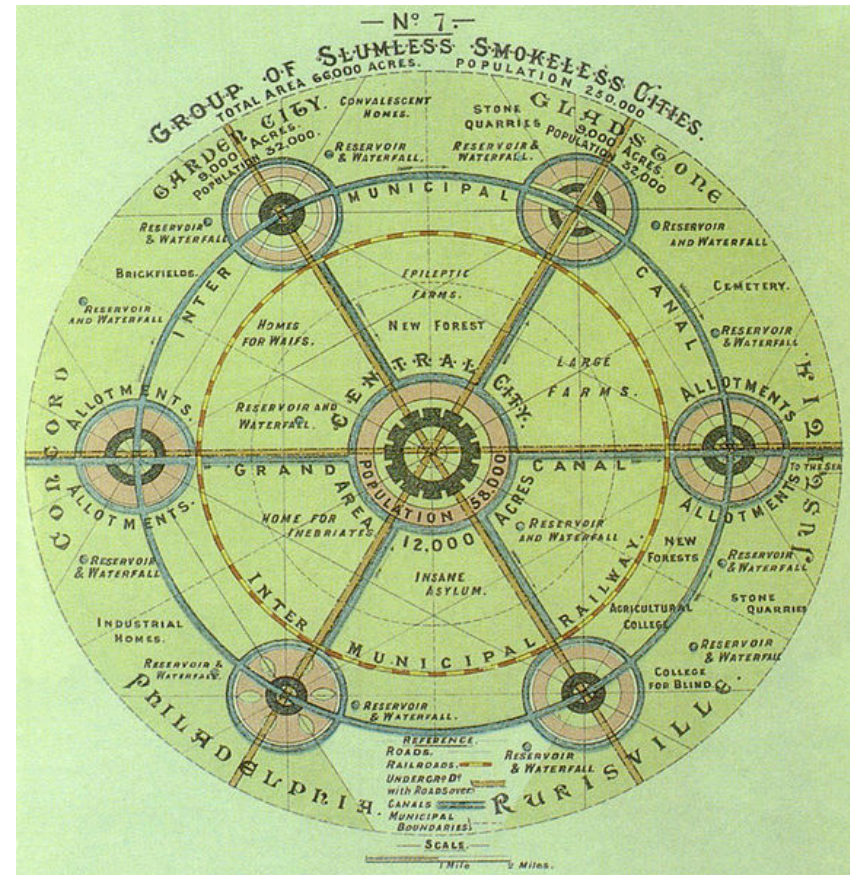


FIGURE [1] DIAGRAM OF EBENEZER HOWARD'S PROPOSAL FOR A GARDEN CITY WITH INTERLINKED OUTLYING SETTLEMENTS (Garden City Concept, Garden Cities of Tomorrow, Ebenezer Howard, 1902)

Community ownership

Too often, places suffer because the economic value they produce is diverted elsewhere via land and labour markets. Our model therefore channels the value created locally into the hands of local people as well as delivering the necessary returns to our investors. A portfolio of valuable assets will give our town's Community Trust an income of over £25m pa, to support excellent, additional services – and provide over £5m pa of education and training grants to local residents.

Individual incentives

We want local people to support our city because it offers them huge benefits, and because they have a voice in its development. But we also want a critical mass of local residents to have an individual financial stake in its success. So we will give everyone who lives in the Hoo Peninsula the chance to buy shares in the project before anyone else, on highly preferential terms that will only reap rewards if planning permission is granted.

Location

We have modelled the first 15,000 home settlement at Stoke Harbour in detail, but this is only the start of our vision for the Hoo Peninsula Garden City. The transport infrastructure upgrades will enable Stoke Harbour to grow to 20,000 homes, and for similar size towns at Hoo Junction and Grain, as well as 5,000 homes at Lodge Hill². This will create a polycentric Garden City of 60,000 new homes for around 144,000 people.

The Thames Gateway

The south-east of England has the UK's greatest housing need; London's population is projected to grow from 8.4 million to 9 million by 2020, or 40,000 households per year. Yet London's capacity to build is limited, not least by over 5,000 sq km of Green Belt surrounding it, and intensification of suburbs, though desirable, will not satisfy the housing shortfall. In response to these pressures, the Thames Gateway sub-region, stretching 40 miles east along the Thames Estuary to Southend and Sittingbourne, has long been identified as England's primary location for regeneration and growth and will see continued investment in infrastructure, employment and homes for decades to come, including:

- Strengthening links to London via commuter rail and High Speed One to Stratford and Kings Cross, and to the continent via Eurostar stations at Ashford and Ebbsfleet.
- Potential further transport infrastructure investment, including a new Thames bridge crossing near Gravesend, and potential Crossrail extension reaching Gravesend.
- Other large scale developments including Ebbsfleet New Settlement and Paramount Theme Park.
- Continuing investment in digital infrastructure.

² As shown in Figure [6]

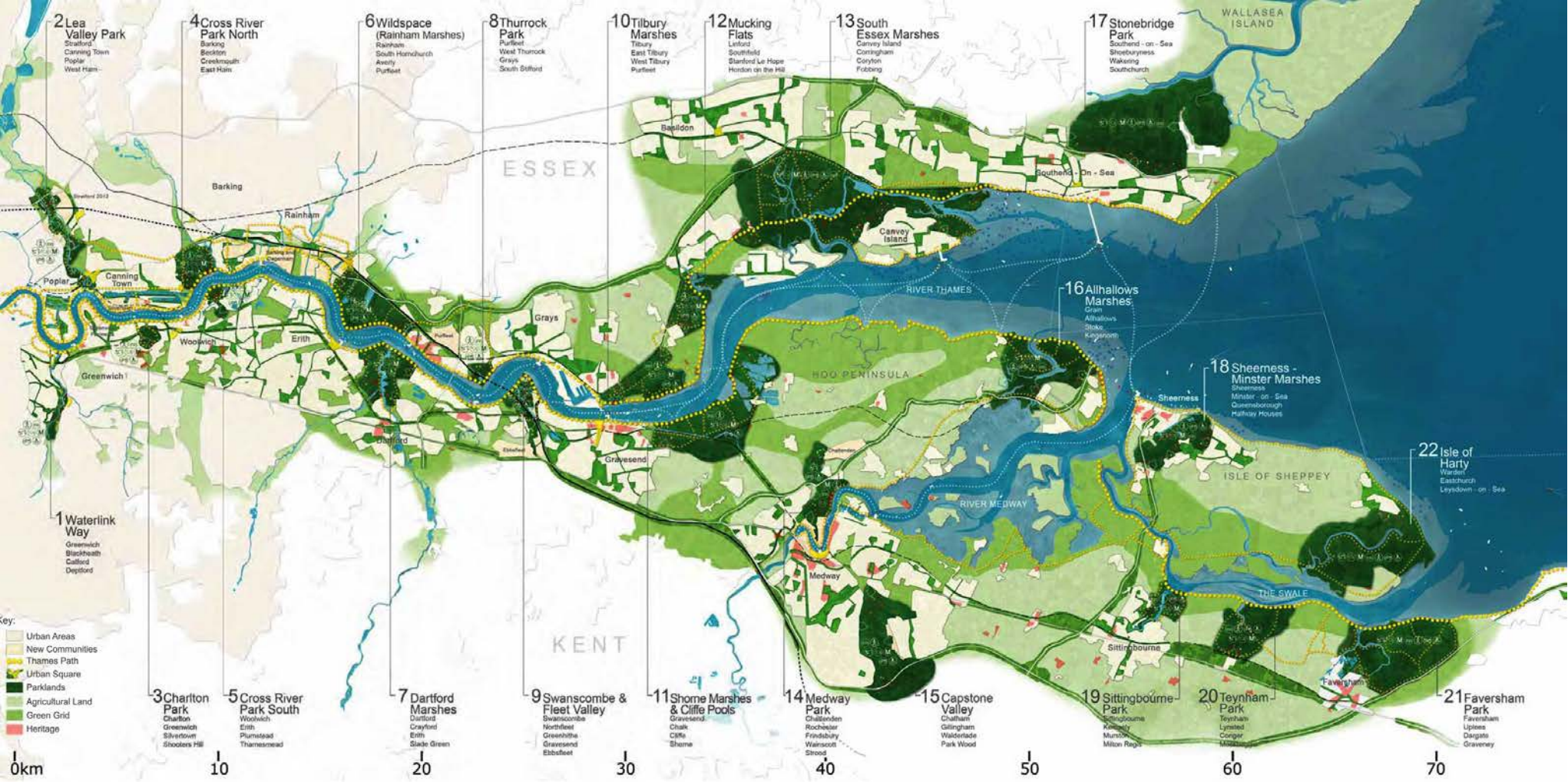


FIGURE [2] 2008, THAMES GATEWAY PARKLANDS VISION, DCLG, SIR TERRY FARRELL (The Thames Gateway, Parklands Vision, DCLG October 2008).

The Hoo Peninsula

Just beyond the London green belt, 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. Historically, Yantlet Creek on the Hoo marked the outer limit of the jurisdiction of the City of London: today it is part of Medway Council – the unitary authority covering Strood, Rochester, Gillingham, Chatham and Rainham.

The Hoo Peninsula is the ideal location for our Garden City. It is currently poorly served by transport into London, yet is close enough to well-connected zones for relatively easy upgrading. The area has been identified by Medway Council for significant regeneration, including as a location for an environmental industries cluster. Medway Council is also keen to form the Medway Universities Campus from a cluster of university satellites³. This is a place that has been crying out for high quality development.

Within the Hoo, the Stoke Harbour site for the seed-town between the main road and the railway has many benefits, including;

- Proximity to the A228 highway and the existing rail line for connectivity to jobs and services.
- Exclusion from high-value ecological areas such as protected SSSI and RAMSAR sites, and from areas of Local Landscape Importance.
- Waterfront location providing appeal as a distinctive destination.
- 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.
- Lower number of land-owners, easing land assembly.
- Lower population density, meaning less impact on existing local communities.
- Proximity of Kingsnorth and Grain, providing a broad range of both current and future potential employment prospects for residents.
- Wide range of landscape and industrial heritage assets, to further strengthen the lifestyle offer to prospective residents and employers⁴.

³ <http://www.medwayrenaissance.com/1-billion-goes-into-the-medway-renaissance/>
<http://gtgkm.org.uk/documents/21st-century-kent-1265119089.pdf>

⁴ As detailed in Figure [2]

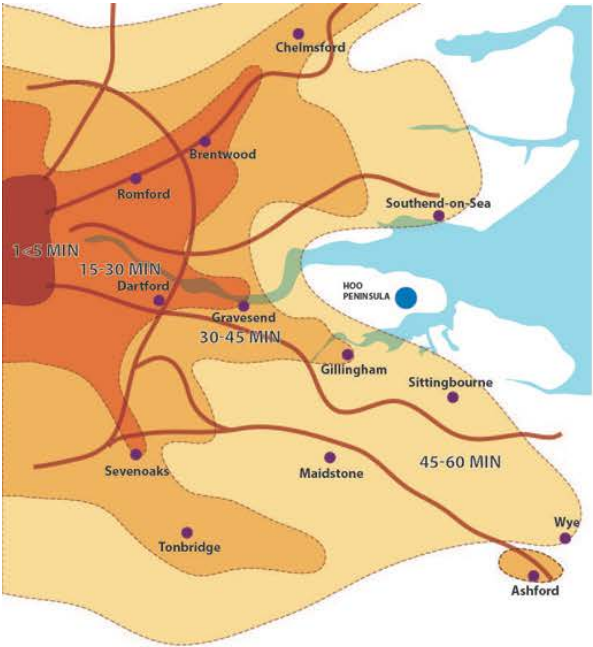


FIGURE [3] TRAIN JOURNEY TIMES- EXISTING
AUTHORS' CALCULATIONS

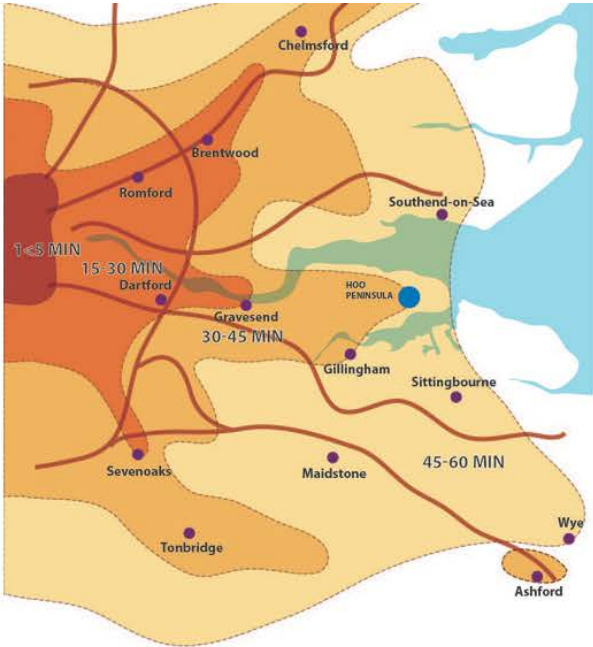


FIGURE [4] TRAIN JOURNEY TIMES- PROPOSED
AUTHORS' CALCULATIONS

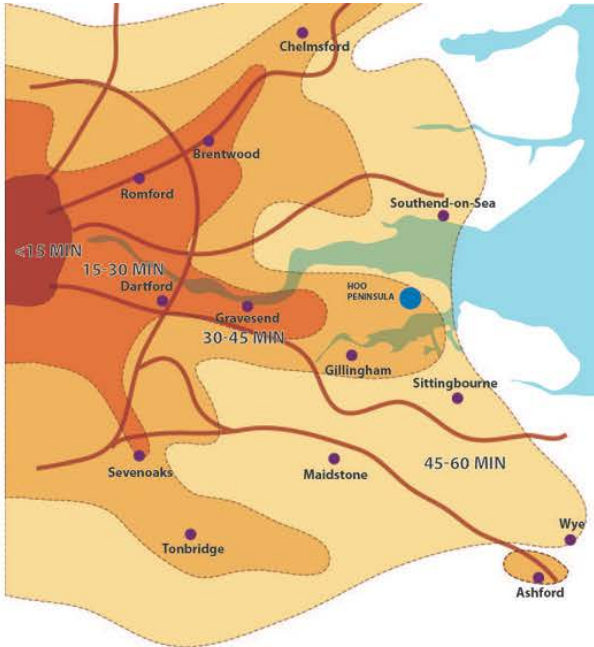


FIGURE [5] TRAIN JOURNEY TIMES- WITH CROSSRAIL EXTENSION
AUTHORS' CALCULATIONS

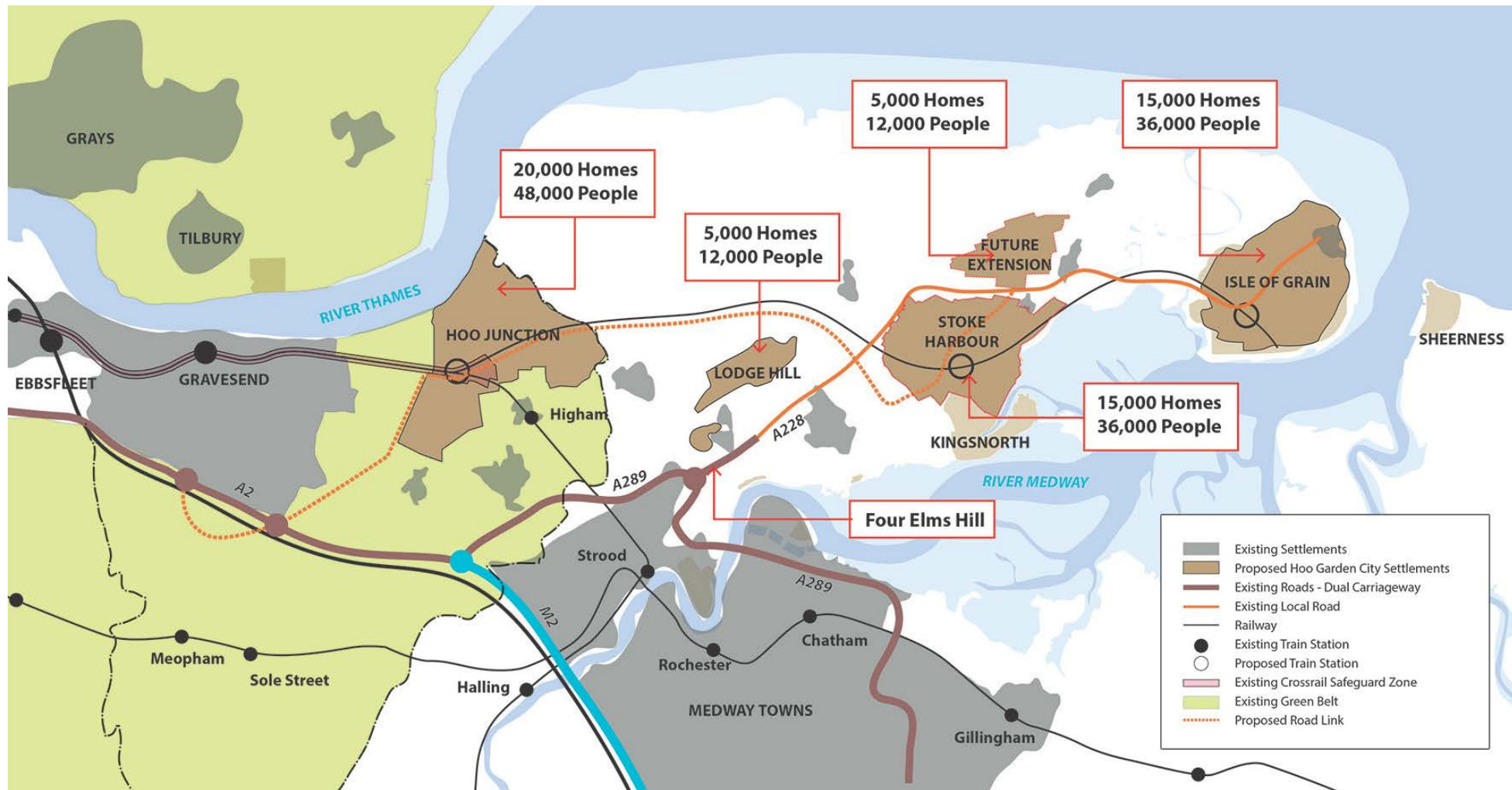


FIGURE [6] HOO PENINSULA GARDEN CITY DIAGRAM

2. Design Stoke Harbour - Proposed Masterplan



FIGURE [7] STOKE HARBOUR - PROPOSED MASTERPLAN

Scale

The Hoo Peninsula Garden City represents the start of exciting new chapter in the UK's proud history of urban design. Consisting of multiple small to medium sized towns our Garden City responds on a human scale to the need to build more houses in the South East. The first proposed town of Stoke Harbour. Homes will be designed to a population of around 36,000 in at least 15,000 homes: similar to the scale of the original Garden Cities of Letchworth and Welwyn. This scale provides sufficient critical mass to make a broad range of homes, jobs and community services viable. Compared to the much larger scale of the one-off state-led Milton Keynes, this scale is also readily adaptable to future social, physical or financial conditions. This scale also lends itself to being rolled out nation-wide, cumulatively addressing housing.

Density

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 settlement, it also provides much more vibrant and viable mixed-uses centres, supported by a larger population within easy reach.



Homes

The tenure mix and dwelling types employed at Stoke Harbour reflect the broader social and economic ambitions of our submission. With a particular emphasis on affordability and wide appeal, a full range of dwelling types is represented, from houseboats through small and large apartments to detached houses on large plots. Apartments are generally much more cost-effective, affordable and sustainable dwelling types both to build and occupy. Because Stoke Harbour will be delivered by a range of investors with different development parameters, an above average proportion of apartments is proposed, including larger family-size units. By locating even more residents within a walkable distance of services, this higher density brings obvious benefits to the broader masterplan. This provision also represents a strong belief that there is an untapped market in the UK for larger apartments on the European model. If these apartments are sufficiently large and flexible to accommodate the needs of a growing family, with ample and secure open space nearby, then demand will be strong across all ages, income groups and tenures.

There is a shortage of 1 and 2 bedroom flats for smaller household compositions and to satisfy the needs of an increasingly ageing population as households headed by someone over 65 will account for 54% of projected household increases. Stoke Harbour is designed to meet these demands in a way that integrates senior living into all of its apartment buildings.





IMAGE WEST 8 URBAN DESIGN & LANDSCAPE ARCHITECTURE



Precedent Images - Homes



IMAGE ROBERT KWOLEK



Infrastructure and Employment

Our plan for Stoke Harbour delivers critical infrastructure including a new train station, dual carriage roads and district-wide solutions to utilities like heating, cooling, water and sewage. Employment provision is realised as town-centre offices and edge-of-town business parks. In addition both light-industrial and heavy-industrial zones are serviced by a harbour and freight rail access. This extends a long and proud history of both industry and innovation on the Hoo Peninsula. A number of local retail hubs provide convenience shopping at a walkable distance to all homes in the town. A main town centre high street and square provides a central retail hub, with food stores covering a wide target market and supported by a substantial range of convenience retail.



FIGURE [8] CONNECTIVITY

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 [9] GREEN INFRASTRUCTURE

- Existing Landscape Protected area
- Existing Flood Risk Zone
- Contours (10 metres AOD)
- Designated Green Space
- Proposed Green Corridors

Streets, Squares and the Harbour

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 water-courses, hedgerows and shelterbelts will be used to create linear parks that link green spaces together. 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. It will be a perfect place to meet neighbours or simply watch the world go by. The harbour district will also be centred on a smaller but equally animated, mixed-use square.

The other major node of the town is the tidal harbour and canal zone, 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 defining feature of the region, the River Medway.



Social Infrastructure

Community services at walkable local centres include at least 7 primary schools with associated nurseries and community hall facilities. Town-wide community services include two secondary schools, a campus for further and higher education, and a town hall civic centre. In terms of health provision, Stoke Harbour supports two GP's surgeries and a community hospital which supports the wider area also. Similarly an emergency services hub provides police, fire and ambulance serves both the town and wider area.

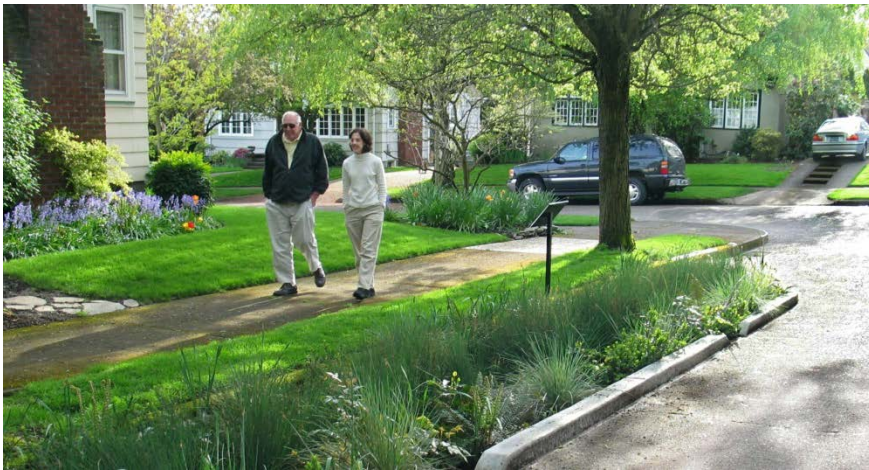


IMAGE KEVIN ROBERT PERRY

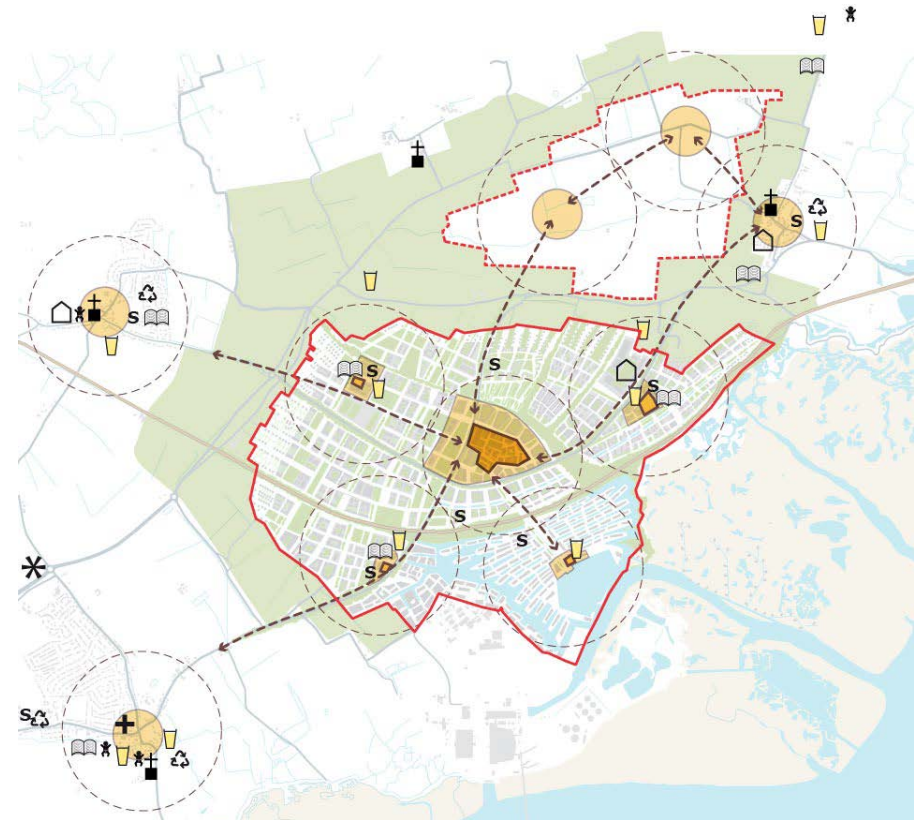


FIGURE [10] COMMUNITY HUBS- EXISTING AND PROPOSED

Flood Risk

The Flood risk areas of the site are identified on Figure 9 Green Infrastructure. This shows that most of Stoke Harbour occupies a spine of higher level land, with the town centre located about 25m above sea level. 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.
- 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.⁵

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.



FIGURE [10] COMMUNITY HUBS- EXISTING AND PROPOSED

⁵ RIBA note: "Designing for Flood Risk"

3. Delivery

Phasing plan

Rapid build out is central to our business model and our vision. After two years for ground works and infrastructure, we plan to complete 910 homes in the first year of full construction, and from then on to complete over 1,100 homes per year to reach 15,000 homes within 12 years⁶.

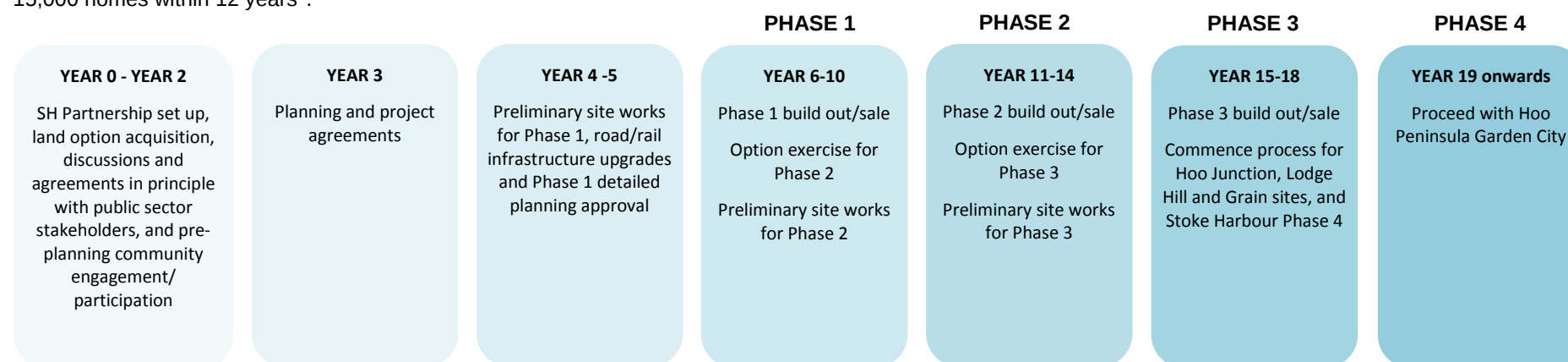


FIGURE [11] – STOKE HARBOUR ESTIMATED CONSTRUCTION TIMELINE

Year	1	2	3	4	5	6	7	8	9	10	11	12
Self-build target	169	184	181	258	175	175	175	175	175	133	33	42
SH Partnership target	741	950	1,233	1,284	1,078	1,090	1,075	1,075	1,075	1,150	1,217	1,175
Total target per year	910	1,134	1,414	1,542	1,253	1,265	1,250	1,250	1,250	1,283	1,250	1,217

TABLE [1] STOKE HARBOUR BUILD OUT RATE TARGET TIMETABLE

⁶ The time line for our project and build out rate target are shown in Figures [11] and [12]

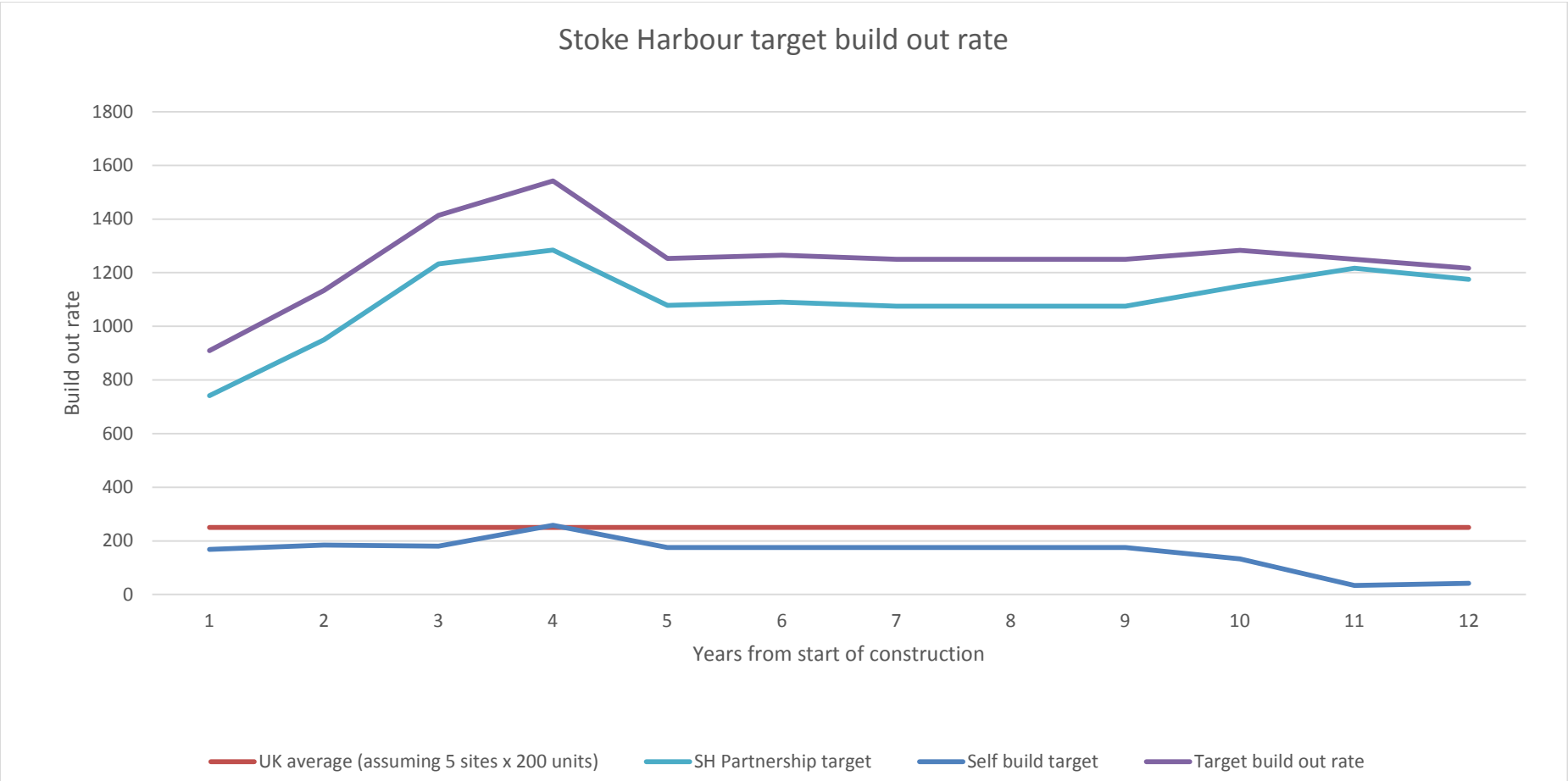


FIGURE [12] STOKE HARBOUR TARGET BUILD OUT RATE

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 outlined below. The current estimated UK average of 50 homes per year per site⁷ is driven by house builders' need to drip feed housing supply to maintain sale prices and margins. Our targets are based on Northern European delivery models, where rates in excess of 700 units per site are not uncommon⁸ often through land parcelling and off-site construction.

Achieving accelerated build out rates

Key to our accelerated build out rates will be our strategy of market segmentation and structuring incentives to foster competition between suppliers on volume, build out rate and price, rather than targeting margins.

Creating a sense of place at the outset

It is vital that Stoke Harbour is an attractive proposition for new residents from its inception. Transport connectivity will be critical in the early stages, to mitigate works traffic impacts and enable residents to commute to work. Before the first homes are completed the rail line will be activated and the Four Elms roundabout and A228 upgraded, and a subsidised bus service will run into the Medway towns. High speed broadband provision will be in place from day one, to provide a framework for remote working and the emerging digital economy.

Initial social infrastructure will also be frontloaded in the delivery schedule: a regional food store, main square, primary school, secondary school, GP surgery and playing fields will all be provided early on to serve the existing community of the Hoo Peninsula as much as the new residents of our town.

⁷ 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]

⁸ Please refer to the case studies contained within Appendix [01]

Segmenting our market

Market absorption rates – real or perceived – are a major constraint on developers' build out rates. Our town will overcome these barriers by segmenting our offer across a range of different tenures, designs and price points: from self-build plots and house boat moorings, to family homes for sale, social rented homes and intermediate options. Below-average sale prices (possible due to low land acquisition prices) will be key to attracting early buyers.

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. Stoke Harbour Partnership will provide the infrastructure and land: SMEs will take on construction risk and take a return commensurate to this level of risk. For homes for private sale, SME builders will also take a limited degree of sales risk to encourage them to compete on quality and price and to be motivated by transactions rather than margin⁹. Licensed house builders will be expected to build and sell the properties according to a pre-determined timeframe, with reducing margins if these are not achieved.

All construction will take place according to the agreed masterplan with house builders required to adhere to material, form and quality guidelines.

Multi-nodal construction sites

Working on a number of construction sites at the same time will allow us to achieve the breadth of dwelling types we are seeking, and to develop sites with differing characteristics during each construction phase. Different sites such as town square, neighbourhood hub, harbour front, rural fringe and the continuum

⁹ As detailed in Section 2

in between these will help further broaden the market absorption. Multiple sites will enable us to license construction to the high number of SME house builders that we hope to provide opportunities to.

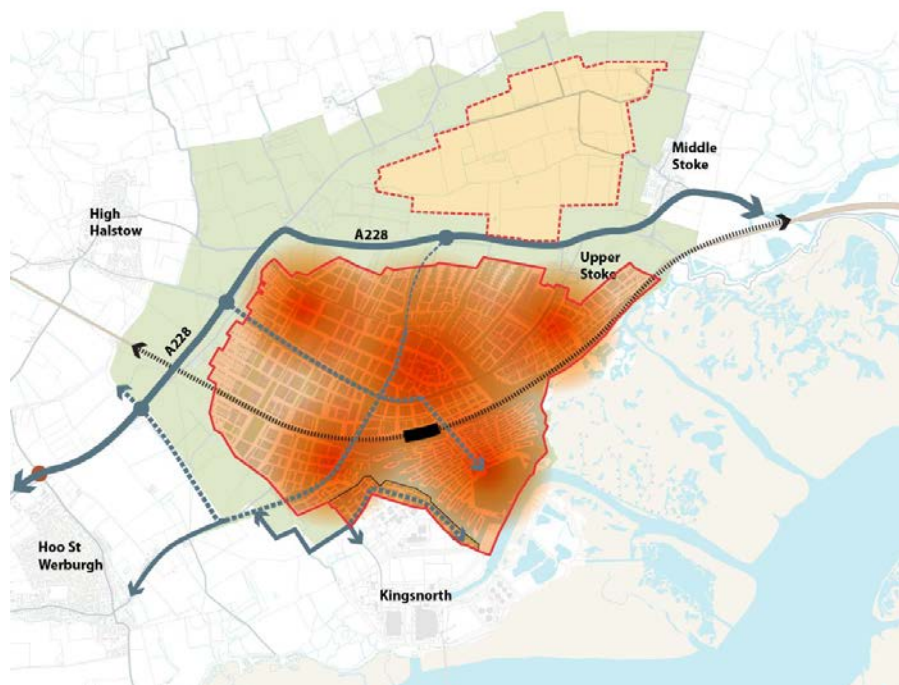


FIGURE [13] PHASING STRATEGY



Self-build

Self-build¹⁰ is central to our vision of ‘the town that built itself’ and to our business plan. Self-build will provide 1,865 of the first 15,000 homes, and will encourage early movers/pioneers, improve cash flow, and add diversity and character to our town from the start.

In our town, self-build will be a real option for people from across the income spectrum. There is enormous latent demand from people to commission or build their own home. Ipsos MORI has found that there are currently six million people in the UK researching how build their own home¹¹. Most will fail to realize their dream due to affordability: a modest plot in southern England can cost £200,000 or more.¹²

In addition to individual self-builders there is a growing movement of community-led housing groups that seek to self-build collectively, many motivated by a desire to create a supportive shared environment for their retirement years – or the desire for their kids to be able to share bigger gardens. In Germany, such groups are significant house builders and are actively supported. In our town they will find the opportunities denied them elsewhere, and will help foster community spirit and diversity early on.

We will actively promote opportunities to acquire plots for a variety of self-build models, 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.

¹⁰ We use the term ‘self-build’ to refer to the wide range of individual-led models for housing delivery. Most commonly, individuals ‘self commission’ by hiring their own professionals to design and build their home, or buy kit homes and hire builders to construct them. For this reason, the government prefers the term ‘custom build’.

¹¹ 2013, 12 March, *Survey of self-build intentions*, Ipsos MORI <http://www.ipsos-mori.com/researchpublications/researcharchive/3171/Survey-of-selfbuild-intentions.aspx> [accessed 19.02.2014]

¹² 2013 August, NaSBA analysis of barriers to self-build in the UK

Even if the demand from people actually ready to “press the button” is only a fraction of the estimated six million nationwide¹³, selling 1,865 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.

Off-site construction¹⁴

Delivering an excess of 15,000 new homes on one site presents the opportunity to introduce an integrated ‘offsite’ construction paradigm, which will contribute to our build out rates and increase energy, carbon and waste efficiencies.

Our strategy aims to apply offsite principals commonly used in Northern Europe, using UK supply chains for pre-production of basic structural components integrated with mechanical, electrical and plumbing elements, built to order at factories and ready to assemble on site.

The scale and speed at which we plan to build raises the issue of capacity constraints in the construction industry and its supply chain. To address this we will ensure that off-site manufacturing facilities are created at Stoke Harbour during Phase 1 by heavily incentivising existing suppliers and start-ups; the masterplan dedicates the industrial zone adjacent to the Kingsnorth industrial site to this specific use.

As a pioneer garden city for the 21st century, and with such strong existing industrial infrastructure including road, rail and shipping links, Stoke Harbour is well-placed to capitalise on this future green industry.

We will need to access existing supply from national and international markets as our off-site construction industry scales up. We will prioritise partnerships with UK suppliers, but we will also partner with European businesses where they have existing UK manufacturing centres or they agree to set up such businesses in our industrial park. If there is a short term constraint in UK supply, the Hoo Peninsula is well placed close to ports with ready access to the centres of North European off-site construction.

Most importantly, offsite construction can be used to create traditional forms and with traditional finishes; a traditional family house with brick exterior is perfectly possible with offsite construction, as well as more modern forms and materials. Stoke Harbour would deliver more traditional brick-finished houses in the lower density neighbourhoods and more modern forms and finishes in the more urban apartment and commerce focused areas.

¹³ The Ipsos MORI research states that, “one in eight Brits expect to research how to build a home for themselves in the next 12 months, and around one in 50 expect to buy a building plot, obtain detailed planning consent or start construction work on their self-build home during the coming year or so.” Looking solely at Medway, this implies a pool of demand of 5,300 people each year, expanding this to Kent the implied demand is 34,000 people per year.

¹⁴ Please refer to Appendix [02] for further detail.

Houseboats

The existing jetty and early development of the harbour will allow houseboats to moor at Stoke harbour and contribute to its development and community from the start. Houseboats will provide an opportunity for self-builders to live near the site pre-occupancy, as well as an alternative water-based community that will increase service demand for the fledgling settlement and contribute to the diversity and viability of Stoke Harbour in these early stages.



[IMAGE DUTCHAMSTERDAM.NL](https://image.dutchamsterdam.nl/)

Housing: tenure mix

Owner occupied

Under our building under license model, strict marketing requirements will be enforced 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 tenancies¹⁵.

Once the long leases have been sold the freehold reversion will be transferred to the Community Trust, which will collect a small ground rent each year. The homes at Stoke Harbour will be affordable to ordinary households in the area.

Affordability analysis		Single earner	1.5 earners	Dual earner			
Mean Medway wage =		£26,580	£39,870.0	£53,160			
Median Medway wage =		£23,113	£34,669.5	£46,226		Mortgage:	90%

Dwelling type	Mean sale price	Multiples		Phase 1 sale price range		Multiples of median wage					
		mean wage	median wage			Single earner		1.5 earner		Dual earner	
1B2P	£95,000	3.22	3.70	80,000	115,000	3.12	4.48	2.08	2.99	1.56	2.24
2B4P	£112,000	3.79	4.36	95,000	129,000	3.70	5.02	2.47	3.35	1.85	2.51
3B4P	£140,000	4.74	5.45	130,000	150,000	5.06	5.84	3.37	3.89	2.53	2.92
3B5P Duplex	£148,000	5.01	5.76	139,000	157,000	5.41	6.11	3.61	4.08	2.71	3.06
2B4P Terrace	£147,000	4.98	5.72	142,000	152,000	5.53	5.92	3.69	3.95	2.76	2.96
3B5P Terrace	£165,000	5.59	6.42	158,000	172,000	6.15	6.70	4.10	4.47	3.08	3.35
4B6P Terrace	£190,000	6.43	7.40	180,000	200,000	7.01	7.79	4.67	5.19	3.50	3.89
3B5P Semi-d	£205,000	6.94	7.98	198,000	212,000	7.71	8.26	5.14	5.50	3.85	4.13
4B6P Semi-d	£224,000	7.58	8.72	218,000	232,000	8.49	9.03	5.66	6.02	4.24	4.52
4B6P Detached	£270,000	9.14	10.51	260,000	280,000	10.12	10.90	6.75	7.27	5.06	5.45
4B7P Detached	£335,000	11.34	13.04	328,000	342,000	12.77	13.32	8.51	8.88	6.39	6.66
5B7P Detached	£400,000	13.54	15.58	380,000	420,000	14.80	16.35	9.86	10.90	7.40	8.18

¹⁵ For example, Shelter's 'Stable Rental Contract'
[\[http://england.shelter.org.uk/professional_resources/policy_and_research/policy_library/policy_library_folder/report_a_better_deal_-_towards_more_stable_private_renting\]](http://england.shelter.org.uk/professional_resources/policy_and_research/policy_library/policy_library_folder/report_a_better_deal_-_towards_more_stable_private_renting)

Social rented

Our model for funding social rental housing is based on one being developed by a major UK pension fund we have spoken to, in which the construction is funded by institutional investors. This arrangement gives the institutional investors a 4.0% index linked yield for 45 years backed by a local government guarantee¹⁶.

The model is a tripartite arrangement whereby Stoke Harbour Partnership leases the property to Medway Council, who subcontracts property management to a Housing Association. Tenants pay 6% index-linked rents based on cost, SH Partnership receives a 4% index linked return, the Housing Association 1.5% for management fees, maintenance and sinking fund, and Medway Council a 0.5% turn in return for guaranteeing the payments and having nomination rights on social housing.

Stoke Harbour Partnership will look to mitigate the construction risk through strong contractual protection and through using a large national construction company for the social housing construction.

After 45 years the freehold is donated to the Community Trust.

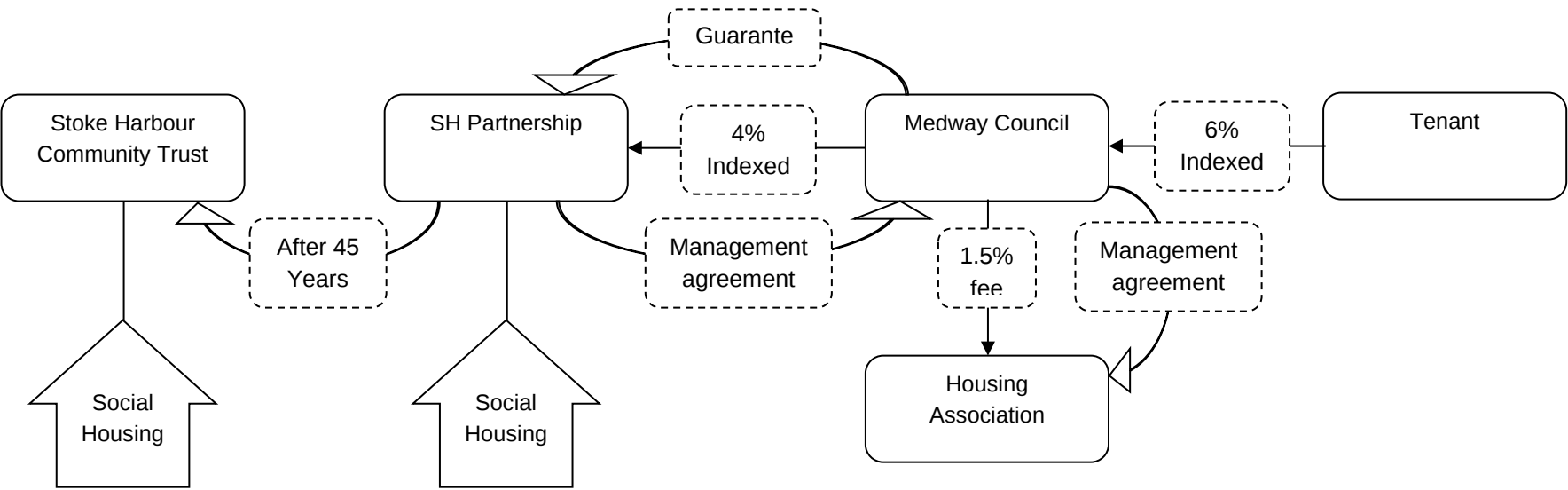


FIGURE [14]

¹⁶ The legal agreements and cash flows are shown in Figure [14].

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 that makes up the traditional shared ownership market.

We have discussed the demand for shared ownership with housing associations active in the Thames Gateway, and have based our shared ownership offer around two product types: apartments close to Stoke Harbour station suitable for commuters, and starter family homes (two to four bed terraces and three bedroom semi detached), as there is a market demand from families who have managed to buy a first flat but are unable to afford larger homes.

Long leases will be sold to an existing housing association at 95% of the private sale value. The housing association will be involved from the start of the construction and will provide a 25% deposit and staged payments throughout construction to help with cash flow.

Private Rented Sector (PRS)

Our PRS model is also an existing pension fund investment model. Investment Partnership¹⁷ will construct the homes and let them to private individuals via a property manager. The freeholds are retained by SH Partnership as they achieve their IRR through a mixture of rental yield and capital growth. Due to the increased risk profile (construction and demand risk are retained) the IRR target is 6%-10%.

Current analysis shows that private rental yields of over 6% are available on the Hoo Peninsula, based on market value¹⁸. Our PRS rents will be set at 5-10% below market value. We will offer longer term rental contracts of up to 5 years to allow private renters more security, with index linked increases written into the rental agreements.

¹⁷ See social rental, above

¹⁸ Please refer to Figure [15]

We have modelled rental levels at a 5.5% yield on Phase I sales prices, which gives rent levels below that of the rent-setting policy. Rents on the majority of the dwelling types are at or below local bottom quartile market rents for Medway.¹⁹

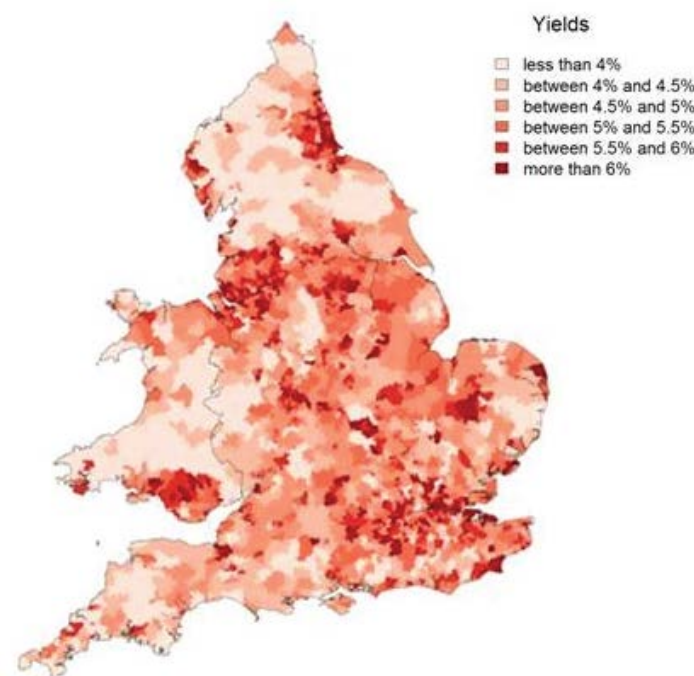


FIGURE [15] - MOVE WITH US, RENTAL YIELD HEAT MAP, AUGUST 2013, [HTTP://WWW.MWULTD.CO.UK/NEWS-AND-INFORMATION/THE-MOVE-WITH-US-RENTAL-INDEX/RENTAL-YIELD-HEAT-MAPS/](http://www.mwultd.co.uk/news-and-information/the-move-with-us-rental-index/rental-yield-heat-maps/)

¹⁹ Valuation Office Agency December 2013 market rental data for Medway

Transport Strategy

Unlocking the Hoo Peninsula for the building of new homes will require a number of phased transport infrastructure upgrades. New residents will need to be able to commute to their existing jobs while Stoke Harbour's economy and related local employment develops, and in the long term transport connectivity will be key to providing the labour market with access to a mix of employment sectors and centres.

Current transport connectivity

The current main road 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 residents²⁰. There is an existing rail line connecting the Hoo Peninsula to Gravesend and on to London, which currently carries only freight.

Phase I strategy (first 6 years)

Double Four Elms roundabout capacity and approach via Four Elms Hill:

Estimated cost: £22m-£27m and further A228 upgrades adjacent to Stoke Harbour also required at an estimated cost of £15m²¹.

Restore passenger service to the Gravesend – Grain railway: 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 Gravesend²². 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.

Gravesend and Ebbsfleet are also being considered for extensions to the Crossrail

²⁰ Medway Council (2011), Schedule of responses to public consultation for the Lodge Hill Development Brief.

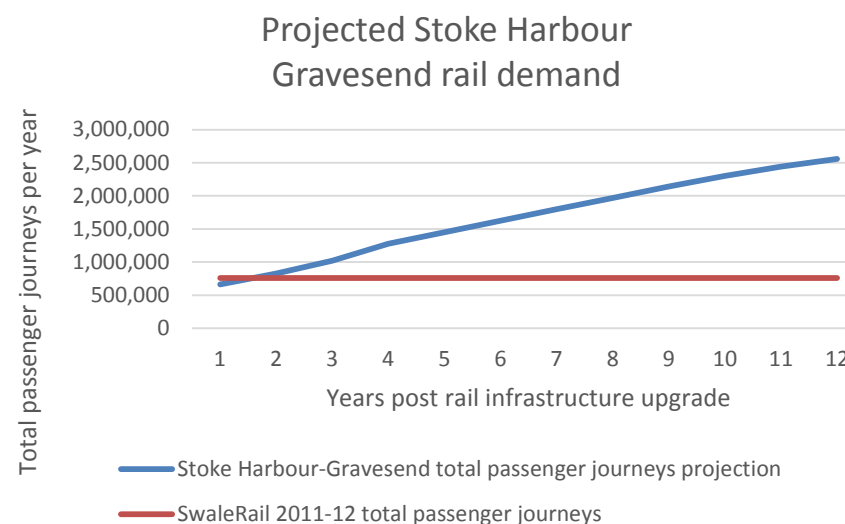
²¹ Please refer to Appendix [03] for full details, including cost sources/comparators

²² Please see Figures [4], [5] and [6]

programme²³, which would add connectivity to Canary Wharf, Liverpool Street, the West End and West London.

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 route is the more attractive of these options, as a private service would need to source rolling stock, experienced staff and appropriate management expertise. Whether a TOC will agree to run a service would normally be an economic decision. We consider the economics to be such that Southeastern (the local TOC) would agree to provide a franchise service, half-hourly through Phase I and then more regularly as demand dictated²⁴.

FIGURE 16 - PROJECTED RAIL DEMAND



²³ Please refer to Appendix [04]

²⁴ Based on our analysis, as detailed in Appendix [03],

Restore passenger service to the Gravesend – Grain railway (continued)

SH Partnership and the Community Trust will provide direct local subsidies until passenger journeys hit SwaleRail 2011/12 (a similar local comparative line) +10% levels, and the rail upgrade will be funded as a separate infrastructure project, with an estimated cost of £73 million - £83 million²⁵.

Subsidised bus service

We propose to provide a subsidised direct bus service at peak times from Stoke Harbour to Strood station for six years. We will discuss bus new routes that take in Stoke Harbour without disrupting existing journey times with Arriva and subsidise these until they are commercially viable. A viable bus service should help to reduce car use around Stoke Harbour, improve its connectivity to Medway for those residents without cars and reduce peak congestion. Estimated cost: £500k pa for six years.

Phase 2 strategy

No major upgrades/infrastructure projects planned but existing local junctions and roads will be monitored to see where upgrades are required. Bus subsidies will be reviewed during this period.

Subsidised river ferry service

During Phase 2 we intend to offer a subsidy to any private operator (or consortium) who is willing to put on a passenger ferry service to Medway from Stoke Harbour. To establish the service we will fund the majority of fuel costs for the first two years; the subsidy will then be based on passenger numbers for the remaining six years. 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.

²⁵ Please refer to Appendix [03]

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.

Phase 3 strategy

A relief road will be required for connectivity to Gravesend to relieve pressure on the A228/A289. Our proposal is a forward-looking solution to highways access that will allow more significant long-term future expansion, including the remaining Hoo Peninsula Garden City developments and the expansion of Stoke Harbour²⁶.

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 line²⁷.

Estimated cost: £160-200 million²⁸.

Phase 4 – Stoke Harbour expansion and Hoo Peninsula Garden City

Phase 4 development will require a new Stoke Harbour ring-road north of Lower Stoke (estimated cost £35 million) while the proposed Hoo Junction and Grain settlements will require two new stations and the laying of new rail track (estimated cost of £34m-40 million²⁹).

²⁶ As detailed in Figure [6]

²⁷ Refer to figure [6]

²⁸ Please refer to Appendix [03] for analysis

²⁹ 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. Please refer to Appendix [03] for full details, including cost sources/comparators.

Employment strategy: off-site construction and digital connectivity

We intend for Stoke Harbour to become the UK centre for the off-site construction industry³⁰. Builders will be able to hone their skills in this sector during Stoke Harbour's construction and the industrial area adjacent to Kingsnorth is set aside for this use. Businesses will be attracted through initial subsidies, and the Community Trust will fund skills and training to complement the industry.

This investment will allow Stoke Harbour to power the Garden City building programme of the next 50 year through its technology and skills base, partnering with the University of Greenwich's engineering campus based in Medway.

Stoke Harbour will benefit from both transport and digital connectivity, giving its residents access to a range of job markets and broadband provision built in during the town's construction providing a framework for digital commerce. Staying at the forefront of digital technology will be important aspect of remaining relevant in the century ahead, and Stoke Harbour will commit to its digital future, embracing the next generation of high speed infrastructure offerings and embedding this by writing this vision into the Community Trust's mission statement.

A thriving Stoke Harbour will provide employment in the following industries amongst others:

- Construction: building the Hoo Peninsula Garden City will sustain around 3,500 construction jobs for up to 30 years³¹.
- Primary, secondary and further education and health.
- A thriving harbour/marine industry (harbour management and commercial activities).
- Transport related employment.

- Off-site construction industry engineering jobs.
- Enterprise opportunities for leisure and tourism pursuits within the Hoo Peninsula.
- Bars, restaurants and hospitality.
- Professional, administrative and clerical jobs in town centre and business park office space.
- Retail, two regional food stores and town centre/neighbourhood hub retail and office space.

³⁰ As outlined in Section [1]

³¹ Based on Shelter's June 2010 document Research Briefing: Housing Investment: Part 1, which shows that £100m of construction expenditure creates 2,500 jobs.

PART II | VIABILITY

4. Unlocking land and governance

Land acquisition strategy

Securing the land at low prices, and offering landowners the opportunity to benefit from the regeneration effect of long term investment and development (without any upfront cost or time on their part) is central to our vision and the viability of our model. We will therefore offer landowners the choice of either a) exchanging land with no upfront payment for a co-investment interest in SH Partnership, or b) receiving an upfront payment for the grant of an option to acquire the land, followed by a generous further payment and share in an investment vehicle set up by SH Partnership on exercise of the option (this would give lower future returns than option A).

This land assembly method significantly reduces the funding hurdle of upfront payments for land.

Our incentivisation strategy will provide rewards for early compliance, matched by a credible threat of the loss of development gain via Local Green Space designation to disincentivise gaming or intransigence by individual landowners. The last resort would be a Compulsory Purchase Order via the local authority and the HCA.

Ninety per cent of the land required is under a single owner: the Church Commissioners, the investment fund of the Church of England, which has £5.5bn of assets under management, including 42,000 hectares of farmland.³² The investment proposition to the Commissioners is projected to deliver returns £52m from £4m of land (at existing value) over 14 years³³.

Our incentivisation package for the remaining 10% of land owners is set out below, including the potential other levers that SH Partnership will use to facilitate land acquisition.

Stakeholder	Sale incentive	Other levers to incentivise sale	Fall back option
Agricultural land owners (10% of land)	OPTION A – Invest land on the same terms as the Church Commissioners, estimated return of 15x EUV of invested land, plus annuity income	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 20% EUV payment for grant of option. Further upfront 200% EUV of land, plus Class A shares in DevCo equal to 100% of EUV. This offer is available for 6 months, then Class B shares will be on offer for 6 months, then Class C shares (please see Table [10] for further details)	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.	
Owners of farm-houses and other residential buildings to be preserved [approximately 16 people]	OPTION A – We will purchase their residential buildings at 110% of market value.	As the forefathers of Stoke Harbour, we would offer the existing residents enhanced civic status for the first four years of development. This would involve participation in the naming of streets, squares, parks and canals and other committees. Existing residents who have not raised an objection to planning will be able to elect a representative directly onto the Community Trust.	Although our design will preserve the buildings, if there is an urgent need to acquire the homes or decant residents during construction we will ask the local authority to use its decant or CPO powers.

TABLE [4]

³² <http://www.churchofengland.org/about-us/structure/churchcommissioners/assets.aspx>

³³ As outlined in Section 1

Collaboration with public authorities

Medway Council

The local authority – Medway Council – will be a key partner in making our town a reality. Our offer to Medway is a simple one: in exchange for co-operation on planning, land acquisition, infrastructure and service provision, we will deliver the town and provide huge economic and social benefits for the local community, without requiring a penny from the council that our town has not generated itself.

The specific deal is outlined in Table [5], below.

Existing Parish Councils

The Stoke Harbour site falls within the boundaries of two existing parishes, Hoo St Werburgh and Stoke. We will work collaboratively with the existing parish councils and give them the opportunity to participate fully in the pre-planning process. They will also be represented on the Community Trust governance body. However, as Stoke Harbour grows we would expect it to be removed from the parish boundaries, as would be expected for any sizeable settlement.

We offer Medway:	We ask Medway to provide:
A promise to require no funding from Medway in delivering our town. ^{34, 35}	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: - Make Local Green Space Designations for specific sites within and around our town - Issue Compulsory Purchase Orders as a last resort.
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	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) ¹² 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.
Nomination rights on affordable homes.	
A 0.5% pa investment fee on the social housing investment (our housing association will provide management and maintenance for 1.5%) for 45 years.	Give the pension fund investor a guarantee on the 4% yield rental payments on the social rented homes for 45 years ¹³
Support in negotiating a City Deal with HM Treasury to provide infrastructure investment – including paying all of advisers fees incurred by Medway	Co-operation in securing the infrastructure investment for our town via the City Deal
Fund the provision of social and transport infrastructure that would normally be expected under Medway's policies, plus additional community facilities and services for our town (and the wider community).	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.

TABLE [5]

³⁴ Set out in the SLAA 2013 and Guide to Developer Contributions 2013

³⁵ If this cannot be secured the housing association will issue its own guarantee. This is not deemed as strong as a local authority guarantee, and would require the investors to take a 4.5% yield, but this can be delivered at the same rent levels by dropping the 0.5% turn for the Council.

5. Investment

Investment model

Role of the promoter

The investment structure requires a promoter who remains throughout the construction phases until full handover of the assets to the Community Trust is achieved. The promoter will assume the land assembly and planning risk. The promoter will normally be expected to have the following responsibilities:

- Identifying and appraising sites and opportunities.
- Sourcing investment.
- Negotiating an agreement in principle.
- Setting up SH Partnership.
- Funding and guiding the local authority and local resident engagement and participation process.
- Initiating investment/incentive discussions with local land owners.
- Funding the acquisition of land options.
- Initiating discussions with appropriate parties re: transport infrastructure upgrades.
- Funding and guiding the outline planning permission.
- Managing the investment structure throughout its life.
- Sourcing appropriate expertise throughout the lifecycle.

Investor profile

Stoke Harbour Partnership is set up to attract two broad categories of investor: Investment LP is set up to deliver steady returns to long term risk averse investors, and Development LP to provide higher returns to the Development Investors who fund the more risky property trading business. For both models investment will enter the structure after planning and land assembly risk have been mitigated.

As we intend to use investment models for social housing and PRS that are currently being used or developed by large UK pension funds our aim is to attract pension funds to invest in these tenures. The Church Commissioners, as 90% land owners, should have investment goals closely aligned to those of pension funds, therefore the investment offer is appropriate for their investor profile. We expect these investors to have hold periods of 10-45 years. The Development LP model assumes 100% equity, but using debt finance could be explored.

For the property trading business model we will look to attract private equity and existing property investors. Construction risk and sales risk is shared with the subcontracting house builders and reduced through self-build (limited construction risk) and shared ownership plots sold under pre agreements with Housing Associations forming part of the business model. The structure is flexible and allows investment in individual development phases, for investors who require faster returns that can be made through one construction phase and for multiple Development Investors during each phase (which we expect to be necessary due to the size of the land). Hold periods may be 4-6 years per phase.

UK pension funds are currently developing investment models for large scale, cross tenure property development: following private conversations with such funds we are confident that we will be able to attract this investment in the near future.

The investment structure has been designed to achieve the following:

- Alignment of income and risk characteristics with investor objectives/profiles.
- Flexibility for investors to invest in the whole of the project of individual Phases.
- Reduction of individual investor risk through collective investment.
- Promoter control of the development.
- Absorption of planning risk by the Promoter.
- Zero direct tax leakage through the structure up to the Resident Investment Company.
- Land to be acquired or contributed as partnership capital as an investment opportunity.
- Flexibility to incentivise land owner investment and match this to investor objective/profiles.
- A collective investment body (the Resident Investment Company) for existing residents and retail investors, allowing them to share in the profits of development and incentivise their investment.
- Investment in a well understood asset class by existing residents and retail investors (ordinary share capital).

Please note that all profits, gains and returns are based on an indicative draft financial model and estimated transport infrastructure upgrade and social infrastructure costs. All assumptions and estimates used in our draft calculations are detailed in the relevant appendices.

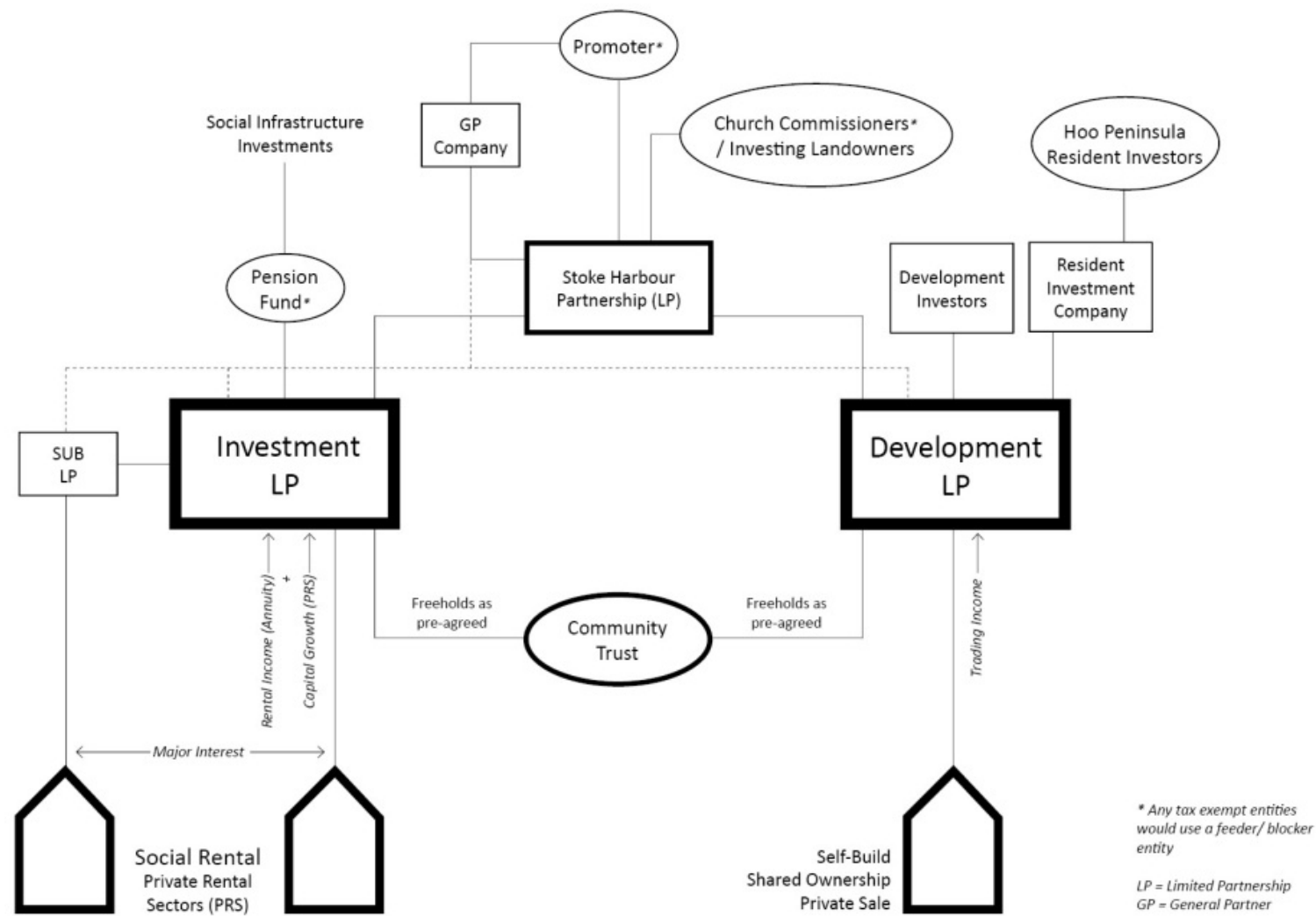


FIGURE [17] STOKE HARBOUR PARTNERSHIP STRUCTURE DIAGRAM

Risk and return profile

Table [6] below details our risk and return analysis for our chosen tenure models, as well as the suitable investor profile.

Tenure/infrastructure opportunity	Income/gain profile	Risk profile	Investor profile
Social rental	4% index linked 45 year annuity	Low – contractual protections for construction risk, no demand risk.	Pension funds for liability matching
Private Rental Sector (“PRS”)	Rental income and capital growth: 6-10% 10 year IRR target through yield and capital growth	Low/Medium – contractual protections for construction risk. Demand risk assumed.	Long term private property investors, institutional investors, residential REITS.
Private sale	Trading income through build and sell. Model shares construction and sales risk with the house builders: 9-13% IRR target per phase	Medium, reduces for those with a long term outlook	Private equity and property investors.
Self-build and shared ownership	Trading income: 6- 10% IRR target per phase	Low, easy conversion to other tenures and lowered construction risk	Private equity and property investors.
Social infrastructure (schools and hospitals)	Social rental model. Fixed term annuity	Low	Pension funds for liability matching

TABLE [6]

Please note that all profits, gains and returns are based on an indicative draft financial model and estimated transport infrastructure upgrade and social infrastructure costs. All assumptions and estimates used in our draft calculations are detailed in the relevant appendices.

Funding schools and a community hospital

Our strategy is to have a small secondary school and a primary school constructed prior to the first residential completion. Construction will be funded by our pool of pension funds based on the social rental model, which require the lease payments to be guaranteed by the local authority or a public sector body. After 45 years a long lease will revert to the educational body/local authority and the freehold will be donated to the Community Trust.

This model will be continued throughout the construction phases unless a time comes when the Community Trust considers itself in a position to build a school out of its retained funds.

A community hospital is planned during the latter stages of Phase 2, and the same funding model is proposed but with the NHS as the counterparty.

The construction of all GP surgeries and Primary Care Centres is to be undertaken on balance sheet by SH Partnership.

Funding transport infrastructure Medway / New Garden City 'city deal'

The Hoo Peninsula Garden City requires £110m-£125m upfront transport infrastructure spend to be a feasible proposition and to garner local popularity, with a total of £339m-£400m during the construction period.

Our transport infrastructure financing proposal:

- Funds the Hoo Peninsula Garden City transport upgrades.
- Creates incremental tax receipts for the UK Exchequer.
- Uses the surplus from the Hoo Peninsula Garden City project to seed a national "Garden City Infrastructure Fund", (GCIF) which will provide funding for other New Garden Cities' upfront transport infrastructure investment requirements.

A privately funded New Garden Cities programme creates a unique opportunity to turn a small initial amount of ring fenced and quickly repaid public borrowing into a large and rapidly delivered demand side boost to the economy, with associated tax receipts more than repaying any public borrowing including financing costs. This process will also create longer term supply side benefits to the economy in the form of new homes, commerce and employment in the New Garden Cities.

A fair deal with Government

Generating short term tax receipts and long term economic benefit while having a significant impact on the UK's housing supply deficit meets two Government objectives at the same time. To achieve this will require agreement for the following from Government and Medway Council:

- Medway Council agrees to borrow to fund the initial £110m - £125m either from the Public Works Loans Board or our pool of pension fund investors (structured so that the pension fund has a public sector guarantee and a charge over land, making this almost as cheap as PWLB financing).
- HM Treasury to agree a new type of City Deal with Medway Council such that the incremental tax receipts generated by the private sector capital expenditure on both the construction of the Hoo Peninsula Garden City (estimated at £2.2bn for Stoke Harbour and £4.4bn overall) and the public sector capital expenditure on transport infrastructure (£339m-£400m), are split between Medway Council, to repay its borrowings and finance costs, the new Garden City Infrastructure Fund, as seed capital, and HM Treasury, as contributions to the UK Exchequer.
- All incremental tax receipts from future economic growth will be retained by HM Treasury.

A fair deal with Government (continued)

The process for reaching such an agreement already exists; the first wave of City Deals were finalised in 2012, and negotiations for a second wave are ongoing. Each and every City Deal represents a genuine transaction of mutual benefit - and our ground-breaking proposal is no different.

Details of the Garden City Infrastructure Fund Deal

- Medway Council borrows the initial £110m-£125m required to fund the pre-construction transport infrastructure upgrades. We are asking Medway Council to do this because they have a vested interest in these upgrades as they will improve the local economy and transport framework.
- This borrowing funds the road and road upgrade capital expenditure, allowing construction of the Hoo Peninsula Garden City to commence.
- The associated capital expenditure will generate tax receipts to HM Treasury.
- Table [7] below shows our tax receipt sharing proposal and the related financial flows.

The time lag between the capital expenditure and the tax receipts it generates normally ranges between one and 21 months. We will agree that HM Treasury makes the 'Demand Payment' 24 months after the capital expenditure has been incurred: the time lag between tax receipts and payment being an additional benefit to HM Treasury.

36	Pre-construction	Phase 1	Phase 2	Phase 3, Phase 4 and the future	Net balance	Notes/comments
Medway Council capital expenditure	£125m					On upgrading transport infrastructure
GCIF capital expenditure				£275m		Assuming that GCIF funds future transport upgrades
Medway Council borrowing costs	£7m					Based on 5% interest.
SH Partnership capital expenditure	<u>NIL</u>	<u>£737m</u>	<u>£737m</u>	<u>£2,885m</u>		Based on Stoke Harbour financial model and assuming future capital expenditure on Hoo Junction, Grain and Lodge Hill is £2.2bn
Total capital expenditure	£132m	£737m	£737m	£3,160m		
Demand boost to UK economy	£132m	£737m	£737m	£3,160m		According to Office of Budget Responsibility analysis, capital expenditure in the UK economy has a fiscal multiplier of 1
Tax receipts to HMRC	£46m	£258m	£258m	£1,106m		HMRC and OECD research ¹⁴ indicates that it will receive 35p of every £1 spent in the economy.
Receipt sharing arrangement	First £50m to HMT	£50m to Medway, £150m to GCIF and balance to Medway	First receipts to Medway to repay borrowing + interest, then £150m to GCIF, balance to HMT	50/50 split HMT/GCIF		
Demand payment to Medway Council	NIL	£104m	£60m	NIL		To repay borrowing and interest
Demand Payment to GCIF	NIL	£150m	£150m	£553m	£585m	To fund transport infrastructure upgrades for other New Garden City projects
Tax receipts retained by HM Treasury	£46m	£4m	£48m	£553m	£651m	
Medway Council borrowing balance	(£132m)	(£50m)	NIL	NIL	NIL	

TABLE [7]

Please note that all profits, gains and returns are based on an indicative draft financial model and estimated transport infrastructure upgrade and social infrastructure costs. All assumptions and estimates used in our draft calculations are detailed in the relevant appendices.

³⁶<http://www.oecd.org/newsroom/tax-revenues-continue-to-rise-across-the-oecd.htm> [accessed 19.02.2014]

Garden City Infrastructure Fund

Once seeded, GCIF will be available to fund the upfront transport infrastructure requirements for any new settlement of more than 10,000 homes, and to negotiate city deals with HM Treasury on behalf of New Garden Cities (without the need for local authority involvement other than to agree to the transport scheme).

The Fund will receive the agreed 'Demand Payment' from HM Treasury. The Fund will only engage in deals that would be expected to yield a surplus and allow for further funding to be provided. Privately funded New Garden Cities should yield this opportunity as a small amount of public expenditure would be expected to unlock a large amount of private capital investment. On a simple basis, so long as the private sector: public sector capital expenditure ratio is greater than 2.86 (implied by tax receipts of 35p for every £1 spent), then the tax receipts from the one-off demand stimulus should outweigh the public sector expenditure.

Enabling the GCIF to negotiate the City Deals for New Garden Cities will embed a tried and tested process, streamlining the negotiation process, reducing, advisers' fees and accelerating capital spend, growth and tax receipts to HMRC. Once the New Garden Cities programme has completed there will be a substantial residual balance left to be used at HM Treasury's discretion.

Alternatives

If the Government does not prove receptive to our proposal for the New Garden City Infrastructure Fund, we will still support Medway Council in requesting a City Deal including the Hoo Peninsula Garden City. There will be potential for increasing the scope of this deal to include the wider Thames Gateway or North Kent region if this was better felt to capture an economic zone.

If this were not available then a PFI route could be looked at with our pool of pension funds providing finance to the private sector vehicle.

Investment summary and Financial Model Results

Table summarising the modelled results for the DEVELOPMENT LP's sale of private residences, shared ownership and self-build				
Construction Phase	1	2	3	Total
Homes	3,457	3,028	2,533	9,018
Sales Proceeds (less sale costs)	£482,108,692	£449,412,125	£410,714,015	£ 1,342,234,832
Acquisition Costs (including land)	(£7,289,866)	(£3,142,330)	(£2,622,252)	(£13,054,448)
Net social infrastructure Costs (including preliminary work)	(£72,490,063)	(£64,228,807)	(£53,757,604)	(£190,475,474)
Construction Costs	(£300,389,379)	(£263,158,757)	(£241,735,227)	(£805,283,363)
Revenue costs (transport subsidy, tax, audit, wages etc)	(£10,440,000)	(£8,340,000)	(£6,240,000)	(£25,020,000)
Profit before tax	£91,499,384	£110,542,231	£106,358,932	£308,401,547

Investor returns	Pension Funds		Church Commissioners			Promoter	Development Investor	Hoo Resident Investors		
	PRS	Social rent	PRS	Social	Development	All	Development	Development		
Cash/land contribution	£160,505,282	£388,010,639	£328,331	£881,334	£3,497,679	£2,747,216	£116,350,357	£3,000,000	£5,000,000	£2,000,000
								A	B	C
Cash returns	£306,897,834*	£608,893,162	£4,745,098	£11,199,415	£55,427,943	£12,520,854	£327,219,808	£24,815,377	£27,572,641	£5,514,528
Equity Multiplier on development property	n/a	n/a	n/a	n/a	15.85	4.56	2.81	8.27	5.51	2.76
Profit/yield on cost	6.73%	4.03%	50.90%	32.89%	£51,930,264	£9,773,638	£210,869,451	£21,815,377	£22,572,641	£3,314,528
IRR	9.45%		47.14%			30.96%	15.70%	15.78% blended		
Notes	*includes expected cash proceeds assuming year 12 PRS sale		*includes expected cash proceeds assuming year 12 PRS sale							

TABLE [8]

Please note that all profits, gains and returns are based on an indicative draft financial model and estimated transport infrastructure upgrade and social infrastructure costs. All assumptions and estimates used in our draft calculations are detailed in the relevant appendices.

Investment summary and Financial Model Results (continued)³⁷

We have also modelled two less favourable scenarios, Scenario B, where each construction phase is 50% longer, and Scenario C, where and house building costs increase by 5% and sale prices reduce by 5%. The impacts on IRR are below. Given the potential upsides including earlier return of cash, reduced construction labour costs, private sales at the higher end of the price range, and the opportunity to retain or share rental income from commercial property for a number of years prior to hand over to the Community Trust, we believe that the investment opportunity is sufficient to justify the risk of slightly reduced returns as shown in Scenarios B and C.

Investor returns	Pension Fund	Church Commissioners	Promoter	Development Investor	Hoo Resident Investors
Scenario B					
IRR	(PRS) 8.78%	31.32%	28.67%	9.55%	10.92%
Scenario C					
IRR	(PRS) 8.08%	35.56%	29.23%	8.24%	11.07%

TABLE [9]

Please note that all profits, gains and returns are based on an indicative draft financial model and estimated transport infrastructure upgrade and social infrastructure costs. All assumptions and estimates used in our draft calculations are detailed in the relevant appendices.

³⁷ Please refer to Appendix [05] for further details of our indicative draft financial model, including the key assumptions.

6. Governance

Stoke Harbour Partnership

SH Partnership will be a commercial vehicle³⁸, responsible for raising equity and debt finance and investing it in the development of our town. As it develops property assets SH Partnership will sell, lease and let these³⁹, and distribute returns to its investors. The freeholds of most of the property will be donated by SH Partnership to the Community Trust as detailed elsewhere in this document.

SH Partnership has two distinct investment models contained within it, the long term social rental and PRS model into which Pension Funds and Institutional Investors are expected to invest, and the shorter term property development model, which includes the Resident Investment Company set up to incentivise land owners and allow existing residents to invest in the development. The development business will cease shortly after the completion of the construction period, all remaining monies will be returned to the relevant investors and the Resident Investment Company will liquidate. However, the investment side of the partnership will continue until the assets are sold or bought out of the partnership by the investors. This added longevity means that SH Partnership could continue as an investment vehicle for the other settlements in the Hoo Peninsula Garden City, depending on investor sentiment. New investors could be introduced and a new existing resident investment company established.

Alternatively, a new development partnership could be created for each of the individual settlements. To a large extent this will depend on investor views at the appropriate time.

Stoke Harbour Community Trust

The Community Trust will be a charitable non-profit body, dedicated to owning and managing property assets for the benefit of the community in perpetuity. Over time it will become the owner of most of the residential and commercial freehold land in our town, and will work in partnership with Medway Council to ensure ongoing effective management of Stoke Harbour.

These land assets will yield income for the community through:

- The Trust charging a modest ground rent of £1 per sqm/pa on the long residential leases.
- Future rents from social housing land that reverts to the Trust in 45 years (with a covenant ensuring that it remains for affordable housing).
- The Trust will let its commercial and industrial property at low market rates to encourage enterprise and employment.
- A community levy of 5% of property gains, levied at point of sale⁴⁰.

The Trust will also have other income streams⁴¹. Post Phase 3, we estimate that these revenue streams will provide annual turnover in excess of £25m⁴², enabling it to continue to subsidise transport, provide generous further education and training grants to young adults, build and maintain community assets, for example, cinemas and other leisure facilities, preserve the environment, maintain flood defences, fund community projects and spend 10% of revenues on the wider Hoo Peninsula.

As detailed in Section 4, the Community Trust will part fund some services that would normally be funded by Medway Council, in order to mitigate impacts on existing budgets.

³⁸ As outlined in section 5

³⁹ As described in section 5

⁴⁰ Please refer to Appendix [06]

⁴¹ Please refer to Appendix [06]

⁴² Please refer to Appendix [06]

Stoke Harbour Community Trust (continued)

All returns will be reinvested to meet the Trust's objective of delivering community benefit. The Trust will be run by a professional team and controlled by a tripartite board to ensure a balance of interests and preserve the values of our town for the long term.

The board will be drawn from:

- Local residents (who will elect representatives on a geographical ward basis to ensure diverse representation).
- Local businesses.
- Public authorities (Medway Council, neighbouring parish councils, the LEP).

PART III | POPULARITY

7. Securing local support

Stoke Harbour is designed to benefit all the residents of the peninsula. But to function economically and socially our project must still work hard to achieve community approval and involvement. Our three stage strategy will encourage the existing community to participate in and profit from the growth and success of our town, using targeted investment opportunities to create early constituencies of support, particularly among those who live closest to our site; actively engage the local community in collaborative design and service planning; and minimise potential grounds for objection through provision of better services and house price growth for the whole community.

Investment Opportunities

The Stoke Harbour Investment Plan will give existing residents of the peninsula exclusive opportunities to buy shares in the Resident Investment Company, by offering these at more preferential rates to the earliest investors. Individuals' cash investments will provide tangible evidence of community support, and provide additional early funding for the development. Most importantly, they will give local people a vested interest in the success of our town, reducing the chances of united local opposition.

We have allocated £10m in shares for community investment to be sold in 3 phases, all investments would be returned in the event that planning permission is denied:

Phase	Share Investment Cap	Share Price on Issue	Terms	Resident Investment Company
1 (pre planning permission)	£3m	£1 Nominal	Available to the residents in the neighbouring community around our town. Minimum investment of £500, maximum £50,000 per person. Investment made prior to the submission of the planning application to maximise community incentive for a positive planning consultation.	Class A Shares: 3 x the dividend and asset rights compared to class C share.
2 (pre planning permission, after phase 1 is sold)	£5m	£1 Nominal	Available to all residents of the Hoo Peninsula. Minimum investment of £500 up to maximum £50,000 per person. Prior to planning application to maximise community incentive for a positive planning consultation.	Class B Shares: 2 x the dividend and asset rights compared to class C share.
3 (post planning permission)	£2m	Market Value	Available to all Medway residents. Minimum investment of £1,000 up to maximum £50,000 per person. Available to buy post Planning Permission.	Class C shares, normal rights.

TABLE [10]

The Resident Investment Company will issue dividends after each phase of construction. For most individuals, except those who pay tax at 40% or higher, there is no further tax to pay on dividend income. Our model estimates that an individual who invests £10,000 in Class A shares would receive over £82,500 from Phases 1-3. This provides a substantial amount of money to top up a pension, pay for house deposit for the investor or their children (with preferential opportunities in Stoke Harbour), or be put to any other use.

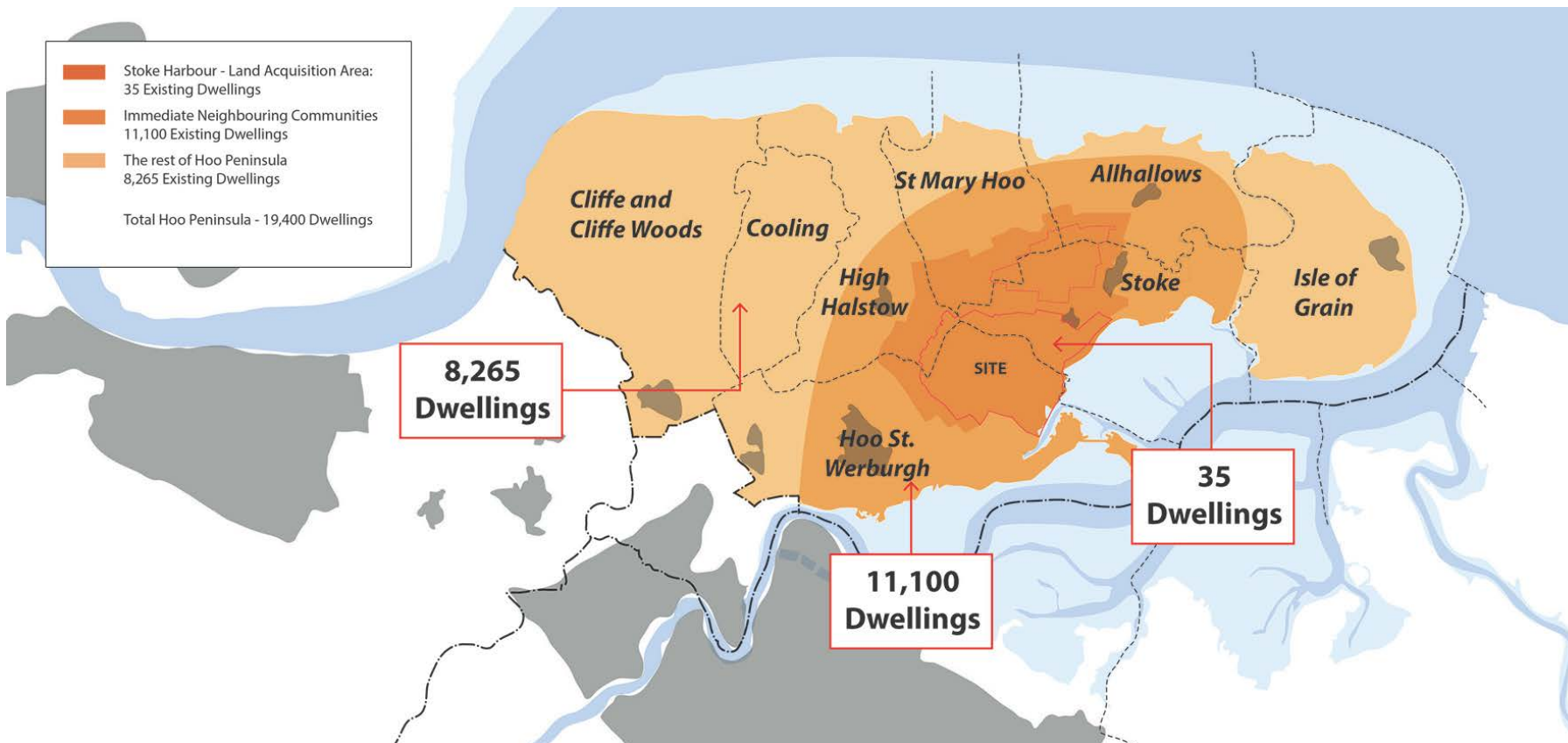


FIGURE [18] COMPENSATION ZONES

Participation not consultation

Participation not consultation is a fundamental goal of Stoke Harbour’s interaction with the community, and this applies to the process of gaining consent from the Hoo residents as well as with future citizens of Stoke Harbour. We intend to ensure that existing residents feel they have had a genuine input into the design of the town, through the following measures:

- Use the existing knowledge and skills in the area to bring their relevant expertise to the design process.
- Arrangement of 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:
 - Technical discussions with local professionals such as architects, local planners and builders, to ensure we can co-create plans that work for the local area.
 - Residents will be encouraged to provide input on all areas they are interested in, from streets to services, schools to hospitals, town planning to community facilities, no aspect will be exempt where there is a desire to get involved.
- Inclusion of all community stakeholders such as social enterprises, community groups and business.
- Co-design of the constitution for the Community Trust, putting local stakeholders permanently in control.
- Those who contribute to the community design process will be rewarded with £50 of free Class C Shares in the Resident Investment Company, this will help ensure that our engagement is not with the same people or the loudest voices.

Community Benefits and Mitigation

A recent planning application for a 5,000 home development at Lodge Hill^{43,44} provides strong evidence of existing community concerns about development on the Hoo; our proposal overcomes all of these concerns by providing excellent infrastructure:⁴⁵

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 two regional food stores
Insufficient existing employment	Creation of employment at Stoke Harbour
Construction traffic a concern	Modular construction using industry located in Hoo. Use of rail and port links to deliver material.

⁴³ Hyder Consulting (UK) Ltd (2011), *Lodge Hill, Evidence Base – Transport Assessment*

⁴⁴ Dobson, Tom (2011), *Lodge Hill; Outline Planning application on behalf of Defence Infrastructure Organisation, Economic Strategy*, Quod Planning

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*

⁴⁵ Our analysis is detailed in Appendix [07]

8 Conclusion: a model for our times

Our model for delivering Stoke Harbour and the rest of the Hoo Peninsula Garden City is one we are confident can be replicated wherever New Garden Cities are needed.

The innovative aspects of our model can be summarised as:

- The flexible investment model (promoter and mix of investors across risk profiles).
- Land acquisition model (co-investment opportunity or existing use value acquisition with share of future returns, backed by threat of Green Space Designation).
- The Community Trust acquiring assets to support exemplary services and provide grants for residents
- Building support from existing residents via incentivised investment opportunities.
- A participatory master planning process.
- Transport infrastructure funding via a City Deal between GCIF and HMT.
- Accelerated delivery model (licensing construction to SMEs; fostering competition on volume, price and quality; multi-nodal phasing; multi-tenure market segmentation; off-site construction).
- Offering opportunities for self-build.
- Upfront investment to create sense of place and connectivity from day one.

By modelling the delivery of Stoke Harbour we have demonstrated that this approach can deliver for landowners, investors, existing residents, the local authority – and of course for the future citizens of our New Garden City.

APPENDICES

Appendix 01 – Lessons from history and Europe

Historical case studies demonstrate functional examples of how various elements of our proposal function. The Letchworth Garden City example exhibits how a functional Land Trust developed over time and what kind of challenges it faced.

There are also influential modern precedents in the form of North European development trends, such as the Dutch VINEX program. These countries prove that large scale developments can be achieved within similar parameters to those in the UK, and suggest changes we could make to improve our planning system.

Letchworth

Letchworth Garden City was the first practical application of Ebenezer Howard's town planning principals. Money was borrowed from philanthropic investors in return for interest on their investment with the 'First Garden City Ltd' development company beginning building of the fully private Letchworth Garden City in 1899.

What notable things did Letchworth introduce?

First Garden City Ltd generated income from the assets held in the land trust, this included leases, commercial buildings and social enterprises. The money was used to repay the initial development loans and was reinvested into the community.

The governance structure of the First Garden City Ltd changed multiple times to respond to the challenges of a previously untested land trust model. The first iteration of the model permitted all residents of Letchworth to own shares within First Garden City Ltd, allowing them a say in the development of the town. In 1961 a company exploited the governance structure in an attempt to purchase the shares from the residents to gain a controlling interest in the town.

Action in the form of the Letchworth Garden City Act 1962 converted the First Garden City Ltd into a statutory corporation that could not be bought. The newly formed Letchworth Garden City Corporation adopted the Garden City Estate and management responsibilities.

The second change happened in 1995 with the Letchworth Garden City Heritage Foundation Act, which transformed the public sector corporation into an Industrial and Provident Society. Today the Letchworth Garden City Heritage Foundation is responsible for the governance of Letchworth and the 33,000 residents.

Letchworth Garden City initially had its own planning powers.

How does the Heritage Foundation function?

The Heritage Foundation is run by a board of trustees comprised of North Hertfordshire District Council, Hertfordshire County Council, elected members and members of the local community and local societies. We spoke to Philip Ross, ex-mayor of Letchworth and learned that there were tensions between the Foundation and the Local Authority, and also concerns that the interests of Letchworth residents were not well represented on the governance board of the Foundation, due to the majority of members being appointed by clubs and societies rather than elected. This led to a narrow strata of Letchworth society being represented on the governance board and its funding decisions reflecting this bias.

The VINEX system, the Netherlands

The Dutch planning system is commonly characterised as an effective approach to sustainable urban design. The three tiered planning system spans the national core strategy down to the local municipal level which coordinates the application of the strategies, this planning structure has been in place since 1848.

National Level	Composes the National Framework and long term plans through 'National Spatial Development Plans'
Provincial Level	Co-ordinates strategies between national and municipal level.
Municipal Level	Holds planning powers to direct development according to national strategy.

The Department of Housing, Planning and Environment (Dutch: VROM) began producing a 'National Spatial Development Plan' in 1958, this plan details the planning targets for the next decade. VINEX was the 4th iteration of this plan.

The VINEX program produced 455,000 new homes during its operation between 1996 and 2005. The government involvement was limited to providing funding to prepare the land for development and in some cases identifying development sites. The developments themselves were self - funding.

Higher income households were generally encouraged to move to the new outskirts developments to open up space for lower income housing in cities. Employment centres were categorised to reflect spatial need to form a strategy for developing new settlements.

What can we learn from VINEX?

The government prepared vacant sites by installing the infrastructure, including district heating systems. The plots were then sold to developers, making it free – market led development. More recently this has caused concerns due to developers buying land in anticipation of development and a drop in demand for developer produced housing, causing a slow – down in construction output.

Land acquisition strategy and build out rates. The government structure is also more effective at delivering housing than our system, primarily through the 3 tiered structure that allows national level strategies to be efficiently implemented by local municipality.

North European case studies

HafenCity – Hamburg, Germany

The 157 Hectare proposed 'Harbour City' development consists of residential space for 12,000 people and an employment centre for 40,000.

The scheme was funded by the government, with the majority of the site being owned by the City. The scheme exhibits a land trust model in which the city and port assets were held in a 'special fund under public law', allowing the city to reinvest money into developing a new container terminal within the 'Harbour City' area.

Co-operative self-build groups were encouraged with cheaper land prices and form a substantial part of the scheme.

Vathorst, Amersfoort, Netherlands

The urban extensions around Amersfoort were initiated by the municipality in 2001, with plans to build 11,000 new homes along with generous community facilities and 5,000 jobs. The scheme achieved a build out rate of 600 – 700 homes per year.

The government initiated the development by forming a development company which was composed of the local council and a consortium of 5 companies that owned the land and had previously worked on the site.

The development company obtained funding for the Dutch Municipal Bank and commissioned two companies to produce masterplans for the site. The scheme pioneered a balanced tenure mix which has since become the standard in the Netherlands, and strictly controlled the public transport infrastructure which included subsidised bus and rail services, along with a focus on cycling.

Ij – Overs, Amsterdam, Netherlands

The redevelopment of the derelict docklands on the East side of Amsterdam began in 1989 with a focus on high density accommodation marketed to higher income groups. The municipality conducted the development by commissioning a master plan of the site and investing in the construction of infrastructure before selling the newly converted residential land to developers.

70% of the homes were owner occupied, with many designed by architects that were commissioned by owners of individual plots. The municipality produced guidelines that enforced standards relating to parking, sustainability and building control along with maintaining a density of 100 dwellings per hectare. Architects were able to follow the master plan and guidelines to design a diverse range of high quality buildings.

Hammarby Sjöstad, Stockholm, Sweden

Initially conceived as part of Sweden's 2004 Olympic bid, the Hammarby development is now recognised for the city's strong environmental goals and visionary use of brownfield land. Along with the successful environmental strategy, the scheme attained a build out rate of between 600 and 700 per year.

The development began in 1995 and is expected to be complete in 2017, when it will consist of 11,000 units and capacity for 10,000 new jobs on a site measuring 160 hectares. As is common with North – European planning systems, the government produced a masterplan for the site which detailed the 150 person per hectare density and the environmental goals, and let the private sector respond to the government targets.

Land Assembly

Stockholm City Development Department owned the majority of the site, residual land was purchased from the owners largely without compulsory purchase. The residents of the site recognised that the land was not productive in its current form and were willing to relocate.

Once the land was purchased the decontamination process began to prepare the land for construction. Tram lines, energy and water systems and a ferry strategy were produced and implemented upfront.

The environmental consideration was initiated by national government as part of a 'Local Investment Program (1998 bill)'. This took the form of a subsidy to municipal governments by application, the money was aimed towards building an 'ecological and sustainable society'. 200m kronor was invested in the development of Hammarby.

Off-site construction

Off-site construction techniques were employed to provide core slabs, walls, columns, stairs and other components, in particular for apartment and commercial buildings.

Criticism

The aim of the project outlined a 50/50 split between private ownership and rented accommodation, these targets were not met. The prices of the newly developed units were high and social segregation was noted as a concern, this is especially problematic as Swedish national housing policy does not oblige developers to provide affordable housing.

Kronsberg, Hanover, Germany

Kronsberg is an urban extension project located on previously Greenfield land that was first planned in the early 1990's. Construction of a city of 6,500 people began in 1996 as part of the preparation for Germany's 'Expo 2000'.

Notable was the 1,000 home per year build out rate that sharply addressed the housing shortage.

Sustainable development was emphasised with district heating, combined heat and power and sustainable energy generation systems integrated into the principals of the projects, the resulting system came to be known as 'Energy Efficiency Optimisation at Kronsberg'. A dedicated company (Kronsberg Environmental Liaison Agency / KUKA) was formed for the purpose of coordinating projects in terms of quality control and enforce 'Low Energy House (LEH)' Standards.

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Appendix 02 – Offsite construction strategy

The contribution of off-site, modular construction to resolving the UK's current housing crisis has already been considered in some detail. The Construction Industry Council's report "Off-Site Housing Review" (February 2013) acknowledges that traditional construction methods could not push production numbers much above 140,000 dwellings per year nationally. Since housing demand significantly exceeds this, the difference must be met at least in part by a significant increase in the uptake of off-site and industrialised construction methods. The report goes on to say that quite apart from the immediate housing crisis, traditional methods of construction also face a dwindling supply of sufficiently skilled labour, which suggest that the transition to greater off-site construction also addresses longer term structural issues for the future of UK house-building. Most larger house-builders already employ some degree of off-site construction, including in-house manufacture to varying degrees. The transition to a greater degree of off-site construction can then be described as one of gradual transition rather than revolution. Preventing this transition has been lack of demand for housing in sufficient quantities and at a sufficient rate. The scale and rates required by the Stoke Harbour proposal provide the perfect catalyst to make this transition not only viable but commercially attractive.

The benefits of off-site construction are many. As building regulations demand higher building standards to meet new sustainability targets, the higher quality that off-site construction can deliver will make it increasingly more competitive. Greater speed of construction can minimise negative on-site impacts such as traffic, visual and noise pollution. Indoor factory-based construction can also be more cost-effective since assembly is typically a more streamlined process is independent of weather delays. Damage to building materials is also minimised, thus reducing waste compared to traditional construction. Reduced on-site weather damage to materials (oxidation, sun exposure, moisture penetration etc.) can also reduce the risk of respiratory problems for occupiers, thus creating healthier environments. Finally, indoor working environments are also typically safer for employees than those on-site.

Because off-site construction has not developed significantly in the UK, common perceptions of these technologies are often still informed by relative low-cost imagery of post-war developments. To be commercially successful, the contemporary off-site construction industry will need to compete successfully in all market sectors of housing. Highly valued traditional materials such as brick, stone and tile will be utilised, as they have been successfully in northern Europe. In the UK, examples such as the "Rational House" (AECOM) have begun to explore with off-site construction a brick-and-stone house that could compete successfully in a high-value area such as a Georgian or Victorian inner London suburb.

Offsite Construction Strategy

Delivering an excess of 15,000 new homes on one site presents the opportunity to introduce an integrated 'offsite' construction paradigm. Typically offsite construction is best utilised at the early stages of the development process, by considering offsite at the design stages house builders are able to better estimate costs and delivery timetables.

Our strategy aims to contribute to the growth of the UK offsite construction industry by applying offsite principals commonly used in Northern Europe, using UK supply chains. Offsite construction is commonly used to varying degrees ranging from the pre-production of basic structural components to entire bespoke volumetric units, integrated with mechanical, electrical and plumbing elements, built to order at factories and ready to assemble on site.

The long term aims include the provision of dedicated offsite manufacturing facilities in Stoke Harbour to maximise the benefits to the project, however in the early stages of development it is necessary to demonstrate the feasibility of offsite construction by partnering with companies practised in the production of offsite building components.

Most importantly, offsite construction can be used to create traditional forms and with traditional finishes; a traditional family house with brick exterior is perfectly possible with offsite construction, as well as more modern forms and materials. Stoke Harbour will deliver more traditional brick-finished houses in the lower density neighbourhoods and more modern forms and finishes in the more urban apartment and commerce focused areas.

Offsite Construction Partners

By identifying offsite construction partners that offer a wide range of material specialties and methods, house builders will have less limitations in the procurement of their offsite components. We have identified a variety of potential partners with the capability of delivering projects of different scale and complexity as part of our strategy to establish new supply chains, based on existing undertakings, we estimate they will be capable of delivering between 100 – 400 units each. Example partner companies are:

Mactaggart & Mickel – North Lanarkshire

Mactaggart & Mickel Timber Systems produce build to order timber wall and floor elements. Components are available pre - assembled, fitted with insulation, plasterboard, plumbing and electrical systems installed prior to delivery on site.

Prefabricated closed panel walls can be clad in brick and render in order to produce the effect of a traditionally constructed building, but take less time to construct.

The company was involved in producing 255 residential units for the 2014 commonwealth games, and expanded their production facilities to deliver this.

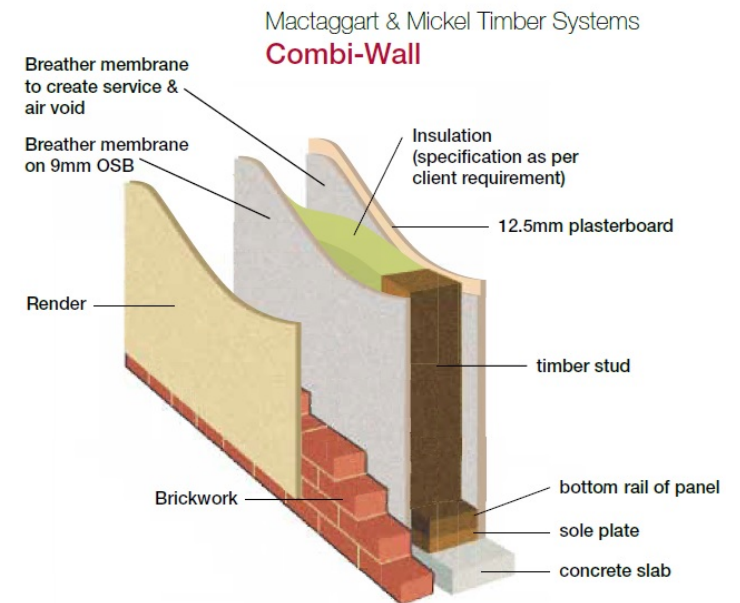


IMAGE MACTAGGART & MICKEL

Scandia – Hus – Sussex

Scandia – hus are a Swedish design and build contractor that expanded into the UK in 1974 and have a factory in Sussex. They specialise in timber frame construction and have delivered over 3000 projects. They are notable for their application of offsite manufactured timber frames towards individual residential buildings, with flexible designs ranging from contemporary to traditional house styles.

Fusion Building Systems - Northampton

Fusion Building Systems are an example of a company that could supply offsite produced pre – insulated steel frames and other building components for construction. Their prefabricated panels have been used extensively in developments across the UK, ranging from luxury homes to apartment blocks, all in significantly faster build out rates than traditional construction.

European examples

Skonto Prefab – Riga, Latvia

Skonto Prefab is a prefabricated concrete producer that commonly supplies countries in North Europe. Skonto supplied components to developments in Hammarby resulting in notably higher build out rates than UK developments, and is an example of prefabricated components being successfully used in large scale residential projects.

Skonto's glass supply is from Pilkington in the UK.

Other potential UK partners are:

Elliott Offsite Solutions,
YorkOn, part of the Shepherd Group
Terrapin Ltd

Bibliography and Sources

Off-site Construction

1. Mactaggart & Mickel, *Closed Panel Combi – Wall*, (Brochure)
2. The Steel Construction Institute (2000), *Value and Benefits Assessment of Modular Construction*
3. Miles, John & Whitehouse, Nick (2013), *Offsite Housing Review*, Construction Industry Council
4. Mactaggart & Mickel Timber Systems; <http://www.macmic.co.uk/TimberSystems.aspx>
5. Scandia – hus; <http://www.scandia-hus.co.uk/>
6. Fusion Building Systems; <http://www.fusionbuild.com/>
7. Skonto Prefab; <http://www.skontoprefab.lv/>
8. Elliot Offsite Solutions; <http://www.elliottuk.com/site-building-solutions>
9. Yorkon; <http://www.yorkon.co.uk/>
10. Terrapin Ltd; <http://www.terrapingroup.co.uk/>

Appendix 03 – Transport strategy supporting analysis

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) which is shown in Figure [19]. SwaleRail is a good comparator as it is of a similar length to the proposed service and also carries freight from the port of Sheerness.

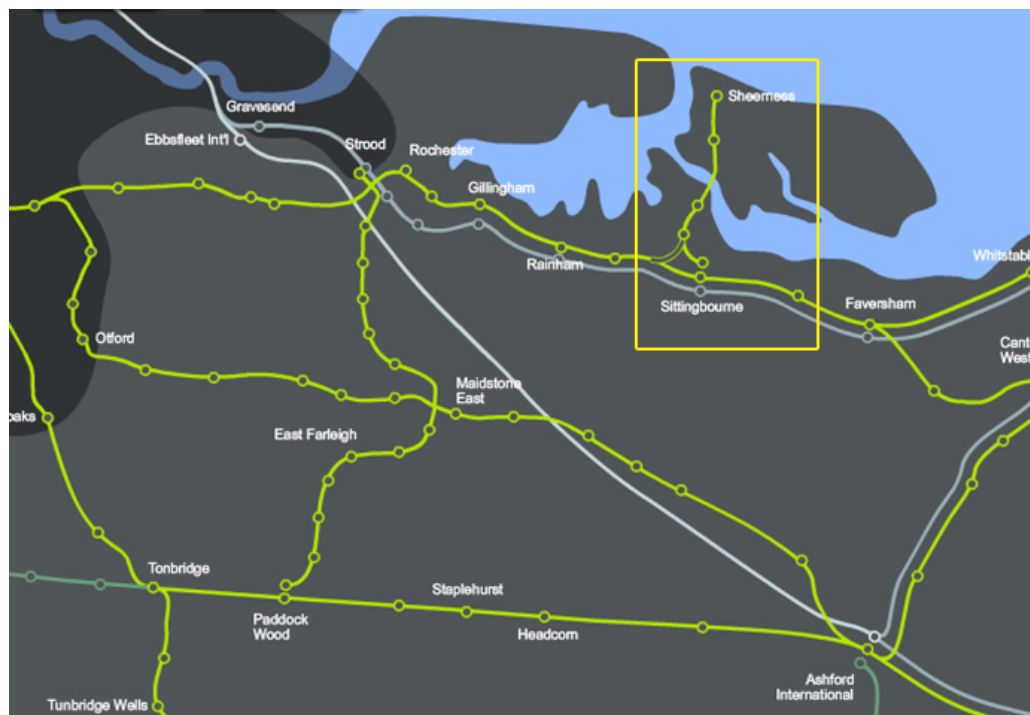


FIGURE 19 - SOUTHEASTERN RAILWAY NETWORK MAP EXTRACT - [HTTPS://WWW.SOUTHEASTERNRAILWAY.CO.UK/YOUR-JOURNEY/NETWORK-MAP/](https://www.southeasternrailway.co.uk/your-journey/network-map/)

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.

**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]

Estimated Stoke Harbour - Gravesend passenger journey figures projection

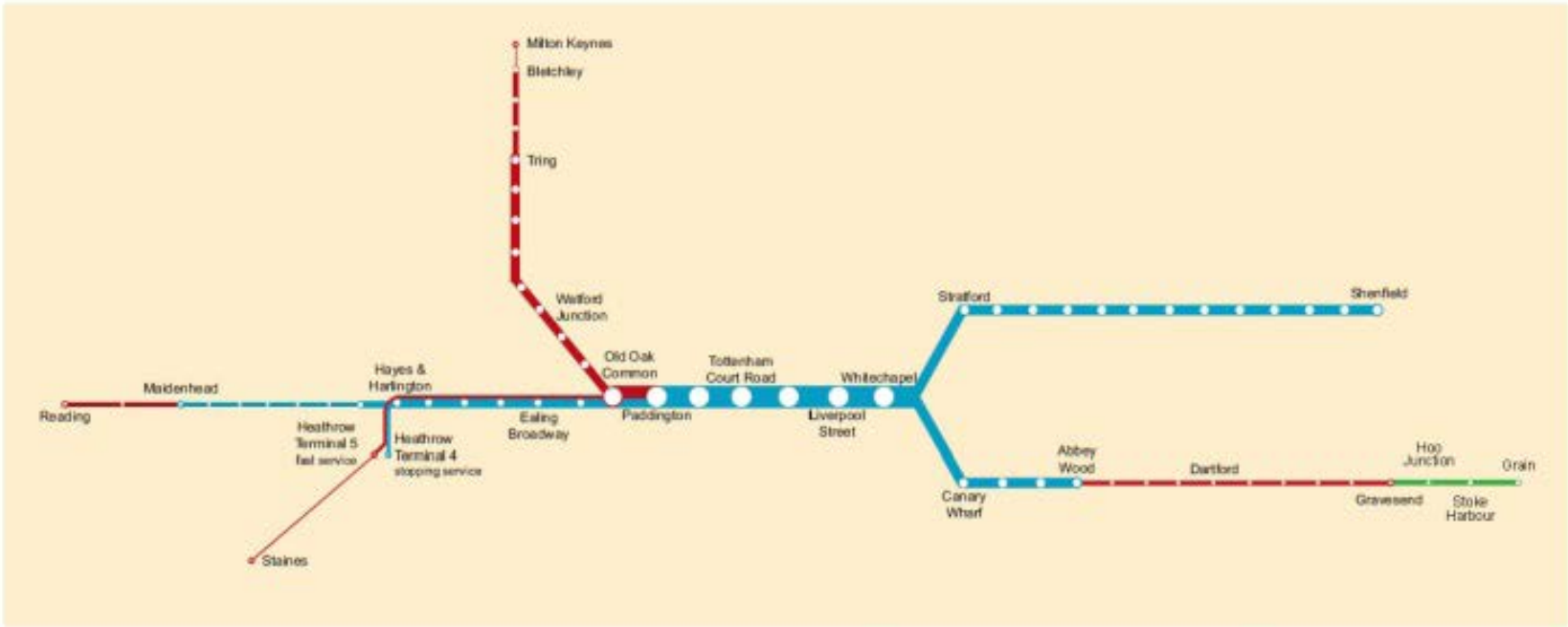
Year	1	2	3	4	5	6	7	8	9	10	11	12
Existing Hoo Peninsula resident demand	266,424	266,424	266,424	266,424	266,424	266,424	266,424	266,424	266,424	266,424	266,424	266,424
Stoke Harbour projected population	2,329	5,241	8,658	13,225	16,322	19,382	22,493	25,530	28,590	31,466	33,939	36,000
Stoke Harbour predicted 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

Hoo Peninsula Garden City - Transport Infrastructure Requirements and Estimated Cost			
Railway Infrastructure required			
Pre phase 1 ¹	Cost	<i>Cost source/comparator</i>	
8 miles single track with passing	£48,000,000	£6m/mile based on Network Rail Control Period 4 ("CP4") costings	
Stoke Harbour station	£5,000,000	Based on Network Rail new Energlyn station, http://www.networkrail.co.uk/south-wales/	
Gravesend station upgrades	£1,500,000	Estimate based on £5m for new station	
Hoo Junction improvement	£10,000,000	Estimate based on CP4 costings	
Signalling	£5,000,000	Estimate based on CP4 costings	
Phase 1	4 x level crossings	£1m per crossing	
Phase 2	No upgrades		
Phase 3	No upgrades		
	Total		
	£73,500,000		
Phase 4 - City expansion and new settlements			
	Hoo Junction station	£10,000,000	As above, doubled as junction of two tracks, therefore four platforms
	Grain	£5,000,000	As above
	Further line 4 miles	£24,000,000	Based on £6m/mile
	Electrification	£55,000,000	Based on Network Rail Great Western Railway electrification £3m/mile for 18 miles (http://www.theguardian.com/uk/2009/jul/21/transport-transport)
	Total	£167,500,000	
	£/mile	£6,000,000	
Notes			
1. To make the existing line carry both freight and passenger traffic is expected to require: the addition of a new single track with passing places (giving two lines in total); the construction of a new station at Stoke Harbour; platform upgrade work at Gravesend; signalling upgrades; Hoo Junction improvements; and four level crossings.			

Hoo Peninsula Garden City - Transport Infrastructure Requirements and Estimated Cost		
	Road Transport required	
Pre phase 1	Cost	Cost source/comparator
	Fly-through and Four Elms Hill upgrade ¹	£22,000,000
Phase 1	Upgrade A228 and roundabouts ²	£15,000,000
Phase 2		
Phase 3	Relief Road	£160,000,000
	Total	£197,000,000
Phase 4 - City expansion and new settlements		
	New ring road North of Lower Stoke	£35,000,000
	Total	£232,000,000
Notes		
1. Our proposed solution is a fly-through from the A289 Halstead Road to A228, expansion of the roundabout to three lanes with traffic lights, a new lane to the slip road from A228 to A289 to Berwick Way, a priority bus lane going East to West, an extra lane in both directions for the length of Four Elms Hill and a pedestrian bridge.		
2. During Phase I the existing roundabouts on A228 Peninsula Way at Bells Lane and Main Road Hoo will also need to be enlarged and the dual carriageway extended from the Ropers Lane roundabout to the Fenn Street roundabout, at an estimated cost of £15m.		

Appendix 04 - Proposed Crossrail extension



Crossrail Route with Proposed "Garden City Line" Extension (shown in green)

Appendix 05 - Financial model

Introduction

Please note the following:

- Sales prices and rental income have been modelled on an average sale price per square metre, using the median sales price for dwelling type. In reality there will be a range of sales prices, with the harbour front apartments and houses commanding a premium, and with the many (but by no means all) of the more affordable apartments and homes being part of the social rental tenure. We therefore consider there to be significant un-modelled upside to the sales proceeds and PRS figures.
- All preliminary works, construction costs and social infrastructure costs have been calculated using building costs per square metre from the SPONS Architects and Builders Price Book 2012. The average value in the price range has been used.
- We consider that pre-fabrication and modular construction will lead to cost savings through reduced labour costs, however, to be prudent we have used cost models for traditional construction.
- The model shows proceeds being returned after the end of each Phase. In reality cash could be distributed earlier than this, which would increase the IRRs.

Wolfson Prize 2014

Stoke Harbour Financial Model - DRAFT

Assumptions Book

<i>Assumptions</i>	<i>Active scenario</i>	<i>Notes/source of information/estimate</i>
<i>Set up and acquisition assumptions</i>		
Corporation and trust set up costs	£150,000	Estimate - legal fees for SH Agreement, tailored AoA, set up CLT etc
Site land acquired (hectares)	677	From architect workings
Residential land (hectares)	249	From architect workings
GIA (m2)	1,255,661	From architect workings
Green space designated land acquired (ha)	200	From architect workings
Option premium	20%	
Existing use value (per hectare/10000sqm)	20,219	Based on 30.54 acres of Grade 1 agricultural/horticultural land at Higham Road, Cliffe, Rochester, Kent £250,000 offers accessed at uklandandfarms.co.uk 6 Feb 2014 Property Ref.10661_3741591. Agent: Smith Gore
SDLT	4%	Assume due on full existing use land value
Uplift offered to landowner	100%	
Class A shares - incentive basis	300%	
Class A investment cash	£3,000,000	
Class B shares incentive basis	200%	
Class B investment cash	£5,000,000	
Class C shares incentive basis	100%	
Class C investment cash	£2,000,000	
Hoo Peninsula population	24,789	
Number of engagement attendees of working age	12,395	
Contribution per attendee	£50	
Engagement attendance investment contribution	£619,725	Class C shares
Number of building phases	3	
Professional fees for acquisitions	10%	
Contingency	5%	
Land owned by Church Commissioners	90%	Per land analysis research

<i>Assumptions</i>	<i>Active scenario</i>	<i>Notes/source of information/estimate</i>
Land owner by individual land owners	10%	Per land analysis research
Average farm existing value	£500,000	Estimate - if we need to acquire a property
Assumed compensation per farmhouse	£100,000	Offer to buy or offer to pay living costs until can move in elsewhere plus incentive
Number of farms to be compensated	16	[Check with Rachel]
Total acquisition price land	£3,546,475	10% of land
Total tenant farmer lease acq costs	£10,000,000	Estimate
Total residence compensation costs	£1,600,000	£100k per farmhouse
Total option premium	£709,295	@20% of Existing use value
<i>Planning and development assumptions</i>		
Planning permission costs	£2,000,000	Estimate discussed with planning partners
Investment uplift provided to Church Commissioners	900%	
Total units	15,018	
Number of units in phase 1 development	5,000	From architects workings
Number of units in phase 2 development	5,018	From architects workings
Number of units in phase 3 development	5,000	From architects workings
<i>Construction assumptions</i>		
Professional fees during construction	10%	
<i>Infrastructure cost assumptions</i>		
Harbour and canals	£15,000,000	Costs based on South Ayrshire Maidens Harbour feasibility study https://www.south-ayrshire.gov.uk/consultations/maidensharbour/ [accessed 20.02.14]
For other infrastructure, please refer to the 'Infra' tab		
Social infrastructure	(£95,465,050)	From site area/tenure mix workings
Site works costs	£50,516,459	From site area/tenure mix workings
CIL costs	0	Assumed agreement with Medway Council: CIL costs are recycled to SH Partnership
New Homes Bonus - assumed % provided to us	50%	Assumed new homes bonus split agreement with Medway Council
<i>Running cost assumptions</i>		
Number of years per phase	4	
Structure running costs (per annum)	£100,000	Estimate for tax, audit etc

Assumptions	Active scenario		Notes/source of information/estimate
Transport subsidy pa	£2,000,000		Bus, rail and for later stages passenger ferry
Reduction per phase	£500,000		
Contribution to Community Trust pa	£100,000		
Medway Council planning office costs	£300,000		8 x planning staff
<i>Medway house price averages</i>			Medway defined as Rainham, Strood, Chatham and Rochester info from <i>Zoopla</i> , Feb 2014
Flat	£129,108		130146 139459 104495 134072 137370 116664
Terraced	£163,911		142487 207911 144133 163292 161734 175791
Semi detached	£205,327		186534 234576 185396 205854 214276 209382
Detached	£324,152		309171 294475 313879 342033 361202 348145
			Chatham Rainham Strood Rochester Gillingham ME3
<i>Private rental information - average</i>			Prices pcm - information from <i>Zoopla</i> , Feb 2014
Flat	£662		640 760 630 630 650
Terraced	£764		704 867 675 828 745
Semi detached	£873		751 1137 814 827 836
Detached	£1,336		1201 1456 1200 1500 1323
Property management costs	10%		Chatham Rainham Strood Rochester Gillingham
<i>Social rental housing (pw)</i>		Per month	Housing benefit caps (Medway)
1 bed flat	£80	£320	£467 Taken from Directgov.uk
2 bed flat	£95	£380	£583 indicative Medway rents taken from
2 bed	£105	£420	http://www.kenthomechoice.org.uk/choice/PdfFiles/KentPublicFreesh
3 bed	£120	£480	eet_MDW.pdf
4 bed	£140	£560	
5 bed	£150	£600	
<i>Sales assumptions</i>			
Sales and marketing spend	£1,000,000		
<i>Tax assumptions</i>			
Corporation tax rate	20%		Structured so no direct tax in structure below the investor level, except for the Resident Investment Company
VAT cost	0%		Structured to maximise VAT recovery

Stoke Harbour - Dwelling type, tenure mix and land take workings, including social infrastructure and preliminary works costs

Target No. Dwellings	15,000
Population/ dwelling	2.4
Resulting Population	36,000

Land Use Schedule

Land Use	Metrics	Notes	M2 Built Area	Land Take - Hectares
Residential				
See detailed residential schedule below			1,255,661	248.93
Harbour				
Phase 1 - including dredging Later phases including dredging				39.00

Land Use	Metrics		Notes		M2 Built Area	Land Take - Hectares
Education						
<u>Nursery & Primary</u>	No.	Area - Ha				
Medway prefer 2FE						
Per 5,000 dwellings	2.5	2	2500	GIA per school (M2)	18,750.00	
Total	7.50					15.00
<u>Secondary</u>						
Say 6FE						
Per 5,000 dwellings	1	7.2				
Total	3		10000	GIA per school (M2)	30,000	21.60
<u>Higher/ Further Education</u>						
Medway Universities Satellite	-					2.00
M2 Built Area		2,500			2,500	
Healthcare						
GP's per 1,800 pop.	1					
Total GP's	20					
GP's per PCT	7.5					
No. PCT's	2.7					
PCT Built Area M2	1,250					
Site area per PCT (LH)	0.2					
Total Area			Assume 2no. smaller local GP's		1,000	0.50
Community Hospital			Assume one central community hospital		4,000	2.00

Land Use	Metrics		Notes	M2 Built Area	Land Take - Hectares	
Community						
<u>Community Centres</u>						
M2 per 1,000 pop.		31				
M2 Total				1,116		
FAR	say	1				
Total Area					0.11	
<u>Libraries</u>						
M2 per 1,000 pop.		31				
M2 Total				1,116		
FAR	say	1			0.11	
<u>Emergency Services</u>						
Lodge Hill (per 5,000dwellings)		0.5				
Total Area			say	2,000	1.50	
Employment						
<u>B1 - Town Centre</u>						
LH Quantum		GIA	28,000			
Our Quantum pro rata				84,000		
FAR			1.4		5.10	
<u>B1 Business Park</u>			Assume max. amount located above Comparison Retail			
LH Quantum	-	GIA		7,000		
Our Quantum pro rata					21,000	
FAR				0.4		5.25
<u>B2 Light Industrial</u>						
LH Quantum	-	GIA		7,000		
Our Quantum pro rata				21,000		
FAR			0.4		5.25	

Land Use	Metrics			Notes	M2 Built Area	Land Take - Hectares
Retail						
<u>Convenience Retail</u>						
Food Store 1					3,000	1.00
Food Store 2					2,000	1.00
<u>Comparison Retail</u>						
LH Quantum				1,900		
LH Site Area				0.3 Ha		
Our Quantum pro rata				5,700		
Our site Area pro rata					5,000	0.90
Hotels						
	No. Keys	M2/ key				
Country House Hotel 1	100	80			8,000	2.50
Country House Hotel 2	100	75			7,500	2.50
Urban Business Hotel, mid-market	150	68			10,200	1.00
Services						
<u>Service Compounds</u>						
LH Site Area Total Ha				3.81	57,150.00	
Our Site pro rata						11.43
<u>Primary Transport Network</u>						
Rate of developed area				8.4%		
Total Land required						9.89
Parking						
	GEA	Efficiency	No. cars			
1no. multi-storey at Train Station	19,800	80%	634		15,840	1.00
3no. multi-storey at smaller hubs	29,700	80%	950		23,760	1.50
20no. landscaped parking courtyards			4,224			10.00
			5,808	total no.	per dwelling	0.16

Land Use	Metrics	Notes	M2 Built Area	Land Take - Hectares
Transport Hubs				
Train Station			400	2.50
Bus Station			150	0.50
Open Space		Assume this is in addition to schools provision		
National Playing Fields Association Requirement				
<u>Outdoor Formal Sports Provision</u>	-			
Per 1,000 pop.	1.7			25.50
Our Site				
<u>Children's Play Space Equipped</u>	-			
Per 1,000 pop.	0.2			3.00
Our Site				
<u>Children's Play Space Informal</u>	-			
Per 1,000 pop.	0.5			7.50
Our Site				
Site Totals			1,575,143	428.07

Stoke Harbour - Dwelling type, tenure mix and land take workings, including social infrastructure and preliminary works costs

Funding category

1. Privately funded
2. Funded by Institutional Investor as separate annuity investment
3. Funded by Development Partnership and Equity Partnership and donated to Community Trust

Land Use Schedule

Land Use	M2 Built Area	Land Take - Hectares				
Residential			Median cost per SPONS 2012 (M2)	Cost per ha		
See detailed residential schedule below	1,255,661	248.93			Cost	Notes
Harbour						
Phase 1 - including dredging		39.00			£5,000,000	See Assumptions
Later phases including dredging					£10,000,000	
Education						
<u>Nursery & Primary</u>						
Medway prefer 2FE						
Per 5,000 dwellings	18,750.00					
Total		15.00	1575		£29,531,250	
<u>Secondary</u>						

Land Use	M2 Built Area	Land Take - Hectares		
Say 6FE				
Per 5,000 dwellings				
Total	30,000	21.60	1725	£51,750,000
Higher/ Further Education				
Medway Universities Satellite		2.00	1150	£2,875,000
M2 Built Area	2,500			
Healthcare				
GP's per 1,800 pop.				
Total GP's				
GP's per PCT				
No. PCT's				
PCT Built Area M2				
Site area per PCT (LH)				
Total Area	1,000	0.50	2000	£2,000,000
Community Hospital	4,000	2.00	2000	£8,000,000
Community				
Community Centres				
M2 per 1,000 pop.				
M2 Total	1,116			
FAR say				
Total Area		0.11	980	£1,093,680

Land Use	M2 Built Area	Land Take - Hectares
<u>Libraries</u>		
M2 per 1,000 pop.		
M2 Total	1,116	
FAR say		0.11
<u>Emergency Services</u>		
Lodge Hill (per 5,000 dwellings)		
Total Area	2,000	1.50
<u>Employment</u>		
<u>B1 - Town Centre</u>		
LH Quantum		
Our Quantum pro rata	84,000	
FAR		5.10
<u>B1 Business Park</u>		
LH Quantum		
Our Quantum pro rata	21,000	
FAR		5.25
<u>B2 Light Industrial</u>		
LH Quantum		
Our Quantum pro rata	21,000	
FAR		5.25
<u>Retail</u>		

1575

£1,757,700

1275

£2,550,000

510

£42,840,000

890

£18,690,000

550

£11,550,000

A funding partnership could be considered

A funding partnership could be considered

Land Use	M2 Built Area	Land Take - Hectares
<u>Convenience Retail</u>		
Food Store 1	3,000	1.00
Food Store 2	2,000	1.00
<u>Comparison Retail</u>		
LH Quantum		
LH Site Area		
Our Quantum pro rata	5,000	
Our site Area pro rata		0.90
<u>Hotels</u>		
Country House Hotel 1	8,000	2.50
Country House Hotel 2	7,500	2.50
Urban Business Hotel, mid-market	10,200	1.00
<u>Services</u>		
<u>Service Compounds</u>		
LH Site Area Total Ha	57,150.00	
Our Site pro rata		11.43
<u>Primary Transport Network</u>		
Rate of developed area		
Total Land required		9.89
<u>Parking</u>		
1no. multi-storey at Train Station	15,840	1.00

500

£1,500,000

500

£1,000,000

500

£2,500,000

1475

£11,800,000

1475

£11,062,500

1825

£18,615,000

750

£42,862,500

1650

16,500,000

£163,205,935

Top end estimated (p192), single carriageway and to include costs of crossings etc

320

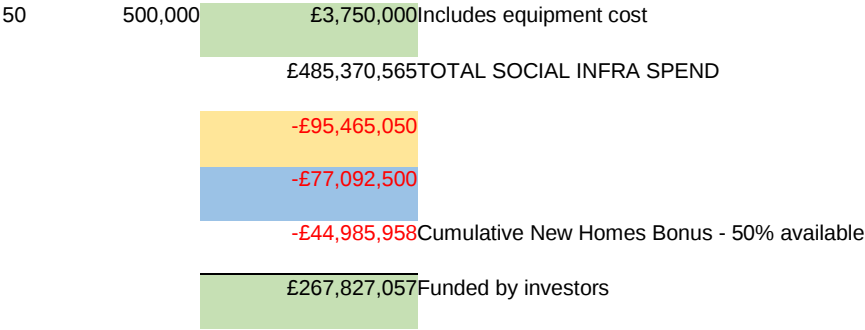
£5,068,800

Part of the train station costs

Land Use	M2 Built Area	Land Take - Hectares
3no. multi-storey at smaller hubs	23,760	1.50
20no. landscaped parking courtyards		10.00
Transport Hubs		
Train Station	400	2.50
Bus Station	150	0.50
Open Space		
National Playing Fields Association Requirement		
Outdoor Formal Sports Provision		
Per 1,000 pop.		25.50
Our Site		
Children's Play Space Equipped		
Per 1,000 pop.		3.00
Our Site		

320		£7,603,200	
89	890,000	£8,900,000	
2000		£800,000	Transport infrastructure costs
2100		£315,000	Transport infrastructure costs
50	500,000	£12,750,000	
			some costs for pavilions etc but mainly land
200	2,000,000	£6,000,000	
			Assume greater cost due to equipment provision

Land Use	M2 Built Area	Land Take - Hectares
<u>Children's Play Space Informal</u>		
Per 1,000 pop.		
Our Site		7.50
Site Totals	1,575,143	428.07



£18,694SOCIAL INFRA SPEND PER HOME

£12,557CIL per dwelling as per Medway Council CIL levy consultation
1 Mar-19 April 2013

1,255,661

Internal GIA

<http://www.medway.gov.uk/pdf/Final%20Draft%20Prelim%20charging%20schedule%201%20Mar%202013.pdf>

Site works costs	Area ha	Area M2	Length m	Cost ha	Cost M2	Cost (£/m)	Number	£/unit	total cost (£)	
Paved areas (brick)	10.00			650,000	65				6,500,000	
Town square (granite/stone)	2.00			1,000,000	100				2,000,000	
No of trees							4000	70	280,000	
Shrubs	10			380,000	38		200000		3,800,000	
Parkland area	200			17,000					3,400,000	
Service run length (m)			24,000			162			3,888,000	
Remediation/abnormals									10,000,000	Contingency
Drainage (non parkland)	677.00			6,500					4,400,491	
Preparatory work	677.00	6,769,986			2.4				16,247,967	
Site works cost									50,516,459	

Dwelling Type	Dwelling Size M2 GIA	No. Dwellings/ floor/ ha	No. Floors counted	Dwellings / Hectare (DPH)	Tenure Mix								
					Social Housing			Social - Senior			Shared Ownership		
% Total No. Dwellings					27.5%			2.5%			7.5%		
Notes on Tenure Mix					Best Guess			Twice Lodge Hill. Assisted Living plus Extra Care			Best Guess		
					% of Tenure	Number	M2 GIA	% of Tenure	Number	M2 GIA	% of Tenure	Number	M2 GIA
Notes on Dwelling Mix					Medway Targets 2009			Lodge Hill Mix			Reverse the Private Sale ratio of Apartments to Houses. Duplex flats and 2B houses also added		
Apartments 1B2P	50	58	4	232	30.0%	1,238	61,875	45%	169	8,438	17.5%	197	9,844
2B4P	70	40	4	160	24.0%	990	69,300	35%	131	9,188	15.0%	169	11,813
3B4P	86	36	4	144	8.0%	330	28,380	20%	75	6,450	4.5%	51	4,354
3B5P Duplex	96	29	2	58	3.0%	124	11,880	0%	-	-	3.0%	34	3,240
Houseboats	50	90	1	90	0.0%	-	-	0%	-	-	0.0%	-	-
Total/ Average				171	65.0%	2,681	171,435	100%	375	24,075	40%	450	29,250
Houses													
2B4P Terrace	83	60	1	60	12.0%	495	41,085	0%	-	-	25.0%	281	23,344
3B5P Terrace	102	50	1	50	13.0%	536	54,698	0%	-	-	27.0%	304	30,983
4B6P Terrace	113	50	1	50	7.0%	289	32,629	0%	-	-	5.0%	56	6,356
3B5P Semi-d	105	34	1	34	2.0%	83	8,663	0%	-	-	3.0%	34	3,544
4B6P Semi-d	112	34	1	34	1.0%	41	4,620	0%	-	-	0.0%	-	-
4B6P Detached	135	28	1	28	0.0%	-	-	0%	-	-	0.0%	-	-
4B7P Detached	180	28	1	28	0.0%	-	-	0%	-	-	0.0%	-	-
5B7P Detached	220	24	1	24	0.0%	-	-	0%	-	-	0.0%	-	-
Total/ Average				38.5	35.0%	1,444	141,694	0%	-	-	60%	675	64,226
Dwellings Total					100.0%	4,125	313,129	100.0%	375	24,075	100.0%	1,125	93,476

Dwelling Type	Dwelli ng Size M2 GIA	No. Dwellin gs/ floor/ ha	No. Floors counted	Dwellin gs / Hectare (DPH)	Tenure Mix											
					Market Rent			Private Sale - Self-build			Private Sale - General			Private Sale - Senior		
% Total No. Dwellings					10.0%			12.5%			35.0%			5.0%		
Notes on Tenure Mix					To match Social Housing provision (including Senior)			Best Guess			Best Guess			4 times Lodge Hill. Assisted Living plus Extra Care		
					% of Tenure	Number	M2 GIA	% of Tenure	Number	M2 GIA	% of Tenure	Number	M2 GIA	% of Tenure	Num ber	M2 GIA
Notes on Dwelling Mix					To match Social Housing. (excluding Senior)			National Average (considered above average for one site)			Lodge Hill Mix			Lodge Hill Mix		
Apartments																
1B2P	50	58	4	232	24.5%	368	18,375	0%	-	-	14.0%	735	36,750	40%	300	15,000
2B4P	70	40	4	160	24.0%	360	25,200	0%	-	-	6.0%	315	22,050	25%	188	13,125
3B4P	86	36	4	144	8.0%	120	10,320	0%	-	-	3.0%	157.5	13,545	35%	263	22,575
3B5P Duplex	96	29	2	58	4.0%	60	5,760	0%	-	-	2.0%	105.0	10,080	0%	-	-
Total/ Average				171	60.5%	908	59,655	0%	-	-	25.0%	1,313	82,425	100%	750	50,700
Houses																
2B4P Terrace	83	60	1	60	15.5%	233	19,298	23%	431	25,875	11.5%	604	50,111	0%	-	-
3B5P Terrace	102	50	1	50	16.0%	240	24,480	33%	609	30,469	12.0%	630	64,260	0%	-	-
4B6P Terrace	113	50	1	50	5.0%	75	8,475	12%	225	11,250	2.0%	105	11,865	0%	-	-
3B5P Semi-d	105	34	1	34	1.0%	15	1,575	0%	-	-	13.0%	683	71,663	0%	-	-
4B6P Semi-d	112	34	1	34	1.0%	15	1,680	0%	-	-	14.0%	735	82,320	0%	-	-
4B6P Detached	135	28	1	28	1.0%	15	2,025	12%	225	6,300	7.5%	394	53,156	0%	-	-
4B7P Detached	180	28	1	28	0.0%	-	-	12%	225	6,300	7.5%	394	70,875	0%	-	-
5B7P Detached	220	24	1	24	0.0%	-	-	8%	150	3,600	7.5%	394	86,625	0%	-	-
Total/ Average				38.5	39.5%	593	57,533	100%	1,866	83,794	75.0%	3,938	490,875	0%	-	-
Dwellings Total					100.0%	1,500	117,188	100%	1,866	83,794	100.0%	5,250	573,300	100.0%	750	50,700

Dwelling Type	Dwelling Size M2 GIA	No. Dwellings/ floor/ ha	No. Floors counted	Dwellings / Hectare (DPH)									
% Total No. Dwellings					100%								
Notes on Tenure Mix													
					Total %	Total No.	Total M2	Landtake Total (Ha)	Total DPH	Density Band	Residential Land (Ha)	% Residential Land	
Notes on Dwelling Mix													
Apartments										Very High Density (Apartments)	39	15.6%	
1B2P	50	58	4	232	20.04%	3,006	150,281	12.96					
2B4P	70	40	4	160	14.35%	2,153	150,675	13.45					
3B4P	86	36	4	144	6.64%	996	85,624	6.91					
3B5P Duplex	96	29	2	58	2.15%	323	30,960	5.56					
Total/ Average				171	43.18%	6,476	417,540	38.88					
Houses										High Density (Terraces)	95	38.3%	
2B4P Terrace	83	60	1	60	13.63%	2,044	159,713	34.06					
3B5P Terrace	102	50	1	50	15.46%	2,319	204,889	46.39					
4B6P Terrace	113	50	1	50	5.00%	750	70,575	15.00					
3B5P Semi-d	105	34	1	34	5.43%	814	85,444	23.93					
4B6P Semi-d	112	34	1	34	5.28%	791	88,620	23.27		Medium Density (Semi-D & Detached)	115	46.0%	
4B6P Detached	135	28	1	28	4.23%	634	61,481	22.63					
4B7P Detached	180	28	1	28	4.13%	619	77,175	22.10					
5B7P Detached	220	24	1	24	3.63%	544	90,225	22.66					
Total/ Average				38.5	56.76%	8,514	838,121	210.04					
Dwellings Total					100%	15,000	1,255,661	248.93	60.26				

Build out tenure analysis

Build out phasing

		Year 1	2	3	4	5	6	7	8	9	10	11	12	Total
Private sale	Home type													
	Apartments													
	1B2P	73	95	109	109	91	86	86	86	86	86	81	49	1,038
	2B4P	35	46	53	53	44	42	42	42	42	42	39	24	504
	3B4P	30	39	44	44	37	35	35	35	35	35	33	20	421
	3B5P Duplex	7	10	11	11	9	9	9	9	9	9	8	5	105
	Total/ Average	145	189	218	218	182	172	172	172	172	172	161	97	
	Houses													
	2B4P Terrace	43	55	64	64	53	50	50	50	50	50	47	28	606
	3B5P Terrace	44	58	66	67	55	53	53	53	53	53	49	30	632
	4B6P Terrace	7	10	11	11	9	9	9	9	9	9	8	5	105
	3B5P Semi-d	48	63	72	72	60	57	57	57	57	57	53	32	685
	4B6P Semi-d	52	67	78	78	65	61	61	61	61	61	57	35	737
	4B6P Detached	28	36	42	42	35	33	33	33	33	33	31	19	395
	4B7P Detached	28	36	42	42	35	33	33	33	33	33	31	19	395
	5B7P Detached	28	36	42	42	35	33	33	33	33	33	31	19	395
	Total/ Average	278	361	415	416	347	328	328	328	328	328	306	186	
	Total	423	550	633	634	528	500	500	500	500	500	467	283	6,000
	check	423	532	633	634	528	500	500	500	500	500	467	283	6,000
	dif	0	18	0	0	0	0	0	0	0	0	0	0	0
	Total build cost	48,393,645	62,923,180	72,418,860	72,533,265	60,406,253	57,202,891	57,202,891	57,202,891	57,202,891	57,202,891	53,427,500	32,376,836	
	Land value existing use	175,780	228,555	263,046	263,462	219,413	207,777	207,777	207,777	207,777	207,777	194,064	117,602	
	GIA (M2)	43,992	57,200	65,832	65,936	54,912	52,000	52,000	52,000	52,000	52,000	48,568	29,432	

Build out phasing

		Year1	2	3	4	5	6	7	8	9	10	11	12	
Private rent	Home type													
	Apartments													
	1B2P	49	49	61	49	49	49	37	25	0	0	0	0	368
	2B4P	48	48	60	48	48	48	36	24	0	0	0	0	360
	3B4P	16	16	20	16	16	16	12	8	0	0	0	0	120
	3B5P Duplex	8	8	10	8	8	8	6	4	0	0	0	0	60
	Total/ Average	121	121	151	121	121	121	91	61	0	0	0	0	
	Houses													
	2B4P Terrace	31	31	39	31	31	31	23	16	0	0	0	0	233
	3B5P Terrace	32	32	40	32	32	32	24	16	0	0	0	0	240
	4B6P Terrace	10	10	13	10	10	10	8	5	0	0	0	0	75
	3B5P Semi-d	2	2	3	2	2	2	2	1	0	0	0	0	15
	4B6P Semi-d	2	2	3	2	2	2	2	1	0	0	0	0	15
	4B6P Detached	2	2	3	2	2	2	2	1	0	0	0	0	15
	4B7P Detached	0	0	0	0	0	0	0	0	0	0	0	0	0
	5B7P Detached	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total/ Average	79	79	99	79	79	79	59	40	0	0	0	0	
	Total	200	200	250	200	200	200	150	100	0	0	0	0	1500
check		200	200	250	200	200	200	150	100	0	0	0	0	1,500
dif		0	0	0	0	0	0	0	0	0	0	0	0	0
Total build cost		16,822,435	16,822,435	21,028,044	16,822,435	16,822,435	16,822,435	12,616,826	8,411,218	0	0	0	0	
Land value existing use		46,626	46,626	58,282	46,626	46,626	46,626	34,969	23,313	0	0	0	0	
GIA (M2)		15,625	15,625	19,531	15,625	15,625	15,625	11,719	7,813	0	0	0	0	
Sales value		26,590,000	26,590,000	33,237,500	26,590,000	26,590,000	26,590,000	19,942,500	13,295,000	0	0	0	0	

Build out phasing

		Year1	2	3	4	5	6	7	8	9	10	11	12	
Shared Ownership	Home type													
	Apartments													
	1B2P	9	13	22	31	13	13	13	13	13	18	18	22	197
	2B4P	8	11	19	26	11	11	11	11	11	15	15	19	169
	3B4P	2	3	6	8	3	3	3	3	3	5	5	6	51
	3B5P Duplex	2	2	4	5	2	2	2	2	2	3	3	4	34
	Total/ Average	20	30	50	70	30	30	30	30	30	40	40	50	
	Houses													
	2B4P Terrace	13	19	31	44	19	19	19	19	19	25	25	31	281
	3B5P Terrace	14	20	34	47	20	20	20	20	20	27	27	34	304
	4B6P Terrace	3	4	6	9	4	4	4	4	4	5	5	6	56
	3B5P Semi-d	2	2	4	5	2	2	2	2	2	3	3	4	34
	4B6P Semi-d	0	0	0	0	0	0	0	0	0	0	0	0	0
	4B6P Detached	0	0	0	0	0	0	0	0	0	0	0	0	0
	4B7P Detached	0	0	0	0	0	0	0	0	0	0	0	0	0
	5B7P Detached	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total/ Average	30	45	75	105	45	45	45	45	45	60	60	75	
	Total	50	75	125	175	75	75	75	75	75	100	100	125	1125
check		50	75	125	175	75	75	75	75	75	100	100	125	1,125
dif		0	0	0	0	0	0	0	0	0	0	0	0	0
Total build cost		4,718,763	7,078,144	11,796,906	16,515,669	7,078,144	7,078,144	7,078,144	7,078,144	7,078,144	9,437,525	9,437,525	11,796,906	
Land value existing use		14,124	21,186	35,310	49,433	21,186	21,186	21,186	21,186	21,186	28,248	28,248	35,310	
GIA (M2)		4,155	6,232	10,386	14,541	6,232	6,232	6,232	6,232	6,232	8,309	8,309	10,386	

Build out phasing

		Year1	2	3	4	5	6	7	8	9	10	11	12	
Social rent	Home type													
	Apartments													
	1B2P	21	39	70	86	86	98	109	125	156	172	203	240	1,406
	2B4P	17	31	56	69	69	78	87	100	125	137	162	191	1,121
	3B4P	6	11	20	25	25	28	32	36	45	50	59	69	405
	3B5P Duplex	2	3	6	8	8	9	10	11	14	15	18	21	124
	Total/ Average	46	85	153	187	187	214	238	272	340	374	441	521	
	Houses													
	2B4P Terrace	7	14	25	30	30	35	39	44	55	61	72	84	495
	3B5P Terrace	8	15	27	33	33	38	42	48	60	66	77	91	536
	4B6P Terrace	4	8	14	18	18	20	22	26	32	35	42	49	289
	3B5P Semi-d	1	2	4	5	5	6	6	7	9	10	12	14	83
	4B6P Semi-d	1	1	2	3	3	3	3	4	5	5	6	7	41
	4B6P Detached	0	0	0	0	0	0	0	0	0	0	0	0	0
	4B7P Detached	0	0	0	0	0	0	0	0	0	0	0	0	0
	5B7P Detached	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total/ Average	22	40	72	88	88	101	112	128	160	176	209	246	
	Total	68	125	225	275	275	315	350	400	500	550	650	767	4,500
check		68	125	225	275	275	315	350	400	500	550	650	767	4,500
dif		0	0	0	0	0	0	0	0	0	0	0	0	0
Total build cost		4,340,484	7,978,831	14,361,895	17,553,428	17,553,428	20,106,653	22,340,726	25,532,258	31,915,323	35,106,855	41,489,920	48,958,105	
Land value existing use		14,178	26,063	46,914	57,339	57,339	65,680	72,977	83,403	104,254	114,679	135,530	159,925	
GIA (M2)		5,096	9,367	16,860	20,607	20,607	23,604	26,227	29,974	37,467	41,214	48,707	57,475	

Build out phasing

		Year1	2	3	4	5	6	7	8	9	10	11	12	
Self build	Home type													
	Apartments													
	1B2P	0	0	0	0	0	0	0	0	0	0	0	0	0
	2B4P	0	0	0	0	0	0	0	0	0	0	0	0	0
	3B4P	0	0	0	0	0	0	0	0	0	0	0	0	0
	3B5P Duplex	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total/ Average	0	0	0	0	0	0	0	0	0	0	0	0	
	Houses													
	2B4P Terrace	39	42	42	59	40	40	40	40	40	31	8	10	431
	3B5P Terrace	55	60	59	84	57	57	57	57	57	43	11	14	609
Land value	4B6P Terrace	20	22	22	31	21	21	21	21	21	16	4	5	225
	3B5P Semi-d	0	0	0	0	0	0	0	0	0	0	0	0	0
	4B6P Semi-d	0	0	0	0	0	0	0	0	0	0	0	0	0
	4B6P Detached	20	22	22	31	21	21	21	21	21	16	4	5	225
	4B7P Detached	20	22	22	31	21	21	21	21	21	16	4	5	225
	5B7P Detached	13	15	14	21	14	14	14	14	14	11	3	3	150
	Total/ Average	168	183	180	257	174	174	174	174	174	133	33	41	
	Total	169	184	181	258	175	175	175	175	175	133	33	42	1865.625
	check	168	183	180	257	174	174	174	174	174	133	33	41	1,866
	dif	1	1	1	1	1	1	1	1	1	1	0	0	0
		162	169	150	200	150	150	150	150	150	100	0	0	
Land value existing use		81,559	88,973	87,361	124,917	84,621	84,621	84,621	84,621	84,621	64,473	16,118	20,148	
GIA (M2)		20,372	22,224	21,822	31,203	21,137	21,137	21,137	21,137	21,137	16,105	4,026	5,033	
Total homes		909	1,115	1,413	1,541	1,252	1,264	1,249	1,249	1,249	1,283	1,250	1,216	14,991
Sales proceeds		3,677,149	4,011,436	3,938,765	5,631,997	3,815,224	3,815,224	3,815,224	3,815,224	3,815,224	2,906,837	726,709	908,387	

[illegible]

	GIA (M2)	Dwelling per hectare	A	B	C	sales proceeds to SPV	D - based on GIA (inc sub contract)	E Professional fees (10%)	F-4% sales margin	F-2% sales margin	Total private cost	D - social build cost (inc prof fees)	Total social cost
Apartments								0.1	0.04	0.02			
1B2P	50	232	325	17,011	22,164	39,500	47000	4700	3800	1,900	72,836	51,700	69,036
2B4P	70	160	471	29,209	5,460	35,140	65800	6580	4480	2,240	106,540	72,380	102,060
3B4P	86	144	524	35,307	9,645	45,476	80840	8084	5600	2,800	130,355	88,924	124,755
3B5P Duplex	96	58	1,300	35,307	6,209	42,816	90240	9024	5920	2,960	141,791	99,264	135,871
Total/ Average									0	0			
Houses									0	0			
2B4P Terrace	83	60	1,257	26,159	1,861	29,278	101675	10167.5	5880	2,940	145,139	66,193	93,609
3B5P Terrace	102	50	1,508	13,962	5,485	20,955	124950	12495	6600	3,300	159,515	81,345	96,815
4B6P Terrace	113	50	1,508	26,159	2,465	30,133	138425	13842.5	7600	3,800	187,535	90,118	117,785
3B5P Semi-d	105	34	2,218	17,011	36,083	55,313	128625	12862.5	8200	4,100	168,917	90,090	109,320
4B6P Semi-d	112	34	2,218	13,962	47,940	64,120	137200	13720	8960	4,480	176,060	96,096	112,276
4B6P Detached	135	28	2,693	20,061	82,748	105,503	139725	13972.5	10800	5,400	187,252	122,513	145,267
4B7P Detached	180	28	2,693	32,258	81,719	116,670	186300	18630	13400	6,700	253,281	163,350	198,301
5B7P Detached	220	24	3,142	38,356	92,031	133,530	227700	22770	16000	8,000	307,969	199,650	241,149

	GIA (M2)	Dwelling per hectare	PRS (5.5% on sales price)	Valuation Agency (Dec 2013) figures - lower quartile	Social rental pcm (6% on cost)	Social Medway HB cap	Social / PRS dif	Self build (private sale) A+B+.5C	Shared ownership (A+B+C/2)	Social rental (A+B+C/3)	Total to be built	GIA value	Total	£/GIA	
Apartments			0.055		0.06			0.4							
1B2P	50	232	435	495	345	466.51	79.3%	15,800.00	28,418.25	15,800	3,009	2.5	7,522	1,900	
2B4P	70	160	513	600	510	583.12	99.4%	14,056.00	32,409.96	14,056	2,154	4.5	9,693	1,600	
3B4P	86	144	642	670	624	645.00	97.2%	18,190.40	40,653.43	18,190	997	5.5	5,483	1,628	
3B5P Duplex	96	58	678		679	645.00	100.2%	17,126.40	39,711.71	17,126	323	5.5	1,775	1,542	
Houseboats	50	90							837.95				0		
Total/ Average													0		
Houses													0		
2B4P Terrace	83	60	674		468	583.12	69.5%	11,711.00	28,346.86	11,711	2,046	4	8,182	1,771	
3B5P Terrace	102	50	756		484	645.00	64.0%	8,382.00	18,212.73	8,382	2,321	2	4,643	1,618	
4B6P Terrace	113	50	871	895	589	862.02	67.6%	12,053.00	28,900.05	12,053	750	4	3,001	1,681	
3B5P Semi-d	105	34	940		547	645.00	58.2%	22,125.00	37,271.02	22,125	816	2.5	2,039	1,952	
4B6P Semi-d	112	34	1,027	1100	561	862.02	54.7%	25,648.00	40,150.13	25,648	793	2	1,587	2,000	
4B6P Detached	135	28	1,238				0.0%	42,201.00	64,128.32	42,201	635	3	1,905	2,000	
4B7P Detached	180	28	1,535		n/a			46,668.00	75,810.64	46,668	620	5	3,100	1,861	
5B7P Detached	220	24	1,833	1300			0.0%	53,412.00	87,514.38	53,412	545	6	3,270	1,818	
Total/ Average							57.5%								
													Total	52,200	£1,781

Proposed mean sales price	Hoo St Werburg/High Halstow comparator LOW	Hoo St Werburg/High Halstow comparator HIGH	MEDIAN	Ave cost/proceeds ratio	Est 1991 value (1/3)	Band	Dwellings	Sales price	=A+B+C+D+E+F+G
£95,000	£97,000	£140,000	£118,500	76.7%	£31,667	A	3,006	Agreed cost over-run	G
£112,000	£84,500	£155,000	£119,750	95.1%	£37,333	B	2,153	Developer margin	F=D x agreed margin
£140,000			£0	93.1%	£46,667	C	996	Professional fees	E
£148,000			£0	95.8%	£49,333	C	323	Agreed cost of construction (inc groundworks)	D
							0	Income for investors	C
							6,476	Infrastructure costs	B
							0	Average land acquisition cost	A
£147,000	£124,000	£170,000	£147,000	98.7%	£49,000	C	2,044		
£165,000	£124,500	£200,000	£162,250	96.7%	£55,000	C	2,319		
£190,000	£191,000	£249,995	£220,498	98.7%	£63,333	D	750		Developer sales margin
£205,000	£175,000	£236,000	£205,500	82.4%	£68,333	C	814		
£224,000	£178,000	£305,000	£241,500	78.6%	£74,667	D	791	Pioneer properties (first 1,500)	4%
£270,000	£242,500	£470,000	£356,250	69.4%	£90,000	D	634	Remainder phase 1 (next 3,500)	4%
£335,000	£335,000	£545,000	£440,000	75.6%	£111,667	E	619	Phase 2	2%
£400,000	£367,500	£456,000	£411,750	77.0%	£133,333	F	544	Phase 3	2%
								Phase 4	2%
				86.5%				Lowest home prices in area	

Total land acq cost	18,773,021		Connection costs (per home)	
Total residential area	248.93	ha	Water	475
Total £/ha res land	75,415.74	£/ha	Electric	480
GIA assignment	52,200		Gas	270
		£/M2	Sewer	150
Est unfunded infra costs	267,827,057		Telephone	390
groundworks costs	50,516,459	check		1765
	318,343,516	£ -		

Construction cost per SPONS 2012 (median values)

Const cost per M2				
Apartments	Floors	Private	HA	
1B2P	4	940	940	
2B4P	4	940	940	
3B4P	4	940	940	
3B5P Duplex	2	940	940	
Houseboats	1			
Total/ Average				
Houses				Dif
2B4P Terrace	2	1225	725	0.59184
3B5P Terrace	2	1225	725	0.59184
4B6P Terrace	2	1225	725	0.59184
3B5P Semi-d	2	1225	780	0.63673
4B6P Semi-d	2	1225	780	0.63673
4B6P Detached	2	1035	825	0.7971
4B7P Detached	2	1035	825	0.7971
5B7P Detached	2	1035	825	0.7971
Total/ Average				

New Homes Bonus estimate

	Year Council tax	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Total
Properties constructed per band																			
A 6 year cumulative total		152	196	263	275	239	247	246	249	256	276	301	310	0	0	0	0	0	3,009
Council tax received	970	152	348	611	886	1,125	1,372	1,465	1,518	1,511	1,512	1,574	1,637	1,392	1,143	887	612	310	
		147,408	337,589	592,340	859,020	1,090,988	1,330,396	1,421,123	1,472,351	1,465,556	1,466,233	1,526,411	1,588,072	1,349,937	1,108,528	860,572	593,216	301,069	
B 6 year cumulative total		108	136	188	196	172	180	176	177	178	194	216	234	0	0	0	0	0	2,154
Council tax received	1132	108	244	432	628	800	980	1,048	1,088	1,078	1,076	1,120	1,174	998	821	644	450	234	
		104,633	236,998	419,190	609,182	776,013	950,237	1,016,647	1,055,770	1,045,956	1,044,063	1,086,819	1,139,150	968,107	796,619	624,242	436,143	226,555	
C 6 year cumulative total		411	507	629	700	548	551	542	538	530	541	508	496	0	0	0	0	0	6,502
Council tax received	1294	411	918	1,548	2,248	2,796	3,347	3,478	3,509	3,410	3,250	3,210	3,155	2,613	2,075	1,545	1,005	496	
		398,464	890,644	1,501,086	2,180,167	2,711,926	3,246,796	3,374,011	3,403,631	3,307,228	3,152,614	3,113,868	3,060,458	2,534,779	2,012,979	1,498,940	974,473	481,460	
D 6 year cumulative total		149	184	214	235	188	186	185	185	185	180	157	131	0	0	0	0	0	2,179
Council tax received	1456	149	333	547	782	971	1,156	1,192	1,193	1,164	1,109	1,077	1,022	838	653	468	287	131	
		144,478	323,123	530,480	758,705	941,537	1,121,630	1,156,339	1,157,043	1,129,358	1,075,875	1,045,035	991,711	812,523	633,174	453,502	278,761	126,768	
E 6 year cumulative total		48	58	63	73	56	54	54	54	54	49	35	24	0	0	0	0	0	620
Council tax received	1779	48	106	169	242	298	351	357	353	344	320	299	268	215	161	107	58	24	
		46,559	102,988	164,312	234,740	288,721	340,919	346,557	342,327	333,201	310,121	289,748	260,415	208,217	156,018	103,820	56,472	22,865	
F 6 year cumulative total		41	51	56	62	49	47	47	47	47	43	33	22	0	0	0	0	0	545
Council tax received	2103	41	92	148	210	259	306	311	307	298	279	264	239	192	146	99	55	22	
		40,015	89,304	143,619	204,023	251,214	296,622	302,015	298,134	289,228	270,998	256,121	231,961	186,553	141,145	95,737	53,562	21,248	

																		15008.625
Affordable homes built		286	383	530	707	524	564	599	649	749	783	783	933	0	0	0	0	0
Affordable homes bonus	£350	£100,038	£134,078	£185,417	£247,465	£183,444	£197,444	£209,694	£227,194	£262,194	£273,933	£274,108	£326,710	£0	£0	£0	£0	£0
Total cash inflow		£981,597	£2,114,724	£3,536,444	£5,093,302	£6,243,842	£7,484,043	£7,826,386	£7,956,450	£7,832,720	£7,593,836	£7,592,112	£7,598,477	£6,060,115	£4,848,464	£3,636,813	£2,392,626	£1,179,965
																		£89,971,916

Investor cash flow and return analysis

Investor cash flows and asset contributions

	Pension Fund		Development Investor		Church Commissioners		
	ELP Cash in (£)	Out (£)	DLP Cash in (£)	Cash out (£)	ELP Cash in (£)	DLP Cash in (£)	Cash out (£)
<i>Step 1: Set up of ELP 1</i>							
Pension Fund							
Church Commissioners							
Promoter							
<i>Step 2: Enter into discussions with Medway UA re: transport infrastructure funding, cities deal and engage with local community and land owners</i>							
Pension Fund	£100,000						
Promoter							
Local investor contributions							
Pension Fund							
Notional resident contributions							
<i>Step 3: Acquire land for Phase 1</i>							
Other land acq costs inc promoter reward	3,188,008		£7,289,866				
Contribute land					£249,998	£1,354,851	
Agreed contribution uplift (9X)					£2,249,979	£12,193,660	
Preliminaries work	£5,199,710		£11,574,521				
Social infra cost	£27,567,706		£53,365,542				
Local investor contributions							
<i>Step 4: Construction Phase 1</i>							
Construction costs inc fees	£127,302,985		£44,120,429				
<i>Contributions after Construction phase 1</i>	£163,358,409		£116,350,358	£0	£2,499,977	£13,548,511	£0
<i>Suggested sharing arrangements</i>							
ELP		Annuity	Yield				
Church Commissioners	1.51%	£124,370	49.75%				
Pension Fund	98.49%	£8,126,812	4.97%				
DLP							
Church Commisioners	8.78%	10 x initial land value					
Pension Fund	75.42%						
Promoter	1.75%	100% of cost incentive					
Local investors	14.01%						
<i>Step 5: Phase 1 sales</i>							
<i>Phase 1 running costs (met by DLP)</i>							
<i>Structure running costs</i>							
<i>Estimated transport subsidies</i>							

				Pension Fund		Development Investor		Church Commissioners		
				ELP Cash in (£)	Out (£)	DLP Cash in (£)	Cash out (£)	ELP Cash in (£)	DLP Cash in (£)	Cash out (£)
<i>Funding for Community Trust</i>										
<i>Medway planning team costs</i>										
<i>Contingency (5%)</i>										
<i>Step 6: full profit distribution</i>										
Remaining cash balance and allocation						£93,787,526	£68,671,266		£10,921,164	£7,996,481
<i>Phase 2: step 1 acquire land</i>										
Land acquisition				1,960,215						
Contribute land								£344,115	£1,196,344	
Uplift								£3,097,031	£10,767,095	
Preliminaries+social infra				£42,259,986						
<i>Step 2: construction</i>										
Construction + prof fees				£154,226,577						
<i>Contributions after Construction phase 2</i>				£361,805,186		£116,350,358		£5,597,008	£24,315,605	
<i>Suggested sharing arrangements</i>										
ELP		Annuity	Yield							
Church Commissioners	1.52%	£268,233	45%							
Pension Fund	98.48%	£17,339,310	4.79%							
DLP										
Church Commisioners	14.73%									
Pension Fund	70.50%									
Promoter	1.66%									
Local investors	13.10%									
	100.00%									
<i>Step 3: Phase 2 sales</i>										
<i>Phase 2 running costs (met by DLP)</i>										
<i>Structure running costs</i>										
<i>Estimated transport subsidies</i>										
<i>Funding for Community Trust</i>										
<i>Medway planning team costs</i>										
<i>Contingency (5%)</i>										
<i>Step 4: full profit distribution</i>										
Remaining cash balance							£77,933,720			£16,287,063
<i>Phase 3: step 1 acquire land</i>										
Land acquisition				2,470,351						
Contribute land								£592,872	£969,165	
Uplift								£5,335,845	£8,722,489	
Preliminaries+social infra				£52,389,640						
<i>Step 2: construction</i>										
Construction + prof fees				£173,217,224						

				Pension Fund		Development Investor		Church Commissioners		
				ELP Cash in (£)	Out (£)	DLP Cash in (£)	Cash out (£)	ELP Cash in (£)	DLP Cash in (£)	Cash out (£)
<i>Contributions after Construction phase 2</i>				£589,882,401		£116,350,358		£10,932,853	£33,038,094	
<i>Suggested sharing arrangements</i>										
ELP		Annuity	Yield							
Church Commissioners	1.82%	£490,540	41%							
Pension Fund	98.18%	£26,467,109	4.49%							
DLP										
Church Commisioners	19.01%									
Pension Fund	66.96%									
Promoter	1.58%									
Local investors	12.44%									
<i>Step 3: Phase 2 sales</i>										
<i>Phase 3 running costs (met by DLP)</i>										
<i>Structure running costs</i>										
<i>Estimated transport subsidies</i>										
<i>Funding for Community Trust</i>										
<i>Medway planning team costs</i>										
<i>Contingency (5%)</i>										
<i>Step 4: full profit distribution</i>										
Remaining cash balance and allocation							£71,220,234			£20,223,236
							£93,787,526			£10,921,164

Investor cash flows and asset contributions

	Promoter		Local Investors		External income	External costs	Dev Part balance	Notes
	DLP Cash in (£)	Cash out (£)	DLP Cash in (£)	Cash out (£)				
Step 1: Set up of ELP 1								
Pension Fund						(£50,000)		Pays costs of LPA and agrees to contribute cash as per the Investment Plan should land options and planning be forthcoming
Church Commissioners								Agrees to contribute freeholds to ELP1 on same basis
Promoter	£50,000							Agrees to undertake best efforts to gain options over land and planning permission and foot initial costs for enhanced return
Pension Fund						(£100,000)		Sets up development company for local investors and Development Partnership
Promoter	£2,697,216					(£2,697,216)		Planning and land option premiums
Local investor contributions			£8,000,000				£8,000,000	
Pension Fund		£5,494,432					£0	Covers investment offer cash
Notional resident contributions			£619,725					
Step 3: Acquire land for Phase 1								
Other land acq costs inc promoter reward						(£10,477,873)		
Contribute land								
Agreed contribution uplift (9X)								Uplift for provision of land to ELP - TBC
Preliminaries work						(£11,574,521)		
Social infra cost						(£61,365,542)	(£8,000,000)	
Local investor contributions			£2,000,000					
Step 4: Construction Phase 1								
Construction costs inc fees						(£171,423,414)		
Contributions after Construction phase 1	£2,747,216	£5,494,432	£10,619,725	£0				
Step 5: Phase 1 sales					£225,839,742		£225,839,742	
Phase 1 running costs (met by DLP)								
Structure running costs						£400,000		
Estimated transport subsidies						£8,000,000		
Funding for Community Trust						£400,000		
Medway planning team costs						£1,200,000		
Contingency (5%)						£440,000		
							(£10,440,000)	
Step 6: full profit distribution		£1,591,927		£12,760,201			(£91,049,385)	
Remaining cash balance and allocation	£2,174,168		£17,427,196				£124,350,358	
Phase 2: step 1 acquire land								
Land acquisition						£3,142,330	(£3,142,330)	
Contribute land								

	Promoter		Local Investors		External income	External costs	Dev Part balance	Notes
	DLP Cash in (£)	Cash out (£)	DLP Cash in (£)	Cash out (£)				
Uplift								
Preliminaries+social infra						£64,228,807	(£64,228,807)	
Step 2: construction								
Construction + prof fees						£31,143,833	(£31,143,833)	
Contributions after								
Construction phase 2	£2,747,216		£10,619,725				£25,835,388	
Step 3: Phase 2 sales					£217,397,200		£217,397,200	
Phase 2 running costs (met by DLP)								
Structure running costs						£400,000		
Estimated transport subsidies						£6,000,000		
Funding for Community Trust						£400,000		
Medway planning team costs						£1,200,000		
Contingency (5%)						£340,000		
							(£8,340,000)	
Step 4: full profit distribution		£1,840,138		£14,481,310			(£110,542,231)	
Remaining cash balance							£124,350,358	
Phase 3: step 1 acquire land								
Land acquisition						£2,622,252	(£2,622,252)	
Contribute land								
Uplift								
Preliminaries+social infra						£53,757,604	(£53,757,604)	
Step 2: construction								
Construction + prof fees						£41,525,110	(£41,525,110)	
Contributions after								
Construction phase 2	£2,747,216		£10,619,725				£26,445,392	
Step 3: Phase 2 sales					£210,503,898		£210,503,898	
Phase 3 running costs (met by DLP)								
Structure running costs						£400,000		
Estimated transport subsidies						£4,000,000		
Funding for Community Trust						£400,000		
Medway planning team costs						£1,200,000		
Contingency (5%)						£240,000		
							(£6,240,000)	
Step 4: full profit distribution		£1,681,622		£13,233,839			(£106,358,932)	
Remaining cash balance and allocation		£2,174,168		£17,427,196			£124,350,358	

Development Appraisal

	Social rental			PRS		
	P1	P2	P3	P1	P2	P3
Homes	693	1,340	2,467	850	650	0
DEVELOPMENT COSTS						
1.Land acquisition						
On 10% non CC land	£15,172	£29,337	£54,011	£12,606	£8,898	£11,864
On land owner incentives (10% non CC land)	£15,172	£29,337	£54,011	£12,606	£8,898	£11,864
Assumed SDLT 4%	£30,725	£59,410	£109,376	£37,205	£28,392	£949
Assumed professional fees	£1,517	£2,934	£5,401	£1,261	£890	£1,186
Promoter reimbursement	£375,508	£0	£0	£460,580	£0	£0
Promoter fee	£375,508	£0	£0	£460,580	£0	£0
Compensation existing farm residents+break costs	£536,255	£1,036,915	£1,909,006	£657,744	£502,981	£0
Total	£1,349,858	£1,157,932	£2,131,805	£1,642,581	£550,058	£25,864
2. Social infrastructure costs						
On preliminary works	£2,335,320	£4,515,626	£8,313,469	£2,864,390	£2,190,416	£0
On social infrastructure	£12,381,348	£23,940,847	£44,076,171	£15,186,358	£11,613,097	£0
Total	£14,716,668	£28,456,473	£52,389,640	£18,050,748	£13,803,513	£0
3. Build costs						
On buildings as per tenure mix	£44,234,638	£85,533,065	£157,470,203	£71,495,349	£54,672,914	£0
Professional fees @10%	£4,423,464	£8,553,307	£15,747,020	£7,149,535	£5,467,291	£0
Total	£48,658,101	£94,086,372	£173,217,224	£78,644,884	£60,140,205	£0
4. Finance costs	£0	£0	£0	£0	£0	£0
5. Post construction costs						
Promotion costs				£81,025	£61,960	£0
Total	£0	£0	£0	£81,025	£61,960	£0
Total development cost	£64,724,627	£123,700,777	£227,738,669	£98,419,237	£74,555,737	£25,864
Annuity related cost	£64,724,627	£123,700,777	£227,738,669			
PRS related cost				£98,419,237	£74,555,737	£25,864
1. Rental income						
Social rent @6% costs pa	£3,883,478	£7,422,047	£13,664,320			
Rental management fees to LA/HA@1.9%	(£1,229,768)	(£2,350,315)	(£4,327,035)			
Annuity value (analysis below)	4.1%	4.1%	4.1%	5.7%	5.7%	0.0%
PRS rent @ 5.5% based on sale prices				£6,215,413	£4,752,963	£
PRS rental management fees				(£621,541)	(£475,296)	£0

	Shared ownership			Self build			Private sale			Total	Check
	P1	P2	P3	P1	P2	P3	P1	P2	P3		
Development LP related cost		£54,075,213	£37,845,623	£50,460,831	£18,810,814	£15,877,910	£8,695,046	£68,710,951	£53,253,979	£46,115,944	£353,846,312
2. Sales income											
Sales proceeds (for private- 5% P2 uplift, 2.5% P3)		£62,891,117	£44,393,730	£59,191,640	£21,574,183	£19,076,120	£10,446,447	£414,890,012	£394,404,818	£348,442,784	£1,375,310,851
Less developer/subcontractor costs								(£256,268,950)	(£232,014,924)	(£200,210,117)	
Development LP related value		£62,891,117	£44,393,730	£59,191,640	£21,574,183	£19,076,120	£10,446,447	£158,621,062	£162,389,893	£148,232,666	£686,816,859
Development LP profit		£8,815,904	£6,548,107	£8,730,809	£2,763,369	£3,198,210	£1,751,400	£89,910,111	£109,135,915	£102,116,723	£332,970,547
Profit on cost		16.3%	17.3%	17.3%	14.7%	20.1%	20.1%	130.9%	204.9%	221.4%	
Comparative profit ratio								27.7%	38.3%	41.5%	
Profit on GDV		14.0%	14.8%	14.8%	12.8%	16.8%	16.8%	56.7%	67.2%	68.9%	

Investor Return Analysis

IRR calculations	Year	2015	2016	2017	2018	2019	2020	2021	2022
Investor and cash flow		Setup, option purchase and outline planning		Project agreements	SITE WORKS+ INFRA START	2019 DETAIL PLANNING			
Promoter	IRR								
	30.96%	(£2,747,216)	£0	£0	£5,494,432	£0	£0	£0	£0
Pension Fund PRS									
- set up and acq costs		(£100,000)	£0		(£1,750,315)				(£632,443)
-prelim and social infra costs						(£3,610,150)	(£3,610,150)	(£3,610,150)	(£3,610,150)
- construction costs						(£16,822,435)	(£16,822,435)	(£16,822,435)	(£21,028,044)
- rental income						£1,440,407	£2,880,813	£4,681,321	
Cash flow	9.45%	(£100,000)	£0	£0	(£1,750,315)	(£3,610,150)	(£18,992,178)	(£17,551,771)	(£20,589,315)
Pension Fund (social rent)									
- set up and acq costs					(£1,437,693)				(£1,327,772)
-prelim and social infra costs						(£2,943,334)	(£2,943,334)	(£2,943,334)	(£2,943,334)
- construction costs						(£4,340,484)	(£7,978,831)	(£14,361,895)	
- rental income						£471,050	£912,109	£1,664,547	
Cash flow	2.64%	£0	£0	£0	(£1,437,693)	(£2,943,334)	(£6,812,768)	(£10,010,056)	(£16,968,454)
Church Commissioners									
-contribute land					(£1,604,849)				(£1,540,458)
-annuity payments							£7,209	£13,959	£25,474
- PRS payments							£22,043	£44,087	£71,641
- development returns									
Cash flow	47.14%	£0	£0	£0	(£1,604,849)	£0	£29,252	£58,045	(£1,443,344)
Hoo Resident Investors	17.04%	£0	(£8,000,000)	£0	(£2,000,000)	£0	£0	£0	£0
Development Investor									
- set up and acq costs					(£7,289,866)				
-prelim and social infra costs						(£12,988,013)	(£12,988,013)	(£12,988,013)	(£12,988,013)
- construction costs						(£11,030,107)	(£11,030,107)	(£11,030,107)	
- trade income									
Cash flow	15.70%	£0	£0	£0	(£7,289,866)	(£12,988,013)	(£24,018,120)	(£24,018,120)	(£24,018,120)

IRR calculations	Year	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Investor and cash flow											
IRR											
Promoter	30.96%	£1,591,927	£0	£0	£0	£1,840,138	£0	£0	£0	£1,681,622	£2,174,168
Pension Fund PRS											
- set up and acq costs											
-prelim and social infra costs		(£6,370,852)	(£2,760,703)	(£2,760,703)	(£2,760,703)	(£2,760,703)					
- construction costs		(£16,822,435)	(£16,822,435)	(£16,822,435)	(£12,616,826)	(£8,411,218)	£0	£0	£0	£0	
- rental income		£6,121,728	£7,561,899	£9,002,070	£10,082,198	£10,802,284	£10,802,284	£10,802,284	£10,802,284	£10,802,284	£211,115,980
Cash flow	9.45%	(£17,071,559)	(£12,021,239)	(£10,581,068)	(£5,295,331)	(£369,636)	£10,802,284	£10,802,284	£10,802,284	£10,802,284	£211,115,980
Pension Fund (social rent)											
- set up and acq costs					(£2,444,487)						
-prelim and social infra costs		(£8,634,628)	(£5,691,295)	(£5,691,295)	(£5,691,295)	(£16,169,223)	(£10,477,928)	(£10,477,928)	(£10,477,928)	(£10,477,928)	
- construction costs		(£17,553,428)	(£17,553,428)	(£20,106,653)	(£22,340,726)	(£25,532,258)	(£31,915,323)	(£35,106,855)	(£41,489,920)	(£48,958,105)	
- rental income		£2,722,073	£3,660,588	£4,702,191	£5,932,692	£7,616,406	£9,322,902	£11,157,868	£13,249,779	£15,642,313	£15,642,313
Cash flow	2.64%	(£23,465,983)	(£19,584,134)	(£21,095,757)	(£24,543,816)	(£34,085,075)	(£33,070,349)	(£34,426,915)	(£38,718,069)	(£43,793,720)	£15,642,313
Church Commissioners											
-contribute land					(£1,562,037)						
-annuity payments		£41,658	£56,628	£72,741	£91,777	£117,823	£172,790	£206,799	£245,571	£289,914	£289,914
- PRS payments		£93,685	£116,980	£139,259	£155,968	£167,108	£167,108	£167,108	£167,108	£167,108	£3,265,895
- development returns		£7,996,481				£16,287,063				£20,223,236	£10,921,164
Cash flow	47.14%	£8,131,823	£173,608	£212,000	(£1,314,292)	£16,571,994	£339,898	£373,907	£412,679	£20,680,258	£14,476,973
Hoo Resident Investors	17.04%	£12,760,201	£0	£0	£0	£14,481,310	£0	£0	£0	£13,233,839	£17,427,196
Development Investor											
- set up and acq costs											
-prelim and social infra costs		(£12,988,013)									
- construction costs		(£11,030,107)									
- trade income		£68,671,266				£77,933,720				£71,220,234	£93,787,526
Cash flow	15.70%	£44,653,146	£0	£0	£0	£77,933,720	£0	£0	£0	£71,220,234	£93,787,526

Appendix 06 – Additional Community Trust income sources

In addition to ground rents and rents on commercial property, the Community Trust will have a series of sources of income:

Property gains levy

All freeholds will have a covenant added such that c5% of the increase in the proceeds of the sale of an existing interest above the previous premium/sales proceeds will be payable to the Community Trust or its equivalent body in future years (sales/grants of new land interests by SH Partnership would be exempt). Where a new interest is granted then the charge would be c0.5% of premium plus NPV of rents over the life of the lease (where the rents are not nominal). All leaseholds will be granted subject to terms that specify a payment in line with the above and that corresponding terms be included in the sub-lease (so any further inferior interests have the same obligations).

This is not a transaction tax but a community levy on any increase in value, which allows the community to share in the fruits of any property value increases. This recognises that property value is to a high degree dependent on the environment and community in which it is sited.

Car parking fees

As per our design principles, we recognise that a semi-rural community will require cars but that cars on the whole have a net negative impact on a community in terms of space usage, traffic, environmental impact and community safety. Accordingly, each incremental car parking permit per residence will be more expensive, so that the community benefits from residences that choose to own multiple cars and the fee is also dependent on Carbon Dioxide Emissions. Our proposed car parking fees for the first vehicle are shown below:

Band	Pre-2001 (cc)	Post-2001 (CO2g/km)	12 months	6 months	3 months	1 month
A	Electric	0-100	Free	Free	Free	Free
B	1-900	101-110	£15	£7.50	£5.50	£5.50
C	901-1100	111-120	£27	£13.50	£6.75	£5.50
D	1101-1200	121-130	£72	£36	£18	£6
E	1201-1300	131-140	£87	£43.50	£21.75	£7.25
F	1301-1399	141-150	£94	£47	£23.60	£8
G	1400-1500	151-165	£117	£58.50	£29.25	£9.75
H	1501-1650	166-175	£135	£67.50	£33.75	£11.25
I	1651-1850	176-185	£158	£79	£39.50	£13.50
J	1851-2100	186-200	£200	£100	£50.20	£17
K	2101-2500	201-225	£232	£116	£58	£19.50
L	2501-2750	226-255	£325	£163	£81.50	£27.50
M	2751 and above	256 and above	£420	£210	£105	£35.50

The second vehicle per residence will be charged at a rate of 1.5 times the above plus £15, and third or greater vehicles at 2 times the above plus £25.

Houseboat mooring fees

We estimate that our harbour, canals and jetty will have room for up to 750 houseboats and yachts. Our proposed mooring fees are £1-£2 per foot per week depending on site with some berths reserved for short term visitors at a higher rate, electricity is metered and water charged at £3.50 a week. These charges are similar to other houseboat moorings in the region.

Harbour

Commercial harbour licences from leisure operators, plus visiting mooring fees at £2.50 per metre

Donations in lieu of infrastructure payments

A donation of c.£1m from the original regional food store, in lieu of infrastructure payments, and a further payment from the second food store when this opens during Phase 2

Community Trust Example Income Statement

For the Year Ended 31 December 20XX

	Current year (£)	Prior Year (£)
<i>Income</i>		
Residential head rent	£801,270	£801,270
Annual resident parking permits	£1,305,000	
Excess of car park income over costs	£230,000	£588,000
Commercial land rent	£19,875,000	£19,000,000
Industrial land rent	£4,200,000	£4,000,000
Excess of harbour income over cost	£200,000	£195,000
House boat licenses	£702,000	£923,575
	£ 27,313,270	£ 25,507,845
<i>Expenditure</i>		
Running costs including management board	(£1,365,664)	(£1,380,258)
Wider Hoo peninsula expenditure (10%)	(£2,731,327)	(£2,550,785)
Transport subsidies	(£1,365,664)	(£1,200,677)
Further education and apprenticeship funding	(£5,462,654)	(£4,855,551)
Asset maintenance	(£4,000,000)	(£4,000,000)
Tourism marketing expenditure	(£500,000)	(£500,000)
Environmental and ecology expenditure	(£850,000)	(£844,000)
Contribution to flood defence maintenance	(£250,000)	(£250,000)
Other community-based expenditure	(£1,500,000)	(£1,475,000)
	(£18,025,308)	(£17,056,271)

For the Year Ended 31 December 20XX

	Current year (£)	Prior Year (£)
Excess of income over expenditure	£9,287,962	£8,451,575
Contribution to long term sinking fund (10% of annual profit)	£928,796	£845,157
Contribution to reserves	£8,359,166	£7,606,417
Sinking fund balance b/f	£ 6,274,144	£ 5,428,987
Sinking fund balance c/f	£ 7,202,941	£ 6,274,144
Reserves b/f	£ 56,174,974	£ 48,568,557
Reserves c/f	£ 64,534,140	£ 56,174,974

Stoke Harbour Community Trust Example Asset Register

As at 31 December 20XX

Assets	Ha/number	Notes
Commercial land	13.25	Ave rent £150/M2
Industrial land	5.25	Ave rent £80/M2
Social rent freehold	33.72	Not income generating until 45 year lease expires in 20XX
Shared ownership freehold	9.35	150 year leases
Owner occupier freehold	62.40	150 year leases
Self build freehold	8.38	150 year leases
House boat spaces (canal, jetty and harbour)	600	50% capacity, ave £45pw
Harbour - visitor mooring spaces	150	£2.50 per m
Designated green spaces	200.00	
Car park area	11.50	5,800 car maximum

Appendix 07 – Mitigation of known local concerns

Concern raised	Stoke Harbour proposal	Benefit to existing residents	Affected Group
Congestion at Four Elms roundabout	Doubling of roundabout capacity prior to any residential construction	Improvement to daily car/bus journeys	Hoo Peninsula
No proposal for rail links	New passenger service prior to any residential construction	Connectivity and traffic reduction, reduced journey times Increased property prices	Hoo Peninsula
Local bus service inadequate	Dedicated bus lane and subsidised peak time and throughout the day services.	Connectivity and traffic reduction	Hoo Peninsula
Existing low quality internet provision	Broadband built in during construction allows connections to existing towns	Digital connectivity Enterprise opportunities	Hoo Peninsula
Current schools are failing	New schools open to existing Hoo Peninsula residents, with partnerships with Canterbury Christchurch University's teacher training department. Further education provision.	Raised educational standards Increase in aspiration Economic growth Increased property prices	Neighbouring Community, Hoo Peninsula
Nearest hospital is in Rochester	Provision of a community hospital with a minor injuries clinic and emergency services hub	Reduced waiting times and travel distances for treatment	Neighbouring Community, Hoo Peninsula
Foodstore retail provision is insufficient and fragmented	Provision of two regional food stores	Lower food prices and increased convenience Employment	Neighbouring Community
Insufficient existing employment opportunities	Creation of thriving Stoke Harbour economy and related employment.	Multiple employment opportunities Connectivity allows a number of job markets to be accessed.	Hoo Peninsula
Construction traffic is a concern	Modular construction using industry located in Hoo. Use of rail and port links (and the harbour) to deliver material.	Minimisation of construction traffic	Neighbouring Community