Housing Infrastructure Fund

Business Case - HIF/FF/000369/BC/01 - Colchester Braintree Borders Garden Community

Bid Details

Lead Authority

Essex County

Is it a joint bid with other Local Authorities?

No

Contact Details

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Are you an agent making this submission on behalf of one or multiple Local Authorities?

No

Are the contact details provided above for the lead responsible officer for the project at the local authority?

Yes

Project Summary

What is the name of the scheme

Colchester Braintree Borders Garden Community

Please provide an Executive Summary for your proposal

Unique location

Essex is the largest county bordering London, with excellent rail and road connectivity. Essex hosts two major airports (London Stansted and London Southend), three major shipping ports (Tilbury, Harwich and London Gateway) and two universities (Essex and ARU).

Essex has an ambitious housing growth strategy to enable over 180,000 additional homes in the next 20 years (Att.1.1.2a pp.30-35). Essex County Council (ECC) as the lead bid co-ordinator is committed to housing growth and has established a new team to drive this agenda (Att.1.1.2b pp.12-13).

Colchester and Braintree enjoy a buoyant housing market. However, growth has put pressure on affordability - the ratio of median house prices to median workplace-based incomes is 8.89 and 9.50 respectively (Att.1.1.2c).

Our project will unlock the Colchester Braintree Borders Garden Community one of three garden communities in the shared Section 1 of Braintree, Colchester and Tendring Local Plans, with combined potential to deliver up to 43,000 homes; is the largest and most ambitious project in the Garden Towns Villages & Cities programme run by MHCLG.

However, there is a market failure. The scale of infrastructure required cannot be provided incrementally through developer contributions (or other public/private sector investment); it requires funding to give certainty on infrastructure delivery to facilitate and future proof the delivery of this exciting and ground-breaking new community.

Our HIF ask

This HIF bid ask is for £228,592,861 for A12 improvements beyond those in existing proposals from Highways England, comprising of additional lane dualling, a new junction and highway realignment. This infrastructure will facilitate the delivery of 21,000 new homes of which 15,000 are unlocked by this HIF investment (Att.1.1.2d).
Without this funding, development is capped at around 6,000 homes. At this level, it is unlikely that the development would be included in the emerging shared Section 1 of the Local Plans; it would not accord with the emerging planning policy position as it would not deliver the ambitions for the scale and quality of this new garden community.

Our delivery arrangements

Braintree District Council, Colchester Borough Council, Tendring District Council and Essex County Council (‘the Councils’) have been collaborating at both political and corporate levels for several years to establish an agreed strategic approach to large-scale plan-led housing and employment growth.

Housing

The majority of the site (Att.1.1.2d) is promoted by a land promoter with important additional land outside of this agreement owned by two further landowners. Delivery preference is for a ‘master developer’ approach to implement strategic infrastructure and enable developers to take serviced land to deliver new housing.
The Councils have established a wholly-owned company called North Essex Garden Communities Ltd. (NEGC Ltd.) to take an active role in delivery and ensure that growth occurs both at pace and to the quality to satisfy placemaking ambitions.

Infrastructure

ECC have a demonstrable track record of delivering large-scale infrastructure enhanced by strong working relationships with Department for Transport, Highways England and the South East Local Enterprise Partnership.

Infrastructure delivery will be through a robust partnership, making use of ECC's existing long-term relationships with Highways England, the organisation that will delivery this scheme.

Future Vison and Outcomes

The delivery of further improvements to the A12 will unlock 15,000 additional high-quality homes, bringing benefits in the emerging Local Plan period to 2033 and sustaining high quality housing growth on this site for the next 50 years. Essex is one of the best places in the UK to deliver Government's aspirations for quality housing at scale, community integration, connectivity, economic growth and improved living standards.

This HIF bid is a key to delivering this future vision for Essex.

Please provide an overview of the project, including your project scope for the infrastructure and for the wider project

Homes

The housing site

The improvements to the A12 will unlock 15,000 new homes on the Colchester Braintree Borders Garden Community (CBBGC), a new and exciting development of 21,000 homes that will be comprehensively planned and accessible through a range of sustainable transport choices (Att.1.1.2e). An 'infrastructure-first' approach gives more confidence to existing communities that the appropriate level of infrastructure will be delivered at the right time and in the right locations.

Local Plan vision and context

The wider project is articulated in the emerging shared Section 1 of Braintree, Colchester and Tendring Local Plans (Att.1.1.3a). The councils recognise that addressing growth at scale must be founded on a vision of how and where change should occur. The vision for North Essex has identified it as a location for significant growth over the period to 2033 and beyond, and one which embraces the need to build a well-designed community. At the heart of the vision are three new garden communities (Att.1.1.3a pp.40-42, pp.47-50) to provide a steady and long-term supply of new housing in current and future Local Plan periods. A particular ambition for these three garden communities is to provide a long-term sustainable transport system that provides excellent access to jobs and services to support economic growth.

Timely provision of infrastructure is a key requirement of its inclusion in Local Plans. The Examination in Public (EiP) for the Shared Section 1 is currently paused following initial hearing sessions in January 2018 and requests from the Planning Inspector for further information. The EiP is expected to resume in Autumn 2019 with a target of adoption in 2020 (further detail about Local Plan progress can be found in the Strategic Case, question 2.2.2 and the Management Case, questions 7.3.3 and 7.4.3 and in summary in Att.1.1.3b).

Infrastructure

There is a strong and clear focus on the provision of the right infrastructure for the CBBGC, with appropriate connections, flexibility, future proofing and sustainable transport provisions.

Of key importance is the connection of the Garden Community to the Strategic Road Network; in particular, the A12 trunk road. This provides the main highway link to and from nearby towns, while nationally it is a major freight route through Essex and Suffolk, connecting Harwich and Felixstowe ports to London.

Highways England are committed to upgrading the A12 in north Essex. Their A12 Junction 19 to 25 Road Investment Strategy (RIS) scheme will upgrade the road from 2-lane to 3-lane dual carriageway between Chelmsford and Marks Tey. However, in order to provide for the level of housing proposed at the CBBGC, this HIF bid is for the following key infrastructure components over and

above the planned A12 improvements (Att.1.1.2d):

• A12 Realignment – This additional realignment of the A12 will provide capacity for further growth to enable the full potential of the CBBGC, and which would not otherwise have been delivered through the existing A12 RIS1 scheme/funding envelope. Without this realignment, land to the south of the existing A12 would become severed from the rest of the wider Garden Community, sterilising future housing and economic opportunities.

• Dual 4 lane carriageway - Widening of the A12 between Junctions 23 and 24 at Kelvedon Bypass to accommodate additional traffic flows from the new development

• A new grade separated junction including local road upgrades - This new junction – replacing the existing Junction 25 – will provide the improved access to the realigned A12 and facilitate the provision of Rapid Transit.

• Traffic signals at J23 - Provision of traffic signal at Junction 23 to allow controlled access to the A120 from the A12

The transport elements subject to this bid would be managed and delivered by Highways England as part of their committed Roads Investment Strategy scheme via dedicated governance and project management structures.

Site Details

How many housing sites will the funding bring forward?

2

Please provide a list of the housing sites that the funding will bring forward, including the amount of units to be delivered on each site, the lower tier or unitary authority the site is in and the current land ownership

Site name	No of units	Local authority	Current ownership	Planning status	Planning reference
Colchester Braintree Borders Garden Community	10465	Colchester	Land is currently in private ownership. One main promoter – G120/L&Q – and additional land owned by the West and Sherwood families	None	
Commentary					
The site is contained in the shared Section 1 of the North Essex Authorities' emerging Local Plans which are currently the subject of a joint Examination, with anticipated potential adoption of the shared Local Plans in 2020.					

Site name	No of units	Local authority	Current ownership	Planning status	Planning reference
Colchester Braintree Borders Garden Community 2	10466	Braintree	Land is currently in private ownership. One main promoter – G120/L&Q – and additional land owned by the West and Sherwood families	None	
Commentary					
The site is contained in the shared Section 1 of the North Essex Authorities' emerging Local Plans which are currently the subject of a joint Examination, with anticipated potential adoption of the shared Local Plans in 2020.					

Please provide site boundaries for all housing sites

(see final page of document)

Please attach scheme plan(s) for your proposal - these should include plans of housing sites and infrastructure

Filename	Description
190319 CBBGC HIF Preferred Option Hatched.pdf	Site Plan

What is the total size of the development (in hectares)?

1,200.00 ha

Of the total development size, what is the total housing area (in hectares)?

584.00 ha

How much of the total housing area is on:

Brownfield land

0.00 ha

Public sector land

0.00 ha

What are the proposed tenures of the homes to be delivered?

Affordable sale	12 %
Affordable rent	18 %
Market sale	70 %
Market rent	0 %
Other	0 %

Infrastructure Requirements

Please provide further details on the HIF infrastructure requirements and their link to the delivery of housing

Infrastructure Type	Road / highway - SRN	**Description**	Realignment of A12 between Feering and Marks Tey Upgrading of A12 Kelvedon Bypass from proposed 3-lane dual to 4-lane dual carriageway New grade separated interchange at Marks Tey (A12 Junction 25) Signalisation of southern A12 Jn 23 roundabout
HIF Funding	£228,592,861	**Link to housing**	Without the proposed infrastructure improvements, the CBBGC development would be limited to 6000 homes (because the impact of traffic generated by more than 6000 homes would be detrimental to the highway network) The realignment of the A12 between Feering and Marks Tey will enable the delivery of 21,000 homes in one unified community north of the A12. The widening of Kelvedon Bypass, the new grade separated interchange at Marks Tey and the signalisation of A12 Junction 23 (south) will enable the traffic associated with CBBGC to be accommodated on the highway network satisfactorily.
Sites benefitting	Colchester Braintree Borders Garden Community, Colchester Braintree Borders Garden Community 2		

Please outline, in further detail, the direct link between the infrastructure scheme(s) and how this unlocks the homes

There is a clear and direct link between the infrastructure schemes and how these unlock the homes identified in our bid.

Deliverability and soundness of Local Plan

A successful HIF bid would provide a strong confident position on ‘deliverability’ and plan soundness to demonstrate a proactive approach and show that funding opportunities were both suitable and available. This would address key questions raised by the Local Plan Inspector on viability and deliverability as part of further evidence gathering (Att.1.1.3b).

Without the HIF Forward Funding, there is a high risk that piecemeal development would be proposed, at considerably lower scale than potential for this site. This would not accord with the scale, quality and pace envisaged for this garden community as set out in the emerging Shared Section 1 of the Local Plans and would require testing as to the acceptability in planning terms.

Mitigates impact of new housing

In the absence of mitigating infrastructure, proposed housing at CBBGC would cause an unacceptable impact on the transport network. However, the widening of Kelvedon Bypass from 3-lane dual carriageway, as currently planned by Highways England, to 4-lane dual carriageway, would create sufficient capacity on the A12 to accommodate the traffic generated by the 21,000 homes proposed at the site and from wider development. A new grade separated interchange at Junction 25 (Marks Tey) would provide the improvements in access to the CBBGC required and facilitate the essential provision of a Rapid Transit System. Traffic signals on the southern roundabout of the proposed A12/A120 Junction 23 should ensure that the traffic generated by 21,000 homes will not cause undue delay at the interchange.

Creates new space for housing

The realignment work in this HIF bid will create the physical space to allow for development to the south of the existing A12, bringing together a single development that is not fragmented by a major highway. There is a clear spatial relationship between the proposed infrastructure and its impact in releasing a very large tract of development land for housing and economic benefit. The Councils have been clear that without further realignment the adjoining land around the route of the A12 would not be suitable to form part of Colchester Braintree Borders Garden Community (CBBGC). This land would therefore effectively be sterilised and the opportunity for an integrated approach to comprehensive placemaking would be lost.

Future proofing highway network

Such improvements to major strategic highways networks cannot be added incrementally. This HIF bid will allow for these works to be carried out at the same time as the major planned A12 enhancements by Highways England are carried out, maximising efficiency, minimising disruption and future-proofing this part of the highways network for many decades.

Addresses cashflow challenge

There is a market failure in the ability of the private sector to deliver upfront infrastructure of this scale. This is primarily due to the high infrastructure requirements set against local sales values; alongside core infrastructure requirements expected on any new development of this size, there is a need for ‘abnormal’ big ticket infrastructure items which form the basis of this bid.

Scheme viability

The approach to create Garden Communities is predicated upon delivery of appropriate infrastructure in a timely manner. Improvements to the A12 are key early requirements but are costly. Scheme viability is challenging where this infrastructure is to be funded up front by developers and the provision of funding would enable the scheme to come forward and deliver on its full potential.

Therefore, for the reasons outlined above, funding towards the provision of the infrastructure detailed in this bid is directly linked to the delivery of 15,000 additional homes to achieve a significant overall development of 21,000 homes.

Wider Development Impacts

Please provide a summary of what impact the scheme will have on the Transport Network

The specific impacts of the individual elements of the scheme are outlined below and described in detail in the Option Assessment Report (Att.4.9.3p):

Kelvedon Bypass

The A12 between junctions 23 and 24, known as Kelvedon Bypass, would not provide a satisfactory level of service with the A12 Junction 19 to 25 scheme in place and around 6,000 homes on the CBBGC site. The additional lane in each direction proposed in the HIF bid would enable Kelvedon Bypass to accommodate the traffic expected with a 21,000 home development in place at CBBGC, thereby unlocking 15,000 dependent homes (in association with the other HIF bid infrastructure proposals).

Realigned A12

The proposed realignment of the A12 would enable CBBGC to reach a larger maximum size (21,000, rather than 15,000 homes). As such, more traffic will ultimately be generated by the site in the future and wish to access the A12 in the vicinity of Junctions 24 (Feering) and 25 (Marks Tey). The widening of Kelvedon Bypass, the new Junction 25 and the signalisation of Junction 23 (south) will adequately accommodate this increased traffic.

New A12 Junction 25

A new grade separated junction would be required to replace the existing Junction 25 (J25) with 21,000 homes at CBBGC as the currently proposed access arrangements would not provide a satisfactory level of service. The provision of an upgraded J25 would also facilitate the provision of a public transport/active mode corridor on the old A120 (Stane Street), thereby providing the quality of public transport services envisaged for the Garden Community development.

A12 Junction 23

Traffic modelling has shown that, with a 21,000 home development CBBGC in place, delays at a non-signalised southern roundabout would be excessive. However, with signals installed at the roundabout, performance of the junction would be satisfactory.

Does the new housing development generate a need for new school places and how this will be accommodated

Education impacts have been calculated in accordance with population and pupil generation forecasting undertaken by Essex County Council and revised through emerging concept design work (Att.1.4.2.7a pp.43-61). Current workings indicate that the Garden Community will generate the need for the provision of 25 x Early Years Facilities, 11 x 2FE Primary Schools and 3 x 6-8 FE Secondary School.

These facilities are integrated into the overall masterplan approach to ensure that they are phased in accordance with housing and population growth and sited at appropriate locations across the site to be available locally and stimulate sustainable travel, walking and cycling. The approach will be evolved through further detailed modelling,
Development Plan Documents and Local Development Order preparation.

The first primary school will be required by the 300th house, with subsequent primary schools required roughly every 1,400 units. These will be accompanied by Early Years facilities. The secondary school is likely to be built in phases with the initial phase operational as part of the first or second phase of development.

The funding of education has been considered as part of the site wide viability and cashflow modelling and assumed to be developer funded. Provision will be sequenced throughout the development period.

No attachments

How have you assessed that no new utility infrastructure (electricity capacity, water, waste water, gas and telecoms) will be required for this scheme and future housing delivery, or, how additional utility infrastructure will be delivered without HIF funding?

There has been ongoing engagement with utility providers as part of the preparation of the Local Plans, which include and define the location of the Garden Community. The associated Infrastructure Delivery Plans identify the scope, scale and location of new facilities aligned to the scale and location of future population growth.

Planning policy for infrastructure provision and specifically for development on the Garden Community will require new and improved utilities as part of the scheme and wider strategic capacity for growth.

AECOM have undertaken technical feasibility and costing work as part of the feasibility process (not yet finalised – will be updated version of Att.1.4.2.7a pp.43-61). New provision and upgrades have been considered and included in the viability and cashflow modelling work aligned to the project. This includes connections in to existing networks, reinforcement works and new on-site provision. Significant elements will be required in early phases of development.

The funding of utility provision has been considered as part of the site wide cashflow modelling and assumed to be developer funded. Works will be delivered either via the masterdeveloper approach to provide serviced development plots and/or working with utility companies to secure improvements to strategic capacity & networks.

Filename	Description
1.4.2.7a - AECOM Options_and_Evaluation.pdf	1.4.2.7a Emerging Concept Design Work

What consideration have you given to ensuring that the health and care services locally will align with the additional homes to be built?

Essex County Council's (ECC) Public Health team have a designated lead on the healthy places agenda. This includes engaging with healthcare providers especially the NHS who provide much of the healthcare estates and infrastructure in Essex.
The lead has developed strong working relationships with the multiple partners required to ensure that health and care service providers locally are aware of, and engaged in, the planning for additional homes.
The Public Health team are invited to a variety of healthcare provider estates groups including that at an STP level. Public Health and local planning teams engage with strategic estates teams at NHS Improvement, Clinical Commission Groups (CCG) estates teams and STP estates leads to ensure that health providers are engaged with the local plan process including contributing to both the policy development and subsequent Infrastructure Delivery Plan.
In addition, for the strategic new settlements, several specific groups have been established to address need that will arise from these additional homes. These groups are made up on both health and wellbeing teams, healthcare estates teams, strategic estates leads, CCG estates teams and planning. They provide the opportunity to discuss issues and challenges arising from this anticipated growth.
One specific group has been identified by the TCPA as a 'good practice' example due to its innovative approach to addressing these issues. This includes submitting a 'single response' to proposals on behalf of the health economy. This group comprises of the CCG, acute providers, mental health providers, ambulance services, commissioned providers & Public Health. ECC is also addressing workforce need that will be required to support the additional homes including essential worker housing need. Private developer funding has currently been identified to provide capacity for 21 GPs & 29 dentists at the CBBGC site (report not yet finalised – will be updated version of Att.1.4.2.7a pp.43-61)

Have you engaged with your Sustainability and Transformation Partnership?

In addition to the work described in 1.4.4.1, Essex County Council's Public Health team is engaging with relevant STP programmes estates and infrastructure groups. They are also on STP local workforce groups to ensure that the anticipated new growth is considered as part of the workforce planning for the future.

If you have any further information to support your project overview, which has not already been captured in the above, please include this here

Securing Employment growth

Whilst this bid relates primarily to the relationship between investment in infrastructure and housing growth, it is also important to set out the wider economic objectives and the related impacts that investment could achieve in relation to local employment growth and economic prosperity.

Colchester Borough Council has set out a vision for Colchester to be 'the best-connected borough in the East of England, offering all businesses and all new residential developments world-class, future-proofed connectivity and to drive the uptake of digital technology to make the best of its potential for delivering economic growth and job creation'.

The area is identified in the Local Plan as a Strategic Economic Area (SEA) to drive future local economic growth. Colchester offers scope for expansion as a retail and service centre, linked with a growing tourism and accommodation offer. In particular, the Borough Council has promoted Colchester as a centre for the creative and media industries, linked with public investment in ultra-fast broadband.

Further along the A12 lies the Northern Gateway and Severalls Business Park, which are key employments zone for Colchester. These provides a wide mix of office, industrial, storage and manufacturing activities.

The Garden Community itself makes provision for employment generating uses to be provided with good accessibility directly from the strategic highways network. Importantly by removing the barriers of the present A12 supports a comprehensive approach to site wide masterplanning, to enable a dispersed approach to employment uses throughout the site. This is important to support the internalisation of trips, promoting sustainable patterns of movement, and minimising wider impacts on the transport network.

The importance of employment has been recognised from the outset. It also means that the Garden Community will be designed to anticipate mid-21st century lifestyles to the full. The improvements in accessibility brought about by investment in the strategic road network and importantly the role that this then plays in enabling considerable private sector investment in the providing a Rapid Transit System (RTS) across the wider area and into Colchester Investment will contribute greatly to achieving wider economic ambitions.

Filename	**Description**
1.1.3 a - Shared Section 1 Publication Draft June 2017.pdf	1.1.3a Shared Section 1
1.1.3 b - Local Plan Summary.docx	1.1.3b Local Plan Summary

Strategic Case

Strategic Approach

How will this scheme support your long term housing and economic growth ambitions? Please refer to any development plans and / or associated planning guidance policies

This scheme is essential to deliver our long-term ambitions for housing and economic growth, set out in the emerging shared Section 1 of Braintree, Colchester and Tendring Local Plans (Att.1.1.3a). A successful HIF bid would provide a strong confident position on 'deliverability' and plan soundness to address key questions raised by the Local Plan Inspector (Att.1.1.3b).

HIF-enabled infrastructure directly unlocks 15,000 homes on Colchester Braintree Borders Garden Community (CBBGC), contributing a significant number of homes in the emerging Local Plan period to 2033 and beyond. Furthermore, strong local economic growth alongside population and housing growth is an important policy driver and a key component of Garden City principles.

The infrastructure unlocks the housing and the housing drives economic growth – providing one job per home will create 21,000 new jobs form this garden community alone.

Long-term housing ambitions

Essex is a county with appetite for ambitious housing growth. We expect over 180,000 more homes in Greater Essex over the next 20 years with 144,000 within the County Council area. Essex County Council (ECC) is committed to facilitate growing communities and new homes, set out in our Organisation Strategy 2017-21.

Affordability and housing need

The North Essex area of Braintree, Colchester and Tendring (known collectively as the North Essex Authorities, NEAs) has seen significant growth in its population, housing stock and economy over recent years. It is well-placed and connected to key growth points in the wider region including London, Cambridge and Stansted Airport; as a result, it is forecast to continue to grow. However, this growth has put pressure on the affordability of housing - the ratio of median house prices to median workplace-based incomes is 8.89 in Colchester and 9.50 in Braintree
Objectively Assessed Housing Need (OAHN) for Colchester is 920 dwellings per annum (dpa) (1095 dpa under standard methodology) and for Braintree 716 dpa (835 dpa under standard methodology) (Att.2.1.1a). Over the last three years Colchester has seen an average of 964 dpa and Braintree an average of 435 dpa (Att.2.1.1b), demonstrating strong local delivery but indicating a need for a new approach to sustain delivery levels and meet future housing need.

Garden communities - a strategic approach to growth

The NEAs, together with Essex County Council (ECC), recognise that population, housing and economic growth do not stop at administrative boundaries. Settlement patterns, migration flows, commuting and strategic infrastructure needs all have significant influences within, between and beyond local authority areas. It is for these reasons that the NEAs and ECC have been working proactively and collaboratively across the wider area, responding to this opportunity through the implementation of a plan-led approach to growth.

The revised National Planning Policy Framework (NPPF) sets out that the "supply of new homes can often be best achieved through planning for larger scale development." The high housing need identified for North Essex, the constraints that exist in many existing urban areas and the desire to support a sustainable form of development in the long term has led to the inclusion in the shared Section 1 of Local Plans of three new major settlements that follow the principles of garden communities (Att.1.1.3a pp. 40-42).

We need the A12 improvements to meet housing ambitions

This scheme is essential to deliver our long-term housing ambitions, with a successful HIF bid creating the capacity for growth,

addressing market failure and giving confidence on the deliverability. The infrastructure directly unlocks 15,000 homes on CBBGC, contributing 2,500 homes in the emerging Local Plan period to 2033 and a further 12,500 homes over the following 50 years.

Long-term economic growth ambitions

Colchester Borough is the dominant urban centre within the Essex Haven Gateway having developed a strong economy, linked to its "central place" functions and to the town's historic character, cultural activities and the university. Major retail and leisure services are also located within and adjacent to Colchester town. The Councils Economic Development Strategy 2015-21 seeks to develop and enhance local economic prosperity, and acknowledges the need for new strategic employment locations, building upon local assets.
Braintree District's employment is relatively focused on industrial-type sectors, including construction and manufacturing. London Stansted airport, in neighbouring Uttlesford, plays a significant role in employing residents of the District and through the indirect economic benefits associated with proximity to such a large employment hub. Retail is the second largest sector by employment and plays an important role in sustaining the District's three key town centres. The financial and insurance sector, where Braintree District traditionally has a relatively small proportion of employment, has seen some strong growth in recent years. This may be a growth sector in the future.
When assessing housing requirements, an analysis of economic forecasts was undertaken together with demographic projections to establish the inter-relationship between population growth, new jobs and the number of new homes needed to accommodate this growth. Employment Land Needs Assessments have been carried out by each authority which set out the amount of employment land that is required within the Plan period.

A key ambition for the area is to strengthen and diversify local economies to provide more jobs and to achieve a better balance between the location of jobs and housing, reducing the need to travel and promoting sustainable growth. Delivering strong local economic growth alongside population and housing growth is a key local policy driver as set out in the shared Section 1 of the emerging Local Plans and is a key component of Garden City principles. Such growth underpins the local political commitment to garden communities as a means to secure a strong economic future for the area.

We need CBBGC to meet economic ambitions

Braintree, Colchester and Tendring commissioned work to explore employment opportunities associated with the development of innovative garden communities - based on the likely demographic profile of these new communities - and to develop quantified scenarios for future employment growth. The consultants concluded that garden communities have the potential to deliver one job per household, in line with the Garden Communities Charter, and to support employment growth in surrounding areas (Att.2.1.1c p.73; Att.2.1.1d p.12).

The CBBGC is well-placed to take advantage of employment opportunities in new technology-based businesses, construction of the Garden Communities, access to current employment opportunities, meeting the growing need for local services, and accommodating elements of the logistics supply chain.

Employment forecasts for the three authorities factor in the longer-term aspirations for employment growth arising from the positive spin-offs associated with garden communities. These will be designed to fit to modern ways of working such as the growth of home-working enabled by enhanced digital connectivity.

What is your assessment of local housing requirements in your area and how will this scheme address these needs? Please refer to any data and evidence sources you have, including local housing need

Assessment of housing need

Objectively Assessed Housing Need (OAHN)

The North Essex authorities have committed to plan positively for new homes and to significantly boost the supply of housing to meet the needs of the area. To meet the requirements of national policy to establish the number and type of new homes, the authorities commissioned Peter Brett Associates to produce an Objectively Assessed Housing Need (OAHN) Study building on earlier work

(Att.2.1.1a).

Initial and detailed analysis in the report suggested that a Housing Market Area comprising Braintree, Colchester, Chelmsford and Tendring Council areas forms a sound basis for assessing housing need.

The total requirement across north Essex, (that is, excluding Chelmsford City Council's area) is 2,186 new homes per year comprising of OAHNs of 920 dwellings per annum (dpa) for Colchester and 716 dpa for Braintree (and 550 dpa for Tendring). This generates the need for 43,720 new homes in the Local Plan period to 2033. Over the last three years Colchester has seen an average of 964 dpa and Braintree an average of 435 dpa, demonstrating strong local delivery but indicating a need for a new approach to sustain delivery levels and meet future housing need (Att.2.1.1b; Att.2.1.2a; Att.2.1.2b). Consideration to Local Housing Need – 1,095 for Colchester and 835 for Braintree – when plans are reviewed will increase this challenge.

The need for affordable homes

Both Colchester and Braintree suffer from poor affordability – the ratio of median house prices to median workplace-based incomes is 8.89 and 9.50 respectively – emphasising the need to ensure that there is sufficient supply of new homes to meet need (Att.1.1.2c).

Affordable housing need in North Essex is calculated in accordance with PPG in the Strategic Housing Market Assessment (SHMA) (Att.2.1.2c). The resulting figures were 267 dpa for Colchester and 212 dpa for Braintree (and 151 dpa for Tendring) – generating the need for 12,600 affordable homes over the Local Plan period to 2033. These figures represent, respectively, around 30%, 29% and 27% of the overall housing requirement for each district as recommended in the OAHN Study. The Garden Communities need to be mixed and balanced communities and will be expected to provide 30% affordable housing.

The Inspector in his correspondence in June 2018 has endorsed the figures as representing the objectively-assessed housing need for the area and that the submitted policy SP3's housing requirements were soundly based (Att.2.1.2d).

How the scheme will address these needs – short and long-term

CBBGC has potential to deliver up to 21,000 additional homes of which 15,000 are directly linked to this HIF bid; improvements to the A12 facilitated by this HIF bid will create both the additional network capacity and physical space for CBBGC to achieve its full ambitions.

In the Submission Draft Shared Section 1 of the Local Plans, the Garden Communities were forecast to deliver a minimum of 2,500 units each within the plan period, therefore 7,500 in total, around 15-20% of the total housing requirement. A successful HIF bid will give confidence that this level of housing on CBBGC can be delivered in the period up to 2033, potentially enabling the achievement of trajectories as included in the original submission documents.

Importantly, this HIF bid will not only support delivery of new homes in the current Local Plan period; once established, the Garden Communities will deliver a regular supply of new housing into the future, likely to comprise a higher overall proportion of future needs as they will be able to supply a steady high number of units throughout future plan periods. In this case, CBBGC will deliver a further 18,500 homes in addition to the 2,500 homes in the emerging Local Plan period to 2033. Achieving policy-compliant levels of affordable housing will help to deliver 6,300 affordable homes on this site.

Delivering at pace

The NEAs are fully aware that the delivery approach and a broader range of housing tenures can be used to boost the average build rate by building at a scale and at an output that suits the investor/provider market. At this stage, housing delivery on CBBGC for the purposes of this bid is modelled for private sale and affordable housing only. However, work has been prepared to consider other tenures, build out rates and interventions, and it is anticipated that ultimate delivery will include other models to enhance build out rates:

• Build to Rent/PRS. There is considerable opportunity to increase the level of good quality rented accommodation at each of the

Garden Communities providing they are well managed and sustainable. The Build to Rent market and opportunity for PRS, the site's location and proximity to the town centres and public transport will be key to how attractive it is as an option and its potential to be developed at scale.
• Custom/Self build. Currently custom/self-build accounts for around 6% of the UK market with the greatest concentrations in the South East, East of England and South West (just under 50% of the total). This is expected to rise to 7% and possibly up to 10% by 2021. Using a configurable/volume custom build approach, and with a strong market and supportive context, it could account for up to 10% of the total homes built on CBBGC.
• Older Persons accommodation. Future housing projections (local demographics) support a significant increase in older persons accommodation between now and 2033. In order to introduce older persons accommodation at scale (outside of an affordable classification) would require a reasonable level of infrastructure to enable the delivery of this type of accommodation.

The conclusions at the Draft Analysis Stage of the Independent review of build out – 'The Letwin Review' (Att.2.1.2e) – support this position that there is further scope to increase output through other tenures to enhance the average annual build out rate above typical thresholds suggested and meet broader needs. Evidence collected as part of this review points to large sites, for example Great Kneighton in Cambridge and Great Western Park in South Oxfordshire achieving delivery rates upwards of 350 dpa and as high as 550 dpa (Att.2.1.2f). More locally, the NE Chelmsford Garden Village Consortium have assumed seven outlets at 50 completions each year, so 350 market completions, with a further 35 percent affordable housing, so 473 in total. Delivery at pace on a site of this scale is possible.
Early and upfront investment in key infrastructure as per this HIF bid could play a key role to achieve these uplifts in future years.

In conclusion, this HIF bid is critical to providing the confidence on infrastructure funding as required by the Planning Inspector and therefore enabling the Garden Communities to be included in the shared Section 1 of the Local Plans. It provides additional land for development, addresses known infrastructure needs and key cashflow and viability challenges in relation to securing the early provision of capital intensive enabling works, thus bringing forward development at scale to make a sizeable impact on the housing need in Colchester and Braintree, including affordable housing.

Filename	Description
2.1.1 a - OAHN Study Nov 2016 Update.pdf	2.1.1a OAHN Study Nov 2016
2.1.1 b - Live_Table_122- Net housing additions.xls	2.1.1b Net Housing Additions
2.1.1 c - SQW Employment and Demographic Study.pdf	2.1.1c Employment & Demographic Study
2.1.1 d - Garden Communities Charter.pdf	2.1.1d Garden Communities Charter
2.1.2 a - CBC Housing Trajectory for HIF Bid.xlsx	2.1.2a Colchester Housing Trajectory
2.1.2 b - BDC Housing Trajectory for HIF.xlsx	2.1.2b Braintree Housing Trajectory
2.1.2 c - SHMA Study Dec 2015 Update.pdf	2.1.2c SHMA Dec 2015
2.1.2 d - Inspector letter on OAHN.pdf	2.1.2d Inspectors Letter
2.1.2 e - Letwin Review Draft Analysis Stage.pdf	2.1.2e Letwin Review
2.1.2 f - Letwin Review Build out Rates - Annexes.pdf	2.1.2 Letwin Review: Build Out Rates

Local Support

How will this scheme demonstrate effective joint working? E.g. with neighbouring local authorities and other local partners, Private sector organisations, Local Enterprise Partnerships etc.

The approach to date provides an unrivalled example of positive & proactive joint working between the Councils to plan for growth in a strategic way, unconstrained by purely administrative boundaries or parochial issues. Considerable progress has been made over recent years through the effective joint working which has achieved:

• Key to this bid is the close working relations between Highways England (HE) and Essex County Council joined up response to planning and transport across organisations including HE, the Local Transport Authority and the Local Planning Authorities evidenced through the memorandum of understanding as submitted for the Examination in Public (Att.2.2.1a)
• Coordinating the Council's approach to Local Plans, including the confirmation, publication and Examination in Public of the Shared Section 1 of the Local Plans
• Becoming part of the Garden Towns Villages & Cities programme run by the MHCLG. North Essex Garden Communities is the largest and most ambitious project in the programme which provides direct access to other Garden Towns with associated learning and knowledge/information sharing opportunities.
• Since 2015, securing over £3m of capacity funding and support from MHCLG to support in bringing forward the design, planning and technical work necessary to evolve and bring forward the proposals. This is in addition to £2.4m of capacity funding and in-kind commitment that the partnership Councils have also contributed.
• Council commitment to:
- leading the delivery of the Garden Communities including establishment of NEGC Ltd.
- funding the delivery vehicle to deliver the Garden Communities
- considering the potential establishment of a locally led development corporation – which could become the first in the UK.
• Building relationships with land owners and promoters and establishing necessary structures to lead on the delivery of the proposals.
• Developing stewardship arrangements for the long-term maintenance of public amenities.
• Direct high-level engagement with Government on the potential for direct infrastructure investment, the use of new delivery powers such as those enabled via the Neighbourhood Planning Act 2017 in respect of locally led development corporations, and opportunities for comprehensive land assembly.

The programme also benefits from innovation in collaborative working with the North Essex Garden Communities Peer Review led by Lord Kerslake (Att.2.2.1b) stating that "This is an excellent example of cooperation between Councils", and the planning Inspector supporting the approach in terms of satisfying the Duty to Cooperate (Att.2.2.1c pp.2-4).
The existing stakeholder picture is a comprehensive and well-managed. The Councils (with NEGC Ltd.), are working with a wide range of key bodies including the Haven Gateway and South East Local Enterprise Partnership, University of Essex, Stansted Airport and Harwich/Felixstowe ports.
The Councils have key statutory and regulatory roles and such are leading with ongoing liaison and joint working on shared issues. NEGC has a complementary key focus on delivery, distinct from the wider roles of the founding Councils enabling the opportunity for a wider discussion with key individuals / groups and an emphasis on aligning the work to achieve broader aims and objectives across the North Essex area.
A list of stakeholder groups is set out below:
• Political (MPs / Members / parish and town councils)
• Officials (Government Departments, Civil Servants / Senior Officers)
• Transport bodies (Highways England, Network Rail, Rail operators)
• Local Interest & Pressure Groups
• Social & Community Groups
• Business Groups
• Education & Skills
• Health
• Statutory groups (Police/Fire, Transport, Utility, Environment, Heritage etc)
• Housing & Construction sector
• Economic (national/regional (LEPs & corridors)/local)
The Councils and NEGC will need to continue to interface with these key stakeholder groups.

Please demonstrate local support for your scheme (for example in Local Plans and policies)

Colchester (CBC), Tendring (TDC) and Braintree (BDC) (collectively the North Essex Authorities – NEAs) are responsible for taking forward their respective Local Plans and are promoting the allocation of the Garden Community sites through this process.

To effectively plan across the whole of North Essex, the NEAs initiated a joint approach to strategic plan-making. This included a joint evidence base on strategic matters (such as housing, the economy, transport and the natural environment) and promotion of the

Garden Community approach to deliver North Essex's growth requirements.

Plan-making began in 2015 when CBC and BDC held separate public consultations on future growth options in their respective areas; CBC through an 'issues and options' consultation and BDC through a similar 'issues and scoping' exercise. Both included the concept of a new settlement on land straddling the Colchester/Braintree administrative boundary.

Both councils, working with TDC, and Essex County Council (ECC) as a strategic partner, furthered the Garden Community proposals through public consultation and stakeholder engagement, resulting in the inclusion of two other new settlements; the Tendring Colchester Borders Garden Community and the West of Braintree Garden Community. An important part of the rationale for Garden Communities is capturing the strong public feeling for an infrastructure-led approach to new housing, which has come across in the NEAs' public consultations. Alternative options to the spatial strategy proposed were reviewed in light of consultation responses, sustainability appraisal, and other evidence base work. The Colchester Braintree Borders Garden Community (CBBGC) site was identified and approved for inclusion in the shared Section 1 of Local Plans. For CBC and BDC this governance process involved numerous stages of agreement by their Members.

As part of both the preparation of the Local Plan and subsequent Examination, the NEAs have agreed a number of Statements of Common Ground with stakeholders (Att.2.2.2a-p) including:
• Essex County Council
• Highways England
• Natural England
• Environment Agency
• North East Essex CCG, Mid Essex CCG and Colchester Hospital
• Maldon District Council
• Uttlesford District Council
• University of Essex
• Greater Anglia (train operating company)
• Anglian Water
• Numerous land owners/promoters

The shared Section 1 was submitted to the Planning Inspectorate in October 2017 with Examination hearing sessions in January and May 2018.

On conclusion of the hearing sessions, the NEAs were informed by the Inspector that whilst the approach to housing need was sound, further work was needed to ensure the Garden Community proposals contained in Section 1 could be taken forward. Since receipt of the Inspector's initial findings, the NEAs have recommitted to the Garden Community approach with CBC resolving to proceed with the Local Plan on the understanding that in the absence of external funding for critical infrastructure, alternative growth options may need to be reconsidered.
The NEAs have been working towards addressing the Inspector's concerns and are in regular contact with the Inspector, sending monthly update reports and agreeing to reconvene Examination hearing sessions in Autumn 2019.

This would lead to adoption of the Local Plans in early 2020.

Following adoption, the NEAs have committed to preparing development plan documents (DPDs) for the three Garden Communities. These DPDs will be the product of engagement with local communities and will contain the detailed strategies, policies and proposals needed to guide the development of the Garden Communities.

As part of the joint working approach the NEAs are exploring the locally-led new town development corporation model, with strong support from MHCLG.

Can you provide evidence of support for your proposal from the following:

	Support	Further Details
Local MP(s)	No	MP's letters to be provided.
No attachments		

	Support	Further Details
Local community	Yes	Development at the scale proposed is transformational at a local level. Some stakeholders are reserving judgement until the sites make adequate process through the Local Plan examination process to test and confirm their suitability. The Councils are seeking an inclusive approach going forward with local communities to ensure the schemes do deliver on the stated ambition.

Filename	Description
Letter of support - HIF Fund Realignment of the A12.doc	Essex Chamber of Commerce
Support.pdf	CNG Restaurants
Letter of Support - HIF - Colchester Braintree borders_9151873.pdf	Fisher Jones LLP

	Support	Further Details
Local Enterprise Partnership(s)	Yes	SELEP letter attached.

Filename	Description
A12 Realignment HIF project 01.02.2019.pdf	Letter of Support from SELEP

	Support	Further Details
Supporting upper tier local authorities	Yes	Sign off for bids by Leader of the Council.

Filename	Description
HIF Application to BID CMA FINAL APPROVED -14.03.19.docx	Formal approval from Council Leader supporting bid.

	Support	Further Details
Supporting lower tier local authorities	Yes	Support From Colchester and Chelmsford Councils.

Filename	Description
CCC letter of support all HIF Bids 15.3.19.pdf	Chelmsford Letter of Support
2.2.3 The Rt Hon James Brokenshire MP -.pdf	Colchester Letter of Support

	Support	Further Details
Any other key stakeholders	Yes	Highways England - Responsible for delivering the scheme. Greater London Authority Support for the bid. L&Q

Filename	Description
HIF A12 support.pdf	GLA Letter
2981_001.pdf	Support Letter from L&Q
HE Support of ECC HIF Bid_20032019.pdf	Highways England Support Letter

Meeting housing policy objectives

How will your scheme support the Government's ambitions for housing, as set out in the Housing White Paper?

Step 1 - Planning for the right homes in the right places

Up-to-date, sufficiently ambitious plan
• Following the conclusion of the Shared Section 1 Examination in Public (EiP) sessions, the Local Planning Authorities received three letters from the Planning Inspector, concluding that approach to housing need was sound, but that further work was needed so that the Garden Communities proposals contained in Section 1 could be found sound
• A successful HIF bid will provide substantial evidence to the Inspector on the deliverability of this site.
• HIF represents a key step in the progress of the Local Plan across the three local authorities in North Essex

Honest assessment of need for new homes and working with neighbouring LPAs
• As evidenced in 2.2.1, the approach to date provides an exemplary example of positive and proactive joint working between the Councils to plan for growth in a strategic way, unconstrained by administrative boundaries. The Councils are thinking strategically to do what they consider to be the right spatial planning approach for current and future generations.
• Strong partnership working between Braintree and Colchester (and Tendring) on meeting housing need which has resulted in a Shared Section 1 Local Plan.
• CBBGC offers an opportunity for Braintree and Colchester to work together to meet a substantial portion of their housing need both in proposed plan period to 2033 and beyond.

Making enough land available in the right places – Garden Communities
• The programme across three sites is the largest project currently within the MHCLG Garden Towns & Villages programme
• Development has potential for scale (up to 21,000 homes) with this bid bringing land forward which would otherwise be sterlilised

Step 2 - Building homes faster

Ensure infrastructure is provided in the right place at the right time
• New communities are dependent on infrastructure to get development off the ground and sustain the pace of delivery. CBBGC is a good example of where the provision of key infrastructure can increase scale and pace of ambitions
• The premise of this HIF bid is that large scale infrastructure is needed upfront

Supporting developers to build out more quickly
• The Garden Communities provide an excellent opportunity to accelerate the delivery of new homes through comprehensive planning and the early provision of supporting infrastructure, reducing risk and allowing developers to concentrate on building homes

Taking steps to address skills shortage
• The Councils are engaging with the Essex Employment and Skills Board to explore the employment and skills opportunities and

legacy that will arise from the NEGC developments

Step 3 – Diversifying the market

Backing small- and medium-sized builders to grow
• The scale of development will allow for delivery of multiple tenures (private market sale, affordable housing, custom build, starter homes) which could draw in SME builders as these housing markets can operate independently of each other and so SMEs would not be in direct competition with volume housebuilders.
• CBBGC will provide an ideal opportunity to enable delivery from a wide variety of SMEs suppliers working alongside larger housebuilders.

Building more homes for private rent
• The approach is seeking to deliver across a broad range of housing types and tenures - this includes consideration of Private Rented and Buy-to-Rent - which not only meets broader Government ambitions, but also provides a key opportunity to deliver at greater pace than in the past.

Supporting housing associations and local authorities to build more homes
• CBBGC provides a development of scale and depending on delivery model agreed could involve more direct provision of housing or provision with a housing association partner

Boosting productivity and innovation by encouraging modern methods of construction
• The approach is seeking to deliver across a broad range of housing types and tenures with innovation and long-term resilience as a key part of the design and place-making process. This includes incorporation of Modern Methods of Construction (MMC), potentially accompanied by investment in local production capacity.
• Opportunities for innovation across the North Essex Garden Communities are being actively explored under three themes of 'People; Place; & Operation' to ensure they can accommodate and make full advantage of new and modern approaches that can add value. Opportunities could range from new forms of transport through to implementing the 'Smart City' agenda such as via technology and sensors.
• We already have experience in Essex using MMC – Swan in Basildon and Weston Homes in Braintree – and will ensure that lessons learnt from this early-adopter are incorporated into the use of MMC at CBBGC.

Step 4 – Helping people now

Supporting people to but their own home and making home affordable to those priced out of the market
• Affordability is an issue in both Colchester and Braintree with house prices many multiples of workplace-based earnings.
• Increasing supply across a variety of tenures will help more people to access housing either through buying their own home on the open market or through affordable sale as well as providing opportunities to access private and affordable rented homes - affordable housing on the site is expected to be policy compliant at 30%

Encouraging development of housing that meets the needs of future population
• Given the long-term nature and overall scale of the ambition for Garden Communities we are adopting full and active consideration to new and innovative aspects of community life and place management, supporting Garden City Principles to improve the quality of life for both new and existing residents.
• The new homes will be of high quality, with design features that can adapt over the course of a person's life.

Scheme Objectives

What are the overaching objectives of the scheme? Objectives should be SMART - specific, measurable, achievable, relevant and time constrained

- Enable the delivery of 21,000 new homes between 2025 and 2071
- Enable the completion of 15,000 additional homes by 2071 which would not be possible without HIF investment
- Support delivery of 21,000 homes to Town and Country Planning Association (TCPA) garden community principles, in particular

with a highways infrastructure suitable for the new development

- Connect 21,000 new homes with 1,000,000+ jobs within a 90-minute commute
- Provide the opportunity to unlock 2,500 new homes up to 2033 and 18,500 new homes on Colchester Braintree Borders Garden Community after 2033

Please list the criteria (critical success factors - CSFs) against which you will assess the successful delivery of the project and the evaluation of options

- Strategic fit and need – i.e. how well the scheme: (1) meets local housing need and (2) fits with our wider strategic vision, programmes and projects. In particular it needs to help us deliver quality developments at pace and in line with Garden Community principles.
- Value for Money – i.e. how well the scheme: (1) maximises the return on the required spend (benefits optimisation) in terms of economy, efficiency and effectiveness from the perspective of Essex and Colchester and Braintree local authorities and wider society and (2) minimises associated risks.
- Potential achievability – i.e. how well the scheme: (1) is likely to be delivered in view of the organisation's ability to assimilate, adapt and respond to the required level of change and (2) matches the level of available skills which are required for successful delivery.
- Supply-side capacity and capability – i.e. how well the scheme: (1) matches the ability of the service providers to deliver the required level of services and business functionality and (2) appeals to the supply-side; and (3) provides the ability to clawback funding from developers as they build out to recycle into future infrastructure improvements and facilitate further housing growth
- Potential affordability – i.e. how well the scheme: (1) meets the sourcing policy of Essex and Colchester and Braintree local authorities and (2) demonstrates the availability/reliability of additional funding sources that form part of this bid.

Rationale for intervention

What is the market failure being addressed? Please provide a detailed account of why the existing arrangements, both financial and delivery, are not sufficient to deliver the scheme and the rationale for government intervention (HIF funding)

The market failure that this HIF bid addresses is one of transport capacity restraints, physical space constraints and developer cashflow/viability challenges.
The market failure can be summarised as follows:
(i) The need to build new homes to meet housing need
(ii) Such new housing can be appropriately provided through new communities and large scale development that can enable a step change in local infrastructure provision
(iii) Developers cannot pay for this infrastructure upfront or in a timely manner
(iv) NEGC Ltd or the Councils cannot pay for this infrastructure
(v) Without confidence on funding for strategic infrastructure the viability and deliverability of such sites is questionable creates planning risk.

Need to build new homes to meet housing need

As evidenced in 2.1.2, Objectively Assessed Housing Need (OAHN) is 920 dwellings per annum (dpa) for Colchester and 716 dpa for Braintree. Over the last three years Colchester has seen an average of 964 dpa and Braintree an average of 435 dpa, demonstrating strong local delivery but indicating a need for a new approach to sustain delivery levels and meet future housing need. Consideration to Local Housing Need as calculated by the standard methodology – 1095 for Colchester and 835 for Braintree – when plans are reviewed will increase the challenge.
Colchester Braintree Borders Garden Community (CBBGC) has potential to deliver up to 21,000 new homes contributing substantial housing numbers in current and future plan periods.

Infrastructure needed to build these new homes

There is a cap on the amount of housing that can be built on site before there is an unacceptable impact on the local transport

network; traffic modelling has revealed that the operational capacity of the A12 Kelvedon Bypass in Dual-3 lane configuration, as proposed by Highways England, would be exceeded with around 6,000 homes in place at CBBGC. Infrastructure improvements to the A12 including dual 4-lane carriageway at Kelvedon Bypass and new Junctions at J23 and J25 would allow the CBBGC to grow beyond this cap.

However, there is also clear spatial constraint on development with realignment of the A12 as currently proposed by Highways England. Without the further alignment as detailed in this HIF bid, development at CBBGC can only take place to the north of the existing A12 with indication from masterplanning that a development of around 15,000 homes is achievable. The further realignment would allow CBBGC to achieve full potential and grow to 21,000 homes.

HIF would allow us to deliver these improvements up front to mitigate future traffic problems, release land for development and promote market confidence and investment leading ultimately to delivery of homes. By providing the infrastructure up front this would provide an approach to capture value and recycle it back into the scheme via a rolling infrastructure fund (or equivalent) to deliver further improvements over the course of the overall development in particular through developer contribution in the implementation of a Rapid Transit System (on and off site).

HIF key to resolve planning risk

The initial viability undertaken for the Examination in Public on the CBBGC site (Hyas, 2016) revealed that in order to deliver policy requirements, the level of infrastructure and quality of place in line with Garden City principles, viability would be strengthened by early upfront investment in major strategic infrastructure. The initial analysis had included a working assumption that funding for the A12 realignment and improvements would not be funded by developer contributions from the scheme (although allowances had been included for a point of access from it).

This has in part been identified through the Local Plan examination process, and initial findings of the Inspector who has requested additional evidence with respect to viability. Such evidence needs to demonstrate that the site has a ‘reasonable prospect’ of delivery and could provide ‘competitive returns’ to landowners to enable the land to be brought forward. The Inspector also explicitly referenced a concern over the commitment of funding to strategic infrastructure for the delivery of the Garden Communities. A successful HIF bid would resolve this uncertainty for the Inspector and give clear confidence that funding would be forthcoming to overcome concern.
It would be key to resolve this element of planning risk.

Developers cannot pay for this infrastructure upfront

HIF is required to close the funding gap and pay for key infrastructure works up front. Despite land values indicating good market demand, the sites are not viable if they are expected to bear the full costs of the transport infrastructure up front along with their other infrastructure commitments on this new greenfield site
In addition to cashflow and viability models prepared for the Local Plan, and to test a public sector- led funding and delivery model, an independent financial and economic model has been specifically developed for the bid based on the latest available information with respect to the proposed HIF scheme infrastructure costs and the costs of the housing development. All information on costs and Gross Development Value as well as all assumptions input into the model are described in detail later in this bid in the Economic and Financial cases.

Two scenarios have been assessed to demonstrate the need for the HIF funding. These two scenarios can be described as follows:
• Scenario 1: The identified transport infrastructure subject to the HIF bid is included as a developer cost; and
• Scenario 2: The identified transport infrastructure is funded by HIF.
The above scenarios are identical in all other respects and include all costs, fees and developer profit related to the housing and commercial developments, land costs and finance costs as outlined in the financial case in section 6.1.7, section 6.1.8 and Att.6.1.9b. The resulting cash flow for each of these scenarios can be seen in Att.6.4.1 as part of section 6.4

The results of scenario 1 clearly identify that without HIF funding the site is not viable, with a residual value well below zero. This is the

case even at standard agricultural land values without the inclusion of any hope or expectation by the land owner.

For scenario 2, when the infrastructure subject to the bid is assumed to be funded through HIF, the development is viable with a positive residual value at 0% inflation at reasonable agricultural land values including some hope/expectation by land owners (see section 6.1.10).

As such, the receipt of HIF and allocation towards the package of infrastructure measures as set out in this bid reduces the capital cost and early investment obligations that the scheme has to bear and therefore transforms the project into a viable and deliverable proposition.

NEGC Ltd or the Councils cannot pay for this infrastructure

Essex County Council, Colchester and Braintree Councils have been considering their scope for direct investment in the schemes, but do not have existing capital funds to deliver this infrastructure in advance at this stage in the process. Working through NEGC Ltd the Councils are exploring options to secure third party funding from a range of sources, including potential Government funding sources (such as PWLB) and/or private finance, and have initiated a process of soft market testing with funders and institutional investors to take consideration forward. Other government funding initiatives could become available but given the status of the site in the emerging Local Plans funding via HIF provides an immediate key opportunity to address a known need in a timely manner to support the wider level of local ambition.

No attachments

Additional Information

If you have any further information to support your strategic case, which has not already been captured in the above, please include this here

Attached below are statements of common ground and memorandum of understanding with various parties supporting the bid.

Filename	Description
2.2.2 a - SoCG Andrewsfield Consortium (WoBGC).pdf	2.2.2a : SoCG Andrewsfield Consortium
2.2.2 b - SoCG Anglian Water.pdf	2.2.2b SoCG Anglian Water
2.2.2 c - SoCG ECC & Highways England & GA.pdf	2.2.2c: SoGC Highways England
2.2.2 d - SoCG Environment Agency.pdf	2.2.2d SoCG Environment Agency
2.2.2 e - SoCG G120 Consortium (CBBGC).pdf	2.2.2e: SoCG G120 Consortium
2.2.2 f - SoCG Galliard Homes (WoBGC) update.pdf	2.2.2f: SoCG Galliard Homes
2.2.2 g - SoCG Galliard Homes (WoBGC).pdf	2.2.2g: SoCG Galliard Homes
2.2.2 h - SoCG Maldon DC.pdf	2.2.2h: SoCG Maldon DC
2.2.2 i - SoCG Mersea Homes (TCBGC).pdf	2.2.2i: SoCG Mersea Homes
2.2.2 j - SoCG Mid Essex CCG.pdf	2.2.2j: SoCG Mid Essex
2.2.2 k - SoCG Natural England.pdf	2.2.2k: SoCG Natural England
2.2.2 l - SoCG NEECCG & Colchester Hospital.pdf	2.2.1l: SoCG Colchester Hospital
2.2.2 m - SoCG RF West (CBBGC).pdf	2.2.2m: SoCG RF West
2.2.2 n - SoCG University of Essex (TCBGC).pdf	2.2.2n: SoCG University of Essex
2.2.2 o - SoCG Uttlesford DC (WoBGC) update.pdf	2.2.2o: SoCG Uttlesford DC
2.2.2 p - SoCG Uttlesford DC (WoBGC).pdf	2.2.2p: SoCG: Uttlesford DC

Options Appraisal

Outline of options

Please provide a summary of all options considered during co-development related to the extent of HIF funding required. Please set out the rationale for why these options were discounted in favour of the preferred option

The Councils have been evaluating options for development at the Colchester Braintree Borders site for several years. Alternative scales of development were tested as part of a Garden Communities Concept Feasibility Study prepared by AECOM in 2016. Further work was undertaken by the Councils to prepare a Concept Framework for the site which introduced the strategic opportunity of diverting both the A12 and A120 around the development, thereby enabling a comprehensive approach to place-making and land utilisation. Such an approach enabled the new community to deliver on broader objectives as set out in the North Essex Garden Communities Charter (AECOM 2016) which set out a series of key principles to secure the delivery of a new high quality place including the need for integration between land uses, opportunities for community building and interaction between new and existing residents, and based around creating new walkable and social neighbourhoods that could support modal shift to more sustainable forms of transport.

This evidence, together with additional considerations and influences including other technical studies and formal stages of consultation and decision making by the Councils with respect to the emerging Shared Section 1 Local Plans, led to the site being identified with capacity for between 15,000-24,000 units, to be further refined by ongoing masterplanning, and decision making on strategic infrastructure corridors

With the development location and size defined, the options assessed for potential HIF funding have been those options that deliver a successful new community, maximising the number of homes delivered within the development, whilst ensuring that appropriate capacity is provided for development related trips on the transport network.

It has been assumed that the A120 Braintree to A12 Scheme currently being promoted by Essex County Council for inclusion in RIS2 will be open early in the build out of CBBGC (i.e. before 2030). In addition, the provision of high-quality Rapid Transit (RT) to key destinations in Colchester, Tendring and Braintree Districts has been assumed for all the options considered, in order to ensure that the need for highway capacity improvements in the vicinity of the development has not been overestimated. The planned A12 Junction 19 to 25 RIS1 scheme is assumed to have been completed by 2028.

The key highway infrastructure options considered when identifying the preferred option are described below:

• No realignment of the A12, no capacity improvements
With no capacity improvements, over and above the expected A12 Junction 19 to 25 and A120 Braintree to A12 schemes, the CBBGC development would be limited to around 6000 homes. Traffic modelling has revealed that the operational capacity of the A12 Kelvedon Bypass in Dual-3 lane configuration, as proposed by Highways England, would be exceeded by 2041 with 5,850 homes in place at CBBGC.
This option is the Do Nothing option and, as such, was shortlisted for further assessment as Option 3 (see section 3.1.2).

• No realignment of the A12, widening of Kelvedon Bypass to Dual-4 lanes
This option would limit the size of CBBGC to less than 15,000 homes. Traffic generated by the development could be accommodated on the widened Kelvedon Bypass. However, additional capacity would be required at Jn 25 and at the new A120/A12 junction (Jn 23) to accommodate the traffic associated with 15,000 homes. This option was therefore discounted.

• No Realignment of the A12, widening of Kelvedon Bypass to Dual-4 lanes, capacity improvements at Junctions 23 and 25
This option (see Att. 3.1.1a) could accommodate the traffic generated by a 15,000 home CBBGC satisfactorily and be delivered with a reduced amount of HIF funding. It is not the preferred option because, when compared to the
Preferred Option:
o It would reduce the long term potential capacity of CBBGC (by 6000 homes)
o A greater financial burden would be placed on the development to provide and fund strategic infrastructure
o There would be more pressure for piecemeal, disconnected, non ‘Garden Community’ standard development

o It would be considerably more challenging to create employment opportunities & a strong economic role for the Garden Community
o There would be less of a need and rationale for a dedicated public sector led delivery vehicle and a reduced scope to use such powers as CPO to ensure delivery occurred to meet policy objectives.
As such, it was shortlisted for further consideration as the 'Do Less' option (Option 2 in section 3.1.2).

• Realignment of the A12 to enable the construction of 24,000 homes north of the A12
As part of their ongoing route development work, Highways England have been investigating alternative route alignments to the offline A12 alignment between Jn 24 and 25 that was presented at a non-statutory public consultation in spring 2017. Two of the routes being investigated would realign the A12 and Junction 25 further south and east, closer to Copford. With these alignments, more developable land would be available for CBBGC to the north of the A12.
Although these more southerly routes have the potential to provide highway capacity benefits in the vicinity of Marks Tey, they would have to cross an additional river and floodplain compared to the offline alignment presented in spring 2017. They would also have to pass through a historic landfill site, which would potentially need treatment, and would cost significantly more than any other alignments being investigated.
Realigning the A12 to the south of Marks Tey, to accommodate 24,000 homes, was discounted as an option for HIF, as the overall cost of the realignment and associated highway capacity improvements would far exceed the overall HIF Bid allowance of £250M

• Realignment of the A12 to enable the construction of 21,000 homes north of the A12, no additional highway capacity improvements
Although this realignment of the A12 would theoretically provide space to construct 21,000 homes in a single unified development north of the A12, the operational capacity of the A12 Kelvedon Bypass in Dual-3 lane configuration would be exceeded by 2041, which would limit the size of the development to around 6000 homes. This option was therefore discounted.

• Realignment of the A12 to enable the construction of 21,000 homes north of the A12 widening of Kelvedon Bypass to Dual-4 lanes
This option would provide sufficient capacity on the A12 between Marks Tey and Witham in the south, with 21,000 homes in place at CBBGC. However, additional capacity would be required at Jn 25 and at the new A120/A12 junction (Jn 23) to accommodate the traffic associated with the completed 21,000 home development. This option was therefore discounted.

• Realignment of the A12 to enable the construction of 21,000 homes north of the A12, widening of Kelvedon Bypass to Dual-4, capacity improvements at Junctions 23 and 25
This option (see Att. 3.1.1b) will accommodate 21,000 homes and associated employment in a single unified development north of the realigned A12. There will be sufficient capacity to accommodate the traffic generated by the development on the local highway network and the necessary infrastructure improvements would be funded by the HIF Bid.
It has been shortlisted for further consideration as the Preferred Option (Option 1 in section 3.1.2).

Please summarise shortlisted options considered and how these meet the required objectives of the scheme detailed earlier in the business case.

	With requested HIF funding	With a reduced amount of HIF funding	Do nothing (no HIF funding)
HIF Funding Required	£228,592,861	£107,302,236	£0
Total scheme cost	£15,412,071,407	£8,986,744,223	£2,731,222,423
Housing units delivered	20931	15000	5850
Estimated % affordable	30 %	30 %	30 %
Units started up to 2022	0	0	0
Units started 2023 - 2025	50	50	50
Units started 2026 - 2030	1,400	1,400	1,400
Units started 2031 - 2035	1,900	1,900	1,900
Units started in future years	17,581	11,650	2,500
Amount of LA funding (inc. LGF)	£0	£0	£0
Amount of other Central Govt. funding	£0	£0	£0
Amount of private sector funding	£15,183,478,546	£8,879,441,987	£2,731,222,423
Amount of other public sector funding	£0	£0	£0

1. With requested HIF funding

Option 1: With requested HIF funding

The Preferred Option could be delivered with the requested HIF funding. It fully meets the objectives of the scheme:
• The realignment of the A12 will enable the delivery of the 21,000 homes in one unified development north of the A12 by 2071.
• The widening of Kelvedon Bypass, the new Junction 25 and the addition of traffic signals at Junction 23 will allow 15,000 more homes to be developed at CBBGC than would be possible if it remained as a 3-lane dual carriageway
• The highways infrastructure proposed in the option will support the delivery of 21,000 homes to Town and Country Planning Association (TCPA) garden community principles, with the new Junction 25, in particular, facilitating sustainable transport through the development of a full, high quality, Rapid Transit System.
• The RTS and upgraded Marks Tey railway station (funded by CBBGC), combined with the upgraded highway network will connect 21,000 new homes with 1,000,000+ jobs within a 90-minute commute.
• The provision of the HIF bid infrastructure as part of the A12 Jn 19 to 25 widening project will ensure that the Local Plan target of 2,500 new homes by 2033 at CBBGC is met, with the completion of a further 18,500 post 2033.
When assessed against the scheme objectives, using a five-point scoring system (1-5), the Preferred Option scores a total of 25 out of 25 (Att. 4.9.3p Section 7.2.1)

What strategic risks do the shortlisted options carry?

Description	Likelihood	Impact
Part One of the North Essex Local Plans is found unsound which would require significant reworking of garden community plans and would significantly delay implementation. The Councils are addressing the various matters raised by the Planning Inspector and will provide a considerable amount of additional robust evidence. Having confidence on infrastructure funding via HIF would support the case on deliverability.	Low	High
Further masterplanning and preparation of a Development Planning Document setting more detail for the site is not adopted and/or unforeseen objections emerge. A considerable amount of work has already been undertaken with respect to feasibility and conceptual design. Masterplanners have been commissioned. The Councils are fully behind the preparation of a masterplan and DPD.	Low	High
Securing planning consent may be delayed or not secured. The Councils are fully engaged and supportive through the inclusion of the sites in the emerging Local Plans. This will define clear policy requirements which subsequent applications will need to adhere to. The intended strong public sector role in delivery will also minimise risk of divergence.	Low	High
Environmental assessment identifies mitigation measures of issues which affect design and cost of infrastructure delivery. Initial feasibility work has been undertaken to identify key constraints. Proposals will be expected to mitigate against any matters that emerge. The site is large enough to enable masterplanning to work around any specific issues that may arise.	MediumLow	Low
Delivery of all other site wide infrastructure required to deliver housing at the Garden Community – risk of major cost items being missed or costs underestimated. The proposals have been evolving for several years with considerable work on feasibility and infrastructure requirements. Proposals have been costed by specialist consultants. A full set of infrastructure has been identified, costed and included in the Economic & Financial Case. Contingencies are also included to address any unknowns.	MediumLow	High
Market values could be lower than assumed and this could therefore impact on the viability / pace of delivery of the Garden Community. Market values have been sought from several sources. In practice, there is an expectation that a high quality place based development will achieve higher values but the Financial Case is based on caution. The scale and duration of the project is such that it will need to ride downturns in value that will be compensated by upturns. The Financial Case is therefore predicated on present value (and cost) with no assumptions over growth or a Garden Village ‘premium’. This helps to create a more robust platform to proceed.	Low	MediumHigh
Landowner expectations might be unrealistically high in the context of the costs associated with opening up the site and the overall viability. This could affect the achievement of the emerging policy and delay the pace of delivery. Highways England has a strategy to deliver the road to programme including the use of statutory powers where necessary and there is a strategy to take forward the delivery of the Garden Community itself (see Commercial Case) that addresses any issues relating to securing control over delivery	Low	MediumHigh

What are the constraints related to this shortlisted option?

- A12 Programme: Given that the works subject to this HIF Bid would be delivered as part of the Highways England A12 project that is currently in progress as part of RIS1, the A12 programme represents a constraint on when the works can be delivered.
- Cultural Heritage: There are a number of listed buildings within the study area including Hole Farmhouse (Grade 2*) near

junction 23 and Prested Hall (Grade II), Badlocks Farm (Grade II*), Doggets Hammer Farm (Grade II) and 172 London Rd (Grade II) which lie between junctions 24 and 25. The HIF Preferred Option is likely to have greater effects on setting at Badcocks Farmhouse (Grade II* Listed Building) and the cluster of Listed Buildings at Easthorpe, as it is closer to these features than A12 Option 2 (HIF Option 3).

- Biodiversity: There is a local wildlife site along the floodplain to the south of Kelvedon, one to the southwest of Easthorpe and one to the north of junction 25. There are a number of priority woodlands within the study area including near junction 23, to the east of Prested Hall and to the northwest of Easthorpe.
- Water environment: There are a number of main rivers and their associated floodplains which are crossed by the A12 in the study area. These include: The River Blackwater, east of J23 and Domsey Brook, east of Kelvedon. Surface water flood risk is predominantly at watercourse crossings.

Please provide details of any inter-dependencies related to this shortlisted option

- Local Plan.

  Status: The Shared Section 1 of the Local Plans has been through the following stages: Issues and Options; Preferred Options; Publication Draft Local Plan; and Submission. Section 1 of the emerging Local Plans includes a commitment to plan and deliver three new Garden Communities including CBBGC which is the subject of this bid. Examination by the Planning Inspectorate (PINS) is currently paused, expected to re-open in Autumn 2019. Adoption of Local Plans is critical to delivery of housing on the Garden Community sites.

  Key Issues: The Inspector found that the approach to assessing housing need was sound but that further work would need to be undertaken so that the Garden Community proposals could be found sound. The three local authorities – Braintree, Colchester and Tendring – have resolved to continue with examination of Section 1 and are compiling further evidence for when the examination re-opens.
- A12 Programme

  Status: The provision of the infrastructure subject to this HIF bid is in addition to works already committed for the A12 between J19 and J25, which are considered necessary for the housing scheme to go forward. The A12 programme between J19-25 will be delivered by Highways England under the Project Control Framework. (PCF) This scheme is included in RIS1 with funding already secured.

  Key Issues: Although Essex County Council has an excellent working relationship with Highways England, we are reliant on Highways England to design, programme and deliver the works. The HIF money for CBBGC-specific A12 improvements will all go into one “pot” for the wider scheme and needs to be spent by April 2024.
- A12 Planning Consent

  Status: The A12 works will require consent through Development Consent Order

  Key Issues: Without consent, neither the wider A12 programme works nor the HIF-funded improvements will be delivered.
- A12 Land Negotiations/CPO

  Status: The improvements to the A12 around CBBGC require acquisition of land. Some of the route runs through the broad area of search for this site and is on land which will also benefit from the housing. In this case, we expect land to become available by negotiation. Other land required is owned by those who will not directly benefit from new housing.

  Key Issues: Land owned by those who will not immediately benefit from the new housing will be acquired by Highways England through CPO. We have commissioned some work from LSH who are of the view that this land could be acquired at approximately £873,000 (excluding risk and inflation). We have included this in our cost assumptions for the infrastructure part of the bid
-

A120 Programme

Status: The upgrade of the A120 between Braintree and the A12 is considered necessary for the CBBGC site to be developed in full. The A120 scheme has been passed Highways England's Project Control Framework Stage 2 review and is being considered for inclusion in RIS2.

Key Issues: The A120 Braintree to A12 scheme is a key dependency for CBBGC as it will be required to mitigate the impact of development related traffic before 2,500 homes are built on the site. CBBGC expects 2,500 homes to be delivered by 2033. Therefore, inclusion of the A120 scheme in RIS2 (2020-2025) or even RIS3 (expected 2025-2030) would enable CBBGC to be developed at the proposed rate.

- Rapid Transit System (RTS)

Status: The RTS is a key component of the three new garden communities in north Essex and our traffic modelling for this bid has included some assumptions around provision of RTS and modal shift.
Key Issues: It is assumed that the developer will contribute about £53.9 million to the capital costs of the RTS (excluding inflation and risk), which is expected to cover the majority of the capital costs associated with the external sections serving CBBGC as well as £32.3 million for internal RTS infrastructure. These costs have been built into the financial model for this bid and those being explored by NEGC Ltd.

Close out by: Although the RTS linking to this site is anticipated to be delivered in phases, for the purposes of this bid it has been assumed to be fully in place at 2051 as part of the transport modelling. It is expected that this would be implemented earlier than this with finalised developer contributions negotiated at planning application stage or as part of the Locally-Led Development Corporation model.

Please provide details of the exit strategy for the shortlisted options

- Governance mechanisms for the A12 improvements in this HIF bid will be set up by Highways England (who will implement the scheme as part of a wider scheme of improvements between J19-25). These governance mechanisms will review and reaffirm the case for continued investment in design and a final gateway prior to implementation. The governance will channel issues should the case for investment fall away due to significant changes costs or benefits or changes in the strategic drivers for the amount of housing.
- The A12 improvements in this HIF bid will be implemented by Highways England as part of a wider scheme of improvements between J19-25. Once constructed, it will be incorporated into the Highways England network.
  Given that these improvements provide strategic as well as local development benefits it is unlikely that any exit strategy would be required once constructed.

2. With a reduced amount of HIF funding

Option 2: With a reduced amount of HIF funding

The Do Less Option shortlisted for further consideration does not meet the objectives as fully as the Preferred Option:

• It would reduce the size of the development by 6,000 homes, compared with the Preferred Option; enabling a total of 15,000 homes at CBBGC, rather than 21,000.
• The widening of Kelvedon Bypass, the new Junction 25 and the addition of traffic signals at Junction 23 would allow 11,000 more homes to be developed at CBBGC than would be possible if it remained as a 3-lane dual carriageway
• The highways infrastructure proposed in the lower cost option would support the delivery of 15,000 homes to Town and Country Planning Association (TCPA) garden community principles, with the new Junction 25, in particular, facilitating sustainable transport through the development of a full, high quality, Rapid Transit System.
• The RTS and upgraded Marks Tey railway station (funded by CBBGC), combined with the upgraded highway network would connect 15,000 new homes with 1,000,000+ jobs within a 90-minute commute.
• The provision of the HIF bid infrastructure as part of the A12 Jn 19 to 25 widening project would ensure that the Local Plan target of 2,500 new homes would be met at CBBGC by 2033, but only allow the completion of a further 12,500 post 2033.

When assessed against the scheme objectives, using a five-point scoring system (1-5), the Do Less Option scores a total of 20 out of 25 (Att.4.9.3p Section 7.2.1)

What strategic risks do the shortlisted options carry?

Description	Likelihood	Impact
Part One of the North Essex Local Plans is found unsound which would require significant reworking of garden community plans and would significantly delay implementation. The Councils are addressing the various matters raised by the Planning Inspector and will provide a considerable amount of additional robust evidence. Infrastructure funding would help make the case on deliverability albeit it would not fully accord to the wider evidence base and emerging full extent of the scheme.	MediumHigh	High
Further masterplanning and preparation of a Development Planning Document setting more detail for the site is not adopted and/or unforeseen objections emerge. A considerable amount of work has already been undertaken with respect to feasibility and conceptual design. Masterplanners have been commissioned. The Councils are fully behind the preparation of a masterplan and DPD, although it would be more challenging to work a masterplan around the A12 remaining close to its existing alignment.	MediumHigh	High
Securing planning consent may be delayed or not secured. The Councils are fully engaged and supportive through the inclusion of the sites in the emerging Local Plans, but will need to see that the option can deliver on full policy requirements/ambitions. There is a higher risk that a smaller scale proposal would not be found acceptable.	MediumHigh	High
Environmental assessment identifies mitigation measures of issues which affect design and cost of infrastructure delivery. Initial feasibility work has been undertaken to identify key constraints. Proposals will be expected to mitigate against any matters that emerge. The site is large enough to enable masterplanning to work around any specific issues that may arise.	MediumLow	Low
Delivery of all other site wide infrastructure required to deliver housing at the Garden Community – risk of major cost items being missed or costs underestimated. The proposals have been evolving for several years with considerable work on feasibility and infrastructure requirements. Proposals have been costed by specialist consultants but have to date been primarily based on a larger scale of development. There is an increased risk of delivery given that high costs will need to be covered by a smaller amount of development which would bring viability into question.	MediumHigh	High
Market values could be lower than assumed and this could therefore impact on the viability / pace of delivery of the Garden Community. Market values have been sought from several sources. In practice, there is an expectation that a high quality place based development will achieve higher values but the Financial Case is based on caution. The scale and duration of the project is such that it will need to ride downturns in value that will be compensated by upturns. The Financial Case is therefore predicated on present value (and cost) with no assumptions over growth or a Garden Village ‘premium’. It may be more difficult to create a sense of place or as good site frontage and accessibility thus increasing risk on achievable values compared to Option 1.	MediumHigh	High
Landowner expectations might be unrealistically high in the context of the costs associated with opening up the site and the overall viability. This could affect the achievement of the emerging policy and delay the pace of delivery. Highways England has a strategy to deliver the road to programme including the use of statutory powers where necessary and there is a strategy to take forward the delivery of the Garden Community itself (see Commercial Case) that addresses any issues relating to securing control over delivery. There is an added complication with Option 2 in that the land required for the A120 goes through land which will not benefit from the infrastructure thus likely to make	MediumHigh	MediumLow

the negotiation more difficult and protracted.

What are the constraints related to this shortlisted option?

- A12 Programme: Given that the works subject to this HIF Bid would be delivered as part of the Highways England A12 project that is currently in progress as part of RIS1, the A12 programme represents a constraint on when the works can be delivered.
- Cultural Heritage: There are a number of listed buildings within the study area including Hole Farmhouse (Grade 2*) near junction 23 and Prested Hall (Grade II) near junction 24.
- Biodiversity: There is a local wildlife site along the floodplain to the south of Kelvedon, one to the southwest of Easthorpe and one to the north of junction 25. There are a number of priority woodlands within the study area including near junction 23, to the east of Prested Hall and to the northwest of Easthorpe.
- Water environment: There are a number of main rivers and their associated floodplains which are crossed by the A12 in the study area. These include: The River Blackwater, east of J23 and Domsey Brook, east of Kelvedon. Surface water flood risk is predominantly at watercourse crossings.

Please provide details of any inter-dependencies related to this shortlisted option

- Local Plan.

  Status: The Shared Section 1 of the Local Plans has been through the following stages: Issues and Options; Preferred Options; Publication Draft Local Plan; and Submission. Section 1 of the emerging Local Plans includes a commitment to plan and deliver three new Garden Communities including CBBGC which is the subject of this bid. Examination by the Planning Inspectorate (PINS) is currently paused, expected to re-open in Autumn 2019. Adoption of Local Plans is critical to delivery of housing on the Garden Community sites.

  Key Issues: The Inspector found that the approach to assessing housing need was sound but that further work would need to be undertaken so that the Garden Community proposals could be found sound. The three local authorities – Braintree, Colchester and Tendring – have resolved to continue with examination of Section 1 and are compiling further evidence for when the examination re-opens.
- A12 Programme

  Status: The provision of the infrastructure subject to this HIF bid is in addition to works already committed for the A12 between J19 and J25, which are considered necessary for the housing scheme to go forward. The A12 programme between J19-25 will be delivered by Highways England under the Project Control Framework. (PCF) This scheme is included in RIS1 with funding already secured.

  Key Issues: Although Essex County Council has an excellent working relationship with Highways England, we are reliant on Highways England to design, programme and deliver the works. The HIF money for CBBGC-specific A12 improvements will all go into one “pot” for the wider scheme and needs to be spent by April 2024.
- A12 Planning Consent

  Status: The A12 works will require consent through Development Consent Order

  Key Issues: Without consent, neither the wider A12 programme works nor the HIF-funded improvements will be delivered.
- A12 Land Negotiations/CPO

  Status: The improvements to the A12 around CBBGC require acquisition of land. Some of the route runs through the broad area of search for this site and is on land which will also benefit from the housing. In this case, we expect land to become available by negotiation. Other land required is owned by those who will not directly benefit from new housing.

  Key Issues: Land owned by those who will not immediately benefit from the new housing will be acquired by Highways England through CPO. We have commissioned some work from LSH who are of the view that this land could be acquired at

approximately £873,000 (excluding risk and inflation). We have included this in our cost assumptions for the infrastructure part of the bid

- A120 Programme

  Status: The upgrade of the A120 between Braintree and the A12 is considered necessary for the CBBGC site to be developed in full. The A120 scheme has been passed Highways England's Project Control Framework Stage 2 review and is being considered for inclusion in RIS2.

  Key Issues: The A120 Braintree to A12 scheme is a key dependency for CBBGC as it will be required to mitigate the impact of development related traffic before 2,500 homes are built on the site. CBBGC expects 2,500 homes to be delivered by 2033. Therefore, inclusion of the A120 scheme in RIS2 (2020-2025) or even RIS3 (expected 2025-2030) would enable CBBGC to be developed at the proposed rate.

Please provide details of the exit strategy for the shortlisted options

- Governance mechanisms for the A12 improvements in this HIF bid will be set up by Highways England (who will implement the scheme as part of a wider scheme of improvements between J19-25). These governance mechanisms will review and reaffirm the case for continued investment in design and a final gateway prior to implementation. The governance will channel issues should the case for investment fall away due to significant changes costs or benefits or changes in the strategic drivers for the amount of housing.
- The A12 improvements in this HIF bid will be implemented by Highways England as part of a wider scheme of improvements between J19-25. Once constructed, it will be incorporated into the Highways England network.
  Given that these improvements provide strategic as well as local development benefits it is unlikely that any exit strategy would be required once constructed.

Please summarise any economic appraisal conducted for this shortlisted option, relative to the do nothing (no HIF funding) option

- A full economic appraisal was conducted for the Do Less option consistent with the Preferred Option with the headline results as follows (all prices are in 2019 factor prices discounted to 2019):
  • 4.1.1 NPV of additional housing benefits (after additionality): £2,476.9 m
  • 4.1.2 NPV of current use land value (before additionality): £13.4 m
  • 4.1.3 NPV of residential land value (before additionality): £4,790.5 m
  • Gross Development Value (GDV): £7,535.1 m
  • Development Costs: £2,744.6
  • 4.1.5 Additionality: 52%
  • 4.2.1 NPV of external impacts of additional housing: £-346.1 m
  • Amenity value: -£42.3 m
  • Transport user benefits: -£302.3 m
  • Transport carbon emissions: -£3.7 m
  • Health: £2.3 m
  • 4.3.1 NPV of infrastructure impacts: £85.4 m
  • Transport user benefits: £67.8 m
  • Transport carbon emissions: -£3.5 m
  • Commercial land value uplift: £21.0 m
  • 4.4 Private sector developer contributions: £305.9 m
  • 4.4 Indirect taxes (fuel duty): £12.9 m
  • 4.4 HIF infrastructure costs (including optimism bias): £100.1 m
  • Total PVB: £1,910.3 m
  • Total PVC: £87.2 m
  • NPV: £1,823 m
  • BCR: 21.9
  • SUMMARY: The key points to note regarding the economic appraisal of the Do Less option relative to the Preferred Option are

that while the BCR is marginally higher for the Do Less option (21.9 versus 19.6), the Do Less delivers about £2.0 billion (51%) less benefits. This is illustrated in more detail via an incremental analysis (Preferred minus Do Less) as follows:

• Difference in PVB: £2,023 m
• Difference in PVC: £113.0 m
• BCR on difference: 17.9

This analysis highlights that the BCR on the additional benefits associated with the Preferred Option relative to the Do Less is very high. As outlined in section 4.1.6, one key assumption is on land value appreciation. As a sensitivity test (see section 4.6), the rate at which the additional benefits still had an incremental BCR above 2.0, which defines high value for money in the DCLG guidance (Dec. 2016), was calculated at 4.2%. This indicates that the value for money of the additional benefits on top of Do Less is extremely robust.

3. Do nothing (no HIF funding)

Option 3: Do nothing (no HIF funding)
With no HIF funding, CBBGC would be limited to just 6000 homes and could not accord fully with Garden Community principles:
• Around 6,000 homes could be developed on the CBBGC site, but capacity constraints on A12 Kelvedon Bypass would prevent further enlargement of the site, as the impact of further development related traffic would be excessive.
• With the CBBGC site limited to around 6,000 homes, the development is less likely to fully accord with Town and Country Planning Association (TCPA) garden community principles as the development could not generate sufficient funding for the full RTS.
• Only 6,000 new homes would be connected to 1,000,000+ jobs within a 90-minute commute.
• Although the traffic generated by a 6,000-home development could be accommodated on the Highway Network with no HIF Funding, it is by no means guaranteed that a site limited to 6,000 homes at this location would gain approval in the Local Plan process. Approval for 2,500 homes could be given up to 2033, but in a Do Nothing scenario there can be no certainty that further homes would be approved at this location beyond 2033.

When assessed against the scheme objectives, the Do Nothing Option scores a total of 9 out of 25 (Att.4.9.3p Section 7.2.1)

What strategic risks do the shortlisted options carry?

Description	Likelihood	Impact
Part One of the North Essex Local Plans is found unsound which would require significant reworking of garden community plans and would significantly delay implementation. The Councils are addressing the various matters raised by the Planning Inspector and will provide a considerable amount of additional robust evidence. However in the absence of funding for strategic infrastructure, the Inspector has questioned the deliverability of the proposals.	High	High
Further masterplanning and preparation of a Development Planning Document setting more detail for the site is not adopted and/or unforeseen objections emerge. A considerable amount of work has already been undertaken with respect to feasibility and conceptual design. Masterplanners have been commissioned. The Councils are fully behind the preparation of a masterplan and DPD for a Garden Community but would not support the preparation of a DPD for a much smaller non Garden Community type of development	High	High
Securing planning consent may be delayed or not secured. The Councils are fully engaged and supportive through the inclusion of the site in the emerging Local Plans as a Garden Community but not as a smaller scale development.	High	High

What are the constraints related to this shortlisted option?

- Environment: similar constraints exist for the Do-Nothing compared to both the Do-Less and Preferred Option since A12 works associated with the current RIS1 programme scope pass through the same or similar areas.

Please provide details of any inter-dependencies related to this shortlisted option

- Local Plan.

  As per Option 1, except that the delivery of only 5,850 households compromises the integrity of the emerging Shared Section 1 Local Plans by not delivering the nature or scale of development currently identified for the site. This is likely to make it difficult to secure the approval of the Shared Section 1 Local Plans in their current form.
- A12 Programme

  As per Option 1, the current proposal for the A12 upgrade is still required to deliver 5,850 households at the site.
- A12 Planning Consent

  As per Option 1, the current proposal for the A12 upgrade is still required to deliver 5,850 households at the site.
- A12 Land Negotiations/CPO

  As per Option 1, the current proposal for the A12 upgrade is still required to deliver 5,850 households at the site.
- A120 Programme

  As per Option 1, the current proposal for the A120 upgrade is still required to deliver 5,850 households at the site.

Please provide details of the exit strategy for the shortlisted options

- Do Nothing Option, therefore there is no exit strategy required

Please summarise any economic appraisal conducted for this shortlisted option, relative to the do nothing (no HIF funding) option

- Not Applicable: Option 3 is the Do Nothing option

Options Summary

Please summarise why the preferred option, with the requested HIF funding, has been chosen and why the other shortlisted options have been discounted - this should make reference to advantages and disadvantages of the options in relation to scheme objectives and CSFs

Preferred Option (Option 1)

The Preferred Option has been chosen for HIF Bid funding because it the best performing of the three shortlisted options. All three options have been assessed against the scheme objectives and critical success factors (CSFs) in the Option Assessment Report (Att.4.9.3p). The Preferred Option best meets the scheme objectives and scores highest in overall terms when assessed against the five critical success factors:

• Strategic Fit and Need: By enabling the delivery of 21,000 homes, it is the option that best meets the local housing need. The larger size of development (when compared with the Do Less and Do Nothing options) will provide greater funding for Garden Community infrastructure and it is therefore most likely to deliver the quality of development desired.

• Value for Money: It provides very high value for money, with 15,000 new homes and associated jobs dependent on the proposed infrastructure. In addition, by delivering 6,000 more homes than the Do-Less Option, it will minimise the risk associated with development occurring in other less sustainable locations.

• Potential Achievability: Highways England have confirmed that infrastructure improvements included in the scheme are all achievable and deliverable within A12 Jn 19 to 25 project, subject to receiving the HIF funding. The skills needed to deliver the scheme will already be available within the wider A12 scheme workforce.

• Supply-side capacity and capability: The greater size of development not only appeals to the supply side, it also increases the chances of delivering the full RTS through developer funding. It is expected that the full recovery of the HIF funding is achievable through clawback.

• Potential Affordability: The scheme would be delivered fully through the requested HIF funding, with no dependency on other funding sources.

In addition, the Preferred Option:

• Optimises site capacity by defining the most suitable developable area with appropriate defensible boundaries, with clear distinction from other neighbouring places and villages;
• Provides critical mass to support provision of new strategic infrastructure that could benefit both new and existing residents, of particular significance being the opportunity to implement a new Rapid Transit System, which requires a suitable level of development and patronage to be viable;
• Provides the optimum solution to overcome road & rail barriers and help make a liveable, cohesive and successful place, minimising the negative impact of main transport corridors which cause severance, impair connectivity and local interaction;
• Supports a holistic approach to housing and economic growth, by providing for economic space and functions throughout so it did not become a dormitory settlement or suffered from a strict zonal approach (such as car orientated low job generating storage/distribution uses and edge of settlement business parks) which would otherwise encourage unsustainable transport patterns;

Do Less and Do Nothing Option (Options 2 and 3)

The Do Less Option does not perform as well as the Preferred Option when assessed against the scheme objectives and critical success factors:
• 6000 fewer homes would be delivered by the Do Less option. The route of the A12 would restrict the ability for land to be accommodated within the developable area of the site, therefore reducing its long term potential capacity. By not fully realigning the A12, a long and narrow strip of land would be created between the new improved A12, the existing A12 & railway line. This would be disconnected from the main area of the new community and would be constrained by inadequate plot widths, lack of connectivity to services and facilities.
• The Do Less option would still provide provides very high value for money, but the NPV of additional housing benefits would be significantly lower (£2.47billion, rather than £4.73billion). Also, by delivering 6,000 fewer homes, there would be a higher risk of development occurring in other less sustainable locations in the future.
• As with the Preferred Option, Highways England have confirmed that infrastructure improvements included in the scheme are all achievable and deliverable within A12 Jn 19 to 25 project, subject to receiving the HIF funding.
• The smaller size of development would appeal less to the supply side and make it more difficult to deliver the full RTS through developer funding.
• The scheme would be delivered fully through the requested HIF funding, but facilitate far fewer new homes than the Preferred Option

The Do Nothing Option performs very poorly when compared with the Preferred Option:
• By delivering, at most, 6000 homes within the CBBGC, this option does not accord with local ambitions in the emerging Shared Section 1 Local Plans (scale & nature of development).
• The full CBBGC development will not be viable without HIF bid infrastructure. Therefore, although no HIF monies would be spent, the damage to the Local Plan ambitions would be immense.
• The much smaller size of development would appeal less to the supply side and also make it more difficult to deliver the full RTS through developer funding. The significantly reduced patronage would adversely affect the operational viability of the RTS.
• Doing nothing would be affordable, but would severely damage the chances of delivering the future housing requirements of North Essex.

Under the Do Less Option and Do Nothing options, the main area of the Garden Community would likely be located to the north of the railway line, with only minor potential for some employment land south of it; to the detriment of promoting sustainable movement of mixed employment and living environments as part of a holistic Garden Community approach.

It is not considered appropriate to locate residential development in a strip of land between a new major highway and the railway land in a long narrow configuration of land. This would not create socially acceptable, walkable neighbourhoods and would not enable the provision of effective local facilities and services (such as access to primary schools), and therefore be contrary to the emerging policy being established via the emerging shared Section 1 Local Plans.

Bringing forward a considerably smaller development would place a greater financial burden on the remaining development to

provide and fund strategic infrastructure and wider network capacity improvements. Under such scenarios, certain strategic elements such as connections into strategic water and power networks, upgrades to transport infrastructure, notably works to provide for rapid transit across a wider (off site) network and other strategic improvements will be required in any event. This increases the equivalent per unit cost burden to provide all necessary infrastructure and scheme viability becomes a far greater challenge.

By not adopting a comprehensive approach as per the Preferred Option it would be considerably more challenging to create employment opportunities & a strong economic role for the Garden Community, as it would be physically more distant to the strategic highways network and commercial development would be attracted more to the fringe around where the improved A12 will be located, but outside of and away from the main residential communities. This would result primarily in vehicular led economic uses such as distribution, with low job creation and not adequately addressing the employment considerations.

Conclusion

Overall, it is considered that both the Do Less and Do Nothing options would not accord with local ambitions as coming forward via the emerging Shared Section 1 Local Plans and would not be able to deliver on wide placemaking and infrastructure delivery considerations. The Preferred Option, however, fully meets all the scheme objectives and performs best when assessed against the five critical success factors.

Please provide a summary of the impact should funding not be received

Without HIF funding and appropriate transport mitigation, it has been demonstrated that it would be possible to deliver a maximum of 6,000 homes. This would be contrary to the strategic approach to growth as set out in the emerging Shared Section 1 Local Plans as the ability to deliver viable, Garden Community style development together with investment in strategic infrastructure would be compromised.

In terms of delivery, without this funding to implement these works it would leave responsibility on the private sector land promoters to deliver the site in an acceptable manner. Whilst they will indicate confidence as they will wish to see the site included in the adopted Local Plans, the viability and deliverability of the proposals would be questionable in light of the viability work undertaken as part of this bid and as part of the evidence base for the emerging Shared Section 1 Local Plans.

This aligns with initial findings from the Planning Inspector who has questioned deliverability and the funding of strategic infrastructure improvements across North Essex. Should the bid be unsuccessful, then it would be anticipated that this would form part of the Inspectors final consideration of the emerging Shared Section 1 Local Plans. Should the Local Plans be found unsound or incapable of being modified to be made sound, the Councils would need to embark on a new process of plan making likely to take several years until a new strategic approach would be in place.

The approach could revert back to a traditional method of private sector led planning applications to be determined by the Councils, with likely protracted and extended timescales and difficulties in securing necessary policy elements. Even were matters to continue, in order to deliver housing on the site there would likely be a need for compromise on other planning requirements such as delivering affordable housing, delivering a step change in modal shift (with the provision of a strategic Rapid Transit System) and other obligations such as promoting local stewardship and ownership of assets. Compromises such as these would be resisted by the Councils likely resulting in long and protracted planning processes, ongoing negotiations and stalled development.

In terms of overall scale, the Councils consider that were the A12 not to be moved to its widest extent as per the Preferred Option then the adjoining land around the route of the A12 would therefore effectively be sterilised and the opportunity for an integrate approach to comprehensive placemaking would be lost. There would be inevitable pressure from the related landowners (who have been actively promoting their land for development) to bring such land forward for development in future. There would be considerable future growth pressure for piecemeal, disconnected, non ‘Garden Community’ standard development around the improved A12 This is likely to be housing led, self-serving with no consideration of or contribution to delivery of strategic infrastructure (such as strategic utilities, rapid transit, etc). It would be the antithesis of the approach being advocated by the Councils.
Were appropriate improvements to the A12 not come forward alongside the existing Highways England upgrade scheme then

subsequent improvements may then need to be retrofitted at considerable cost to it being planned properly from the outset. This may create a future threshold and blockage to development which could otherwise be addressed now. It would create a situation where major investment and improvements to the A12 were to be implemented only to be reworked in the future to accommodate additional, originally unplanned needs.

Without key public sector investment and active role in the delivery of strategic infrastructure related to the Garden Community, it would be anticipated that there would be less of a rationale for a dedicated public sector led delivery vehicle (such as development corporation) and a reduced scope to use such powers as CPO to ensure delivery occurred to meet policy objectives (and implement more effective mechanism to capture value).

There may also be additional damage to relationships with key stakeholders, with a lower level of ambition now being pursued contrary to the approach to date which has involved a greater level of housing growth. Government and Council backing as part of the Garden Towns & Villages programme may be seen to have been for little purpose. The approach has also had an impact on the approach by Highways England to the A12 with matters paused to allow proper evaluation of wider realignment options to accord with the emerging Local Plan. Reverting back to the options already consulted on could be seen as creating unnecessary delay to that scheme.

If you have any further information to support your options appraisal, which has not already been captured in the above, please include these here

Plans showing Preferred and Do Less options.

Filename	Description
190319 CBBGC HIF Preferred Option Hatched.pdf	3.1.1b: Preferred Option Plan
190319 CBBGC HIF Do Less Hatched.pdf	3.1.1a: Do Less Option Plan

Economic Case

Net Present Value (NPV) of housing benefits

Please provide the estimated NPV (in 2018/19 prices) of the additional housing benefits (as monetised using land value uplift) of the preferred option relative to the do-nothing option

£4,734,209,205

Please provide the estimated NPV (in 2018/19 prices) of the current use land value for the scheme overall (before additionality adjustments)

£20,691,732

Please provide the estimated NPV (in 2018/19 prices) of the site specific residential land value for the scheme overall (before additionality adjustments)

£7,750,849,497

Please provide the undiscounted values used to estimate the residential land value calculation across all sites

GDV (compliant with the Economic Case guidance)	£84,348,771,729
Build costs	£7,965,854,073
Externals	£1,194,878,111
Professional fees	£762,172,918
Sales costs	£2,135,710,900
Finance costs	£38,925,244
Contingencies	£366,429,287
Developer profit	£12,102,361,768
Please provide the additionality % assumed for the scheme (deadweight and displacement)	61%

Please provide a detailed explanation of the method and assumptions used to derive the deadweight and displacement estimates. As part of this, an estimate of deadweight for each site individually must be provided, by illustrating how the homes/each site are linked to the infrastructure

Displacement

The scheme is located in an area of particularly strong local demand as evidenced through the consistently high rates of new housing being delivered in Colchester; the high turnover of existing private stock; and growth resilience in house prices relative to comparators (see Commercial Case). Affordability remains an issue - the ratio of median house prices to median workplace-based incomes is 8.89 in Colchester and 9.50 in Braintree (Att.1.1.2c).

Forecasts show that both Colchester and Braintree are expected to continue to grow in the coming decades and local planning authorities will continue to permit new developments and allocate new sites for residential development in their Local Plans to meet those growth requirements.

Objectively Assessed Housing Need (OAHN) for Colchester is 920 dwellings per annum (dpa) (1095 dpa under standard methodology) and for Braintree 716 dpa (835 dpa under standard methodology) (Att.2.1.1a). Over the last three years Colchester has seen an average of 964 dpa and Braintree an average of 435 dpa (Att.2.1.1b),

demonstrating strong local delivery but indicating a need for a new approach to sustain delivery levels and meet future housing need. The high housing need identified for North Essex, the constraints that exist in many existing urban areas and the desire to support a sustainable form of development in the long term has led to the inclusion in the shared Section 1 of Local Plans of three new major settlements that follow the principles of garden communities (Att.1.1.3a pp. 40-42).

Once Colchester Braintree Borders Garden Community (CBBGC) reaches its peak delivery rates, it will still be a minority contributor (albeit a substantial one in terms of the total number of new homes delivered) to the overall housing needs in both authorities' administrative areas. The outstanding amount of growth required to meet housing requirements will need to be met through the delivery of other housing; this demonstrates the complementary nature of the scheme. CBBGC is also anticipated to deliver a high proportion of affordable housing as well as enable the provision of a wide mix of housing types including private rental housing, self/custom build housing, and other specialist housing products, reducing expected displacement levels. Other schemes coming forward in the area (apart from the Tendring Colchester Borders Garden Community and the West of Braintree Garden Community which are situated on the other side of Colchester and Braintree, respectively) are very likely to deliver a higher proportion of housing for market sale.

The reason for this is two-fold: the other schemes are likely to be smaller in scale and therefore less able to provide/cross-subsidise housing other than that for market sale; but also because the other sites will likely be delivered through a developer-led approach which has traditionally been focused on private sales over other forms of tenure. Indeed, these reasons are contributory factors in the Councils supporting the garden community approach above traditional forms of delivery.

The differing nature of housing products available at the Garden Community compared to the other sites which will inevitably come forward during the delivery timescale of the Garden Community, evidences a reduced potential for displacement than if the scheme were to be focused on providing a similar level of homes for private market sale.

We have allowed for a displacement of 15% which, considering the evidence presented above, is the maximum we would expect to be caused by development at the Colchester Braintree Borders Garden Community site.

Note that DCLG Appraisal Guidance (DCLG, 2016: paragraph 4.5) highlights that ex-ante assessments of displacement are extremely difficult to quantify and should therefore be subject to sensitivity analysis. As such, the impact of variations in displacement on the total present value of benefits has been undertaken by a series of sensitivity tests at 0%, 25% and 50%. This is outlined in section 4.6.

Deadweight

For a transport infrastructure intervention, the assessment of deadweight was undertaken in accordance with DfT TAG Unit A2.2 where deadweight is defined as "the situation in which a rise in investment is expected to occur in both the do-something (with-scheme) and the do-minimum (without-scheme) scenarios." The investment in this case is the new housing development at Colchester Braintree Borders Garden Community (CBBGC).

The deadweight was based on the level of housing at the site that could be accommodated by the transport system in the absence of the transport scheme, without inflicting an "unreasonable" level of service on new and existing road users. Although there is no precise definition of reasonable provided in the guidance, it is suggested that "if traffic flows on a road network remain within the 'flat' part of the speed/flow curve, the network should be assumed to provide a reasonable level of service" (DfT, May 2018: *TAG Unit A2.2 Appraisal of Induced Investment Impacts paragraph 3.1.7*). For the purposes of defining a reasonable level of service, volume to capacity (V/C) ratios have been used due to their relationship with speed/flow curves and their availability as an output from the transport model. As such, a V/C of 0.90 for A-Roads and 0.85 for non A-Roads was conservatively defined as the point at which traffic volumes were no longer considered reasonable as they are approaching the capacity of the given roadway when operational performance starts to deteriorate rapidly.

The assessment of the impact of the new development on the road network was undertaken using a validated WebTAG compliant model that was developed for the A120 Braintree to A12 scheme and formally approved by Highways England's Transport Planning Team via the Project Control Framework (PCF) Stage 2 SGAR process. See sections 4.2.2, 4.3.2 and 4.9.3 for more detail.

The do-nothing forecast year model is based on the road network without the proposed HIF infrastructure in place but including future committed infrastructure schemes. The infrastructure that is assumed to be in place in the do-nothing case, which was agreed with Highways England for the A120 project, includes the following schemes:

- Upgrade of the A12 between junction 19 and junction 25, with committed funding as per Highways England's Road Investment Strategy: for the 2015/16 – 2019/20 Road Period (RIS1);
- M11 J7a, committed funding as per RIS1;
- Lower Thames Crossing, developed for next road period from RIS1; and
- A120 Braintree to A12, although not a committed scheme this is currently being assessed for inclusion in RIS2 and considered necessary for the CBBGC to proceed.

The results of the assessment indicate that the impact on the road network is considered unacceptable by the year 2041, at which time 6,350 houses have been constructed at the CBBGC site. At this point, the additional development at the CBBGC results in a V/C exceeding 0.9 on the A12 between J23 and J24 (Kelvedon Bypass), reaching 0.92 in the AM peak period and 0.93 in the PM peak period, and compromises the operation of both J23 and J24. It should be noted that the V/C in the 2026 opening year only reaches 0.81 in the AM peak period and 0.82 in the PM peak period. The year that the V/C reaches 0.9 can be calculated as 2038 when assuming linear interpolation of these values. However, housing from 2040 onwards has conservatively been used to define the level of dependent housing, representing 15,081 dependent households at the CBBGC site.

In summary, the proposed infrastructure upgrades to the A12 Kelvedon Bypass are required due to a lack of capacity on the existing road network resulting from the location and size of the proposed housing development at CBBGC. The provision of this infrastructure would therefore unlock the housing from 5,850 houses in 2040 up to the full build out of 20,931 houses, that is, 15,081 houses. The deadweight is therefore the amount of housing that would happen without the proposed infrastructure, that is, 5,850 houses representing 27.9% of the total.

Please provide a detailed explanation of the method and assumptions underlying the estimates of NPV of residential land value, NPV of current use value, and NPV of additional housing benefits above, as outlined in the Economic Case guidance

Net Present Value (NPV) of Housing Benefits

Overview

The methodology used to undertake the assessment of housing benefits is in line with MHCLG guidance (DCLG, December 2016: *DCLG Appraisal Guide*) supplemented by the MHCLG HIF Bid guidance (MHCLG, June 2018: *HIF FF Business Case Guidance*).

The spreadsheet-based model for undertaking all the viability, financial and economic modelling is attached as part of section 4.9.2 as the following files:

- Preferred Option Model: "4.9.2a_CBBGC_HIF_Economic_Model_v25_FB21k.xlsx".
- Do-Less Option model: "4.9.2b_CBBGC_HIF_Economic_Model_v25_FB15k.xlsx".

It should be noted that the inflation assumptions inherent in the costs and benefits, which are outlined in more detail later in this section, can be summarised as 7.0% nominal land value appreciation, 3.9% nominal building cost inflation and 3.5% nominal infrastructure cost inflation. Nominal prices are converted to real prices using the GDP deflator. Comprehensive sensitivity testing around the land value appreciation base values is outlined in section 4.6. Values in section 4.1.4 are in nominal prices to be consistent with those in section 4.4.1.

The NPV of Housing Benefits (or net private value of housing) is the private benefit associated with a change in land use. It is represented by the change in land value arising from land moving from its current use to a more productive use. In this case, the change is defined as the value of the land in its new residential use minus the value of the land in its existing agricultural use. This can be represented by the equation:

Net private value of housing = Residential land value – Existing land use value

The PV of residential land value – before deadweight and displacement – was calculated as £7,750.8 million and the existing land use value as £20.7 million for a total net private value of housing of £7,730.2 million. After deadweight and displacement, with additionality estimated at 61.2% as outlined in section 4.1.6, this is equal to a PV of £4,734.2 million.

The methodology and assumptions for calculating each of these elements – residential land value and existing land use value – are outlined below. Note that three scenarios were evaluated as part of this CBBGC HIF Bid to illustrate different facets related to viability and the economic and financial cases. The three scenarios are as follows:

- Scenario 1: viability scenario that assumes that the developer covers the cost of the HIF related infrastructure with 0% land value appreciation, 0% cost inflation and base agricultural land values (i.e., excludes hope/expectation) (see section 2.5);
- Scenario 2: viability scenario that assumes the infrastructure related to this HIF bid is funded by HIF, 0% land value appreciation and 0% cost inflation. This scenario results in a reasonable uplift on agricultural land values (9 times or about £86,000 per acre in 2019 prices) while remaining viable (see section 2.5 and 6.1.10); and
- Scenario 3: financial model scenario that is consistent with the economic model except that it includes hope/expectation in the existing use land values (see section 6.1.10). This scenario excludes the cost of the infrastructure related to the HIF bid and assumes 7.0% nominal land value appreciation, 3.9% nominal general build cost inflation, 3.5% nominal infrastructure cost inflation.

The scenario presented in this section is therefore scenario 3, which includes both land value appreciation and construction cost inflation. The inflation values used and their derivation are discussed in detail later in this section. The other two scenarios evaluated (scenario 1 and 2) relate to viability and are discussed in more detail in section 2.5 and in the financial case. Note that optimism bias has only been applied to public sector costs and as such, no optimism bias is applied to the housing development costs outlined in this section. See section 4.7 for more information and section 4.6 for a sensitivity test that includes optimism bias on all costs.

Existing Land Use Value

The existing land use value is based on data published by MHCLG (May 2017: *Land Value Estimates for Policy Appraisal*), which excludes hope value. The value from MHCLG for the South East LEP area is £22,500 per hectare in 2017 factor prices, which has been adjusted to 2019 factor prices to £23,592 per hectare using the UK HPI for 2017 to 2018 (1.6%) and the supplementary economic tables from the Office for Budgetary Responsibility for 2018 to 2019 (3.2%).

The resulting total PV of the existing land use, before deadweight and displacement, on a total of 583.7 hectares of agricultural land is £20.7 million. When deadweight and displacement is taken into account the total PV of the existing land is £12.7 million.

Residential Land Value

The residential land value is the equivalent to the Gross Development Value (GDV) of the site minus the costs incurred by the developer and a minimum level of profit for developing the site. This can be expressed as follows:

Residential land value = GDV – (developer costs + fees + profit)

The GDV of the site is the estimated total revenue a developer could obtain from the land. This is based on the expected house price multiplied by the total number of houses in each year. The expected housing prices were provided via an independent assessment by LSH, with the resulting market value of £3,573 per square metre in 2018 prices. This was uplifted to 2019 prices using OBR forecasts resulting in £3,687 per square metre, which is equivalent to £13.2 million per hectare or £368,734 per private house in 2019 prices. It should be noted that this evaluation did not consider any premium uplift in value to account for the envisaged quality of place-making for this Garden Community development and is therefore likely to be a conservative estimate.

For the purposes of the economic case, the full economic value of development is used and as such affordable housing is included at the above open market value (as per Annex A of MHCLG FF Business Case Guidance). The resulting total PV of GDV on 583.7 hectares (20,931 houses) is therefore £11,596.4 million.

Developer costs with respect to the development of the land plots are based on industry assumptions and are consistent with values as per the emerging Shared Section 1 Local Plans viability evidence. These developer costs include the base build costs of the houses plus on-plot externals such as immediate access, garden, utility connections, incidental open space and estate roads. This excludes infrastructure costs considered as abnormals and section 106/community infrastructure levy (CIL) costs such as contributions to the building of schools, community health facilities, external utilities, internal primary roads and all external infrastructure. These costs are considered under “private sector developer contributions” and are included in section 4.4.1 of this proposal document with a detailed explanation in section 4.4.2.

A list of each item included under developer costs, fees and profit for the calculation of residential land value are outlined below in terms of their present value costs (2019 factor prices discounted to 2019), the corresponding nominal prices and the basis for the values:

- Build Costs: £1,725.5 million NPV (£9,527.2 million in nominal prices) made up of the following elements:
    - House build cost: £1,442.7 million NPV (£7,965.9 million in nominal prices). The base build cost values are from the North Essex Local Plans (Section 1) Viability Assessment (HYAS, April 2017) and are based on location-adjusted figures from the Build Cost Information Service (BCIS) for Quarter 2 2016, supplemented with agency consideration of prevailing build cost rates. The base cost is £1,060 per square metre in 2016 prices uplifted to 2019 prices using the UK HPI and OBR data for a value of £1,183 per square metre. This results in a per household unit value of £118,320.
    - On-plot externals: £216.4 million NPV (£1,194.9 million in nominal prices). The BCIS build costs do not include an allowance for on-plot externals and connections. This is added here as 15% of the build cost, which is consistent with MHCLG guidance (May 2017: *Land Value Estimates for Policy Appraisal Annex A*).
    - A level of contingency/risk is added to both build costs and on-plot externals at 4%. This represents a NPV of £66.4 million (£366.4 million in nominal prices). This is based on standard contingency values for housing construction as adopted by housebuilders to deliver their market products.
- Professional Fees: £138.0 million NPV (£762.2 million in nominal prices) based on 8.0% of build costs in line with guidance (MHCLG, May 2017: *Land Value Estimates for Policy Appraisal Annex A*).
- Sales Costs: £293.6 million NPV (£2,135.7 million in nominal prices) based on 3.0% of sales value in line with guidance (MHCLG, May 2017: *Land Value Estimates for Policy Appraisal Annex A*). Note that the actual sales value is used here, which includes the expected capital value of the affordable housing.
- Developer Profit: £1,663.9 million NPV (£12,102.4 million in nominal prices) based on 17.0% of GDV in line with guidance (MHCLG, May 2017: *Land Value Estimates for Policy Appraisal Annex A*). Note that this is only the residential plot developer profit, not the master developer profit that is included under “private sector developer contributions” and described in detail in section 4.4.2.
- Finance Costs: £24.6 million NPV (£38.9 million in nominal prices) calculated using the financial model cash flow at a rate of 6.0% per annum in line with guidance (MHCLG, May 2017: *Land Value Estimates for Policy Appraisal Annex A*). Note that the finance cost is based on the financial model cash flow that includes the entire development cost including all on-plot developer costs and land costs (excluding hope value) as well as all other infrastructure paid for by the site developers and included under “private sector developer contributions” in section 4.4.1 and described in detail in section 4.4.2.

The total on-plot developer costs including fees, sales costs, finance costs and profit is therefore £3,845.6 NPV (£24,566.3 million in nominal prices). The equation for the NPV of residential land value (before displacement and deadweight) can therefore be written as follows:

PV of Residential Land Value = £11,596 m – (£1,750 m + £432 m + £1,664 m)

= £7,751 million

Note that private sector costs do not include optimism bias based on guidance by Steers as outlined in detail in section 4.7. Optimism bias is however included in all private sector costs as a sensitivity test as outlined in section 4.6.

Appraisal Period, Discounting and Inflation Assumptions

As per the guidance (MHCLG, June 2018: *HIF FF: Business Case Guidance*), a 60-year appraisal period 2019 to 2078 has been used.

As per the guidance (MHCLG, June 2018: *HIF FF: Business Case Guidance*), the discount rate is applied at 3.5% for years 1-30 and 3.0% for years 31-60.

All prices are in factor prices (as opposed to market prices), as per guidance (HIF FF FAQ, Oct. 2018).

Land value appreciation has been applied to the sales prices and GDV of the residential values and existing land values over time. In line with the guidance (HIF Economic Case – pre-submission checklist for bidders), an evaluation of the local housing market was undertaken based on the UK House Price Index (HPI). The result of this evaluation was that a nominal rate of 7.0% was applied to both the residential and current use land values. The specific basis for this value was 20-years of local market data from the UK HPI for Braintree District (http://landregistry.data.gov.uk/id/region/braintree) and Colchester Borough (http://landregistry.data.gov.uk/id/region/colchester) from 1999 to 2018. The average of the two districts for “all property types” was used, with 7.2% for Braintree District and 6.8% for Colchester Borough. This average of 7.0% is consistent (exactly!), with the value suggested by the guidance for nominal land value appreciation (DCLG, 2016: DCLG Appraisal Guide, paragraph C14). It should be noted that forecast housing values from the UK Office for Budgetary Responsibility are only available to the year 2024, with housing at the CBBGC site to be developed after this period and over a relatively long time period until the estimated completion year of 2071. It is considered that this time period spans several economic cycles and as such 20-years of historic data is considered the most appropriate basis for future land value appreciation. The base case for the values presented here uses this nominal land value appreciation applied during the full 60-year appraisal period. Given the uncertainty implied by the lengthy time scales involved, comprehensive sensitivity testing around this nominal land value appreciation rate has been undertaken with values at a flat rate of 4.0%, 5.0% and 6.0% across the entire 60-year appraisal period tested. In addition, an even more conservative approach has been tested where each of the flat rates has been applied over only the first 20 years of the appraisal period with a rate of 4.0% assumed thereafter. The value of 4.0% is in line with long term nominal income growth as outlined in the DCLG Appraisal Guide (December 2016: paragraph 4.25). The results of these tests are outlined in section 4.6.

For nominal infrastructure construction inflation, forecast RICS data from BCIS General Civil Engineering Cost Index (#1191) is only available up to 2022. As above, given the time scales involved in the CBBGC development, a long-term rate has been calculated from data for the years 2005 to 2022 (3.5%). For housing and commercial construction, forecast RICS data from the BCIS General Building Cost Index (#11111) has been used with a long-term rate calculated based on data for the years 1985 to 2022 (3.9%). Note that this is significantly highly than the general GDP deflator.

The GDP deflator (DfT, November 2018: *WebTAG Databook Annual Parameters*) for each year of the appraisal period has been used to convert nominal prices to 2019 real prices.

No attachments

NPV of external impacts of additional housing

Please provide the estimated NPV (in 2018/19 prices) of external impacts of additional housing from the preferred option relative to the do-nothing option

Type	Summary of impact	NPV of impact
Amenity Value	Amenity Value	£-69,796,197
Transport	User benefits: journey time savings and vehicle operating costs	£-424,059,619
Transport	Carbon Emissions	£-5,270,178
Health	Savings to NHS from affordable housing	£3,225,862

Please provide a detailed explanation of the method and assumptions underlying these estimates, as outlined in the Economic Case guidance

Amenity Value

The amenity value of a plot of land refers to the level of pleasantness of the area,. The values used in this assessment are based on data by DCLG (December 2016: *DCLG Appraisal Guide Figure 24)* for an average of urban fringe (greenbelt) and intensive agriculture resulting in a value of £842 per hectare in 2016 prices. This was calculated in perpetuity as per DCLG guidance (DCLG,2001: *Valuing the external benefits of undeveloped land*) based on 3.0% real appreciation value and 3.5% for a net present value of £196,326 per hectare in 2019 factor prices.

For the impact of the residential site, the per hectare value above was multiplied by the residential land area of 583.7 hectares for a total of £114.0 million before deadweight and displacement and £69.8 million after deadweight and displacement.

It should be noted that a significant allowance has been made within the development site for open space that will maintain a certain level of amenity value. The development will provide new and accessible strategic parkland and open space. Any benefits from this have not been included in this analysis.

Transport External Costs: User Benefits, Carbon Emissions and Indirect Taxes *Definition*

Transport external costs (TEC), refer to the costs imposed by new transport users from a dependent development on all other existing users and the environment through increased levels of travel demand. TECs for this appraisal include the impacts on user benefits, carbon emissions and indirect taxes. Transport user benefits/costs refer to the impact on journey times and vehicle operating costs (VOC) while changes in carbon emissions are the result of changes in the travel demand as well as the speed and distance of travel. Indirect taxes refer to the impact on fuel duty, which is an impact on central government revenues and so are reported in section 4.4.1.

The methodology for assessing TECs follows the guidance in TAG Unit A2.2 (Department for Transport, May 2018: *TAG Unit A2.2 Appraisal of Induced Investment Impacts*). TECs of a land use development can be estimated using an equation that represents the difference in travel costs between the scenarios without the dependent trips compared to the case with the dependent trips included. This difference in costs for each origin-destination (OD) pair is then multiplied by the total trips for that OD pair without the dependent trips in order to determine the impact on existing road users. This equation, as described in TAG Unit A2.2 paragraph B.1.5, is as follows:

$$TEC = \sum_{ij} t_{ij}^{0} (c_{ij}^{1} - c_{ij}^{0})$$

Where:

- t_{ij}^{0} is the trips from origin i to destination j excluding the dependent development traffic;
- c_{ij}^{1} is the cost of travel from i to j with dependent development traffic included; and

- c_{ij}^0 is the cost of travel from i to j with dependent development traffic excluded.

The impacts of the additional dependent travel demand on existing road users is measured by the changes in costs measured from a transport model and input into DfT's TUBA software to calculate the above equation.

Transport Modelling

A validated and WebTAG compliant transport model was used to assess the changes in costs on the road network due to the impact of the proposed infrastructure to be funded by this HIF bid. This includes a validated base year model, variable demand model (VDM) and forecast year highways assignment models. The base model (2016) upon which the forecast year models were developed for this work is the same one used to undertake the appraisal for the A120 Braintree to A12 study for Highways England´s Project Control Framework (PCF) Stage 2 appraisal. This model is considered appropriate for use as it covers the scheme study area in sufficient detail (it is contained within the simulation network area) and also explicitly includes the CBBGC development site. This model was calibrated and validated as per WebTAG standards and approved by Highways England's Transport Planning Group (TPG) as part of the PCF Stage 2 Stage Gate Assurance Review (SGAR2). A detailed description of the 2016 base year model is outlined in sections 4 to 10 of the A120 Braintree to A12 Combined Modelling and Appraisal Report (ComMA) (Jacobs, 2018: *A120 Braintree to A12 ComMA Sections 4 to 10, ref B3553T31-JAC-HGN-00-RP-TR-0004*). This report is attached as part of section 4.9.3 (Att.4.9.3b) of this bid.

In addition, the forecast year modelling methodology used for this HIF Bid is simliar that used for the A120 Braintree to A12 study. Again, this methodology and the assumptions inherent in it were approved by Highways England's TPG for the PCF Stage 2 appraisal and are outlined in detail in the ComMA report (Jacobs, 2018: *A120 Braintree to A12 ComMA Sections 11, 12 and 15, ref B3553T31-JAC-HGN-00-RP-TR-0006 and B3553T31-JAC-HGN-00-RP-TR-0008*). Again, these documents are attached as part of section 4.9.3 of this bid (Att. 4.9.3c and 4.9.3e). In addition, any differences to the A120 modelling methodology and the full results of the specific CBBGC HIF modelling are outlined in the technical note *4.9.3a_CBBGC_HIF_Transport Modelling and TUBA Assessment Technical Note* (Att. 4.9.3a)

The forecast year models used to evaluate the impacts of the dependent development traffic on network costs (journey time and distance) consist of two model runs (for each relevant forecast year and time period) as follows:

- Do-Something network (with HIF infrastructure) **without** the dependent travel demand; and

- Do-Something network (with HIF infrastructure) **with** the dependent travel demand.

This Do-Something (DS) network was based on the A120 model forecast year DS networks with the addition of the proposed HIF funded infrastructure as well as some updates on the network with respect to access arrangements at het CBBGC site.

Additional forecast years were required for the HIF bid modelling on top of those used for the A120 modelling. The A120 model included three forecast years as follows:

- 2026 opening year;
- 2041 design year; and
- 2051.

For the CBBGC HIF modelling, two additional forecast year models were developed as follows:

- 2063, representing a Do-Less full build out scenario of 17,000 houses; and
- 2071 representing the Preferred Option full build out of the site at 20,931 houses.

It should be noted that the level of housing in the final Do-Less scenario adopted for the CBBGC HIF bid was reduced to 15,000 houses following later advice by the site developer. However, due to the timing of this change, the transport model scenario with 17,000 houses has been used as the basis for assessing the impacts for 15,000 houses. The 2063 forecast year model also represents an additional intermediate year for the Preferred Option scenario appraisal.

The key assumptions inherent in the development of the additional forecast year models are as follows:

- There are no changes to the networks for the 2063 and 2071 forecast year scenarios;
- The development of demand matrices for 2063 and 2071 follows a similar methodology as for the 2026, 2041 and 2051 scenarios in the A120 model with the following exceptions:
    - Traffic growth for all zones outside the three North Essex districts associated with the shared Section 1 Local Plan – Braintree, Colchester and Tendring – are based on a nominal growth factor calculated from an extrapolation of TEMPro v7.2 data for the East region, since TEMPro only forecasts to 2051. These growth factors by user class and time period are outlined in a technical note on the forecast year modelling undertaken specifically for this HIF bid and attached under section 4.9.3 (Att. 4.9.3a).
    - Traffic growth in the three North Essex districts is assumed to be fully contained within the three Garden Community sites, which is in line with the assumption made for the A120 study for the 2041 and 2051 forecast years. Trip end totals are based on the housing and commercial build out trajectories within the emerging Shared Section 1 Local Plans and as outlined by HYAS (April 2017: *North Essex Local Plans (Section 1) Viability Assessment*). For the CBBGC site this has been reduced pro-rata based on the latest estimate of the total houses for the site by AECOM at 20,931 houses (down from 23,660). The methodology for calculating the trip end totals is the same as for the A120 project as outlined in section 15 of the ComMA report (Jacobs, 2018: *A120 Braintree to A12 ComMA Section 15, ref B3553T31-JAC-HGN-00-RP-TR-0008*) and outlined in the technical note attached to this bid (file “4.9.3a_CBBGC_HIF_Transport Modelling and TUBA Assessment Technical Note.docx”).

- Whilst it is proposed that the Rapid Transit System linking the CBBGC to Colchester to the east and Braintree to the west will be delivered in phases, for the purposes of this bid it has been assumed to be fully in place from 2052 onwards, that is, there is no change to the 2051 matrices but there is for the 2063 and 2071 demand. This effectively assumes that the RTS will be implemented incrementally with the impact on the transport network felt from 2052 onwards. It should be noted that this is a conservative assumption since the intention is that the RTS would be implemented earlier in the development of the CBBGC site, which would result in lower TECs than reported here.

- The transport model used for the A120 Braintree to A12 study is not multimodal and as such, an allowance has been made to reduce the private car vehicle demand in the unconstrained (pre-VDM) demand matrices. This calculation is outlined in more detail below.

In the absence of an appropriate multi-modal transport model, the following process was undertaken to make an allowance for the impact of the proposed rapid transit system on unconstrained demand for car-based travel only (i.e. excluding LGVs and HGVs):

- Two factors were used to estimate the transfer of car-based trips to the proposed RTS. One factor (in-scope factor) relates to the proportion of in-scope trips in each transport model zone. The second factor (transfer factor) relates to the proportion of trips from a particular transport model zone that would transfer to the RTS.

- The in-scope factor was calculated as follows:

  - The proposed rapid transit routes and stops were plotted using GIS over the A120 model zone system,

  - A walk time radius around each station location of 15 minutes was used to identify the census output areas (OA) within each transport model zone considered in-scope, using the TRACC tool,

  - The proportion of each transport model zone trips considered in-scope was then calculated based the population of the in-scope OAs relative to the total population of the transport model zone.

- The assumed transfer factors are differentiated depending on the origin and destination of the trips. For journeys with an origin in a Garden Community (GC), it is assumed that 100% of trips would transfer to the RTS. For all other journeys, it is assumed that 75% would transfer to the RTS.

- These transfer factors were then multiplied by the in-scope factors to produce a origin factor for each zone representing the proportion of trips in each transport model zone that would transfer to the RTS.

- These factors were then applied to the full car-based demand matrices to calculate the number of trips transferring to the rapid transit for each OD pair,

- These trips were then subtracted from the full demand matrices,

- These adjusted matrices were then used as the unconstrained matrices input into the VDM.

It is worth noting that the full transfer outlined above does not come into effect in the transport model until 2063, with a linear increase in the impact assumed from 2051 onwards.

These factors are considered in line with the aspirations of the GC concept to provide high quality and easily accessible alternatives to car travel. It should be noted that £32.3 million (in 2019 prices but excluding risk and inflation adjustments) has been allocated to internal rapid transit infrastructure at the CBBGC site and £53.9 million has been allocated as a private sector developer contribution to the external rapid transit system, which is expected to cover the majority of the cost of implementing the rapid transit associated with the CBBGC site. This increases certainty around the implementation of the rapid transit system as well as the level and quality of service provided to and within the CBBGC site.

However, it is still worth considering the implications of the factors over-estimating transfer from car to rapid transit. These potential impacts are considered to be:

- The need for the proposed infrastructure is understated post-2063;
- The assessment of the impact of the transport infrastructure may be underestimated post-2063;
- The assessment of TECs may be underestimated post-2063.

As such, there is some trade-off between the benefits of the scheme infrastructure and the external costs imposed by the dependent development traffic. It is worth noting that the full impact would apply post-2063 and as such, the impact on the total present value of benefits is diminished significantly by discounting. It is also worth noting that given the congested nature of the road network in such a distance future year scenario and the potential for other external impacts on car-based demand (autonomous vehicles, etc), some form of car-based demand amelioration is considered reasonable.

A technical note on the forecast year modelling undertaken specifically for this HIF bid has been prepared and attached under section 4.9.3 (file “4.9.3a_CBBGC_HIF_Transport Modelling and TUBA Assessment Technical Note.docx”). This includes a summary of the demand by sector both pre and post VDM, model convergence statistics, estimated forecast year traffic flows and estimated forecast year journey times.

The cost and demand data from the transport model was then output for use in TUBA for all relevant forecast years and all modelled time periods, which were as follows:

- AM weekday average hour (0700-1000);
- Inter-Peak (IP) weekday average hour (1000-1600); and

- PM weekday average hour (1600-1900).

The output cost (time and distance) and demand matrices (skims) were then formatted for inclusion in TUBA.

TUBA Assessment

The calculation of the monetised impact of the changes in network costs (journey times and distances) is undertaken using the DfT's TUBA software. The TUBA assessment takes as inputs the cost and demand data generated by the transport model. The parameters used for the TUBA assessment are the same as those used for the A120 Braintree to A12 study and approved by Highways England's TPG. These are outlined in the technical note produced specifically for the CBBGC HIF Bid (Att. 4.9.3a) as well as in more detail in the A120 ComMA report attached to this bid as part of section 4.9.3 (Att. 4.9.3d).

The standard economic parameters prescribed by DfT in the WebTAG Data Book were used in all cases although they are slightly different for this HIF appraisal compared to PCF Stage 2 of the A120 study as they are based on the use of an updated version of TUBA (v1.9.12 as opposed to v1.9.9), which reflects an updated version of the DfT WebTAG Data Book (November 2018 as opposed to July 2017). The other difference to the standard WebTAG assessment undertaken for the A120 study is that the appraisal period set for the HIF bids at 60 years from 2019, that is, 2019 to 2078, which is in line with the specific HIF guidance (MHCLG, June 2018: HIF FF: Business Case Guidance).

It should be noted that in addition to the modelled time periods, the TUBA assessment includes the impacts during off-peak and weekend time periods. The rationale and methodology for this is also outlined in section 13 of the A120 ComMA Report (Att. 4.9.3d) and was approved by TPG. These additional time periods were also maintained for this HIF Bid with the results of the analysis disaggregated by time period in order to understand the impact in these additional periods.

It should also be noted that a standard TUBA assessment provides outputs in 2010 market prices discounted to 2010. However, as per the requirement of the HIF Bid (MHCLG, June 2018: HIF FF: Business Case Guidance), the results from TUBA are adjusted to 2019 factor prices discounted to 2019. This adjustment has been undertaken outside TUBA using the GDP deflator to uplift prices to 2019, the standard discount factor (3.5%) to change to a 2019 base year and the indirect taxation factor (1.19) to move from market to factor prices. These values were taken from the WebTAG Data Book (November 2018).

Results

The outcomes from the TUBA assessment are the monetised impact on TECs in terms of changes in journey times and vehicle operating costs (VOC) (user benefits) as well as the impact on carbon emissions and indirect taxes (fuel duty). As mentioned above, the results from TUBA were adjusted to 2019 factor prices discounted to 2019 in line with HIF guidance.

The results are described in detailed disaggregated terms in a technical note attached in section 4.9.3 (Att. 4.9.3a). The headline results (before displacement) are summarised in the following table.

Table: Transport External Costs by type (£ millions, 2019 factor prices discounted to 2019)

Item	Preferred Option	Do-Less
Time savings	-£474.4	-£338.5
Changes in vehicle operating costs	-£24.5	-£17.4
Carbon emissions	-£6.2	-£4.4
Indirect taxes	£9.1	£6.5
Total	**-£496.0**	**-£353.8**

The total impact on TECs on user benefits (journey time plus VOCs) for the preferred option is about £498.9 million. This relatively high impact is considered reasonable given the number of houses (15,081) and jobs unlocked by the proposed infrastructure. This means that the traffic generated by the dependent housing will increase journey times and vehicle operating costs for the existing road users by this amount over the 60-year appraisal period. By far the largest impact of the additional traffic will be on existing user journey times. There is also a slight negative impact on existing user VOCs, with analysis indicating an increase in both fuel and non-fuel VOCs. This means that existing users are suffering from increased fuel consumption through increased congestion and/or journey length as well as increased maintenance through longer journey lengths as traffic re-routes to avoid congestion. In addition, there is a slight increase in carbon emissions implying that vehicles are using additional fuel as a result of the increased traffic congestion and/or journey length resulting in higher emissions. TUBA also provides outputs with respect to the impact on indirect taxes (fuel duty), which represent an impact on Central Government revenues through fuel duty receipts. Indirect taxes are reported in section 4.4.1. All these impacts are considered reasonable given the magnitude of the increase in traffic due to the unlocking of the depending housing and commercial development.

Health

External health impacts arise from the provision of additional rented affordable housing and represent the monetised savings to the NHS. As outlined in the DCLG guidance (December 2016: *DCLG Appraisal Guide Annex F),* external health impacts are a function of the impact of overcrowding, the probability that a new unit reduces overcrowding, the impact of reduced rough sleeping and the probability that a new unit reduces homelessness.

The assumptions and unit rates used are taken directly from the 2016 DCLG guidance at a NPV of £2,400 per affordable house in 2011 prices. This value has been converted to 2019 prices using the GDP Deflator (DfT, May 2018: *WebTAG Databook*) to arrive at £2,721 per affordable house. This is then multiplied by the total number of affordable houses in each year (5,100 in total) and then discounted back to 2019.

The resulting NPV of health impacts is £5.2 million before deadweight and displacement and £3.2 million after deadweight and displacement.

No attachments

NPV of infrastructure impacts

Please provide the estimated NPV (in 2018/19 prices) of infrastructure impacts, and any other monetised impacts not captured above, from the preferred option relative to the do-nothing option

Type	Summary of impact	NPV of impact
Transport	User benefits	£67,841,262
Transport	Carbon emissions	£-3,537,966
Commercial Land Value Uplift	Land value uplift - commercial	£67,325,140

Please provide a detailed explanation of the method and assumptions underlying these estimates, as outlined in the Economic Case guidance (incl annex A)

INTRODUCTION

The infrastructure impacts monetised for this CBBGC HIF Bid appraisal include transport impacts on user benefits (journey times and vehicle operating costs (VOCs)), carbon emissions and indirect taxes (fuel duty). In addition, an assessment of the impact of the infrastructure in unlocking the commercial development associated with the site has also been untaken. These items are outlined in detail below.

TRANSPORT IMPACTS

Transport impacts related to user benefits, carbon emissions and indirect taxes (fuel duty) have been monetised using the Department for Transport (DfT) TUBA software (v1.9.12), which takes demand and cost (time and distance) data from transport modelling and standard economic parameters from DfT as inputs.

Transport Modelling

A validated and WebTAG compliant transport model was used to assess the changes in costs on the road network due to the impact of the proposed infrastructure to be funded by this HIF bid. This includes a validated base year model, variable demand model (VDM) and forecast year highways assignment models. The base model (2016) upon which the forecast year models were developed for this work is the same one used to undertake the appraisal for the A120 Braintree to A12 study for Highways England´s Project Control Framework (PCF) Stage 2 appraisal. This model is considered appropriate for use as it covers the scheme study area in sufficient detail (it is contained within the simulation network area) and also explicitly includes the CBBGC development site. This model was calibrated and validated as per WebTAG standards and approved by Highways England´s Transport Planning Group (TPG) as part of the PCF Stage 2 Stage Gate Assurance Review (SGAR2). A detailed description of the 2016 base year model is outlined in the A120 Braintree to A12 Combined Modelling and Appraisal Report (ComMA) (Jacobs, 2018: *A120 Braintree to A12 ComMA Sections 4 to 10, ref B3553T31-JAC-HGN-00-RP-TR-0004*). This report is attached as part of section 4.9.3 (Att. 4.9.3b) of this bid.

In addition, the forecast year modelling methodology used for this HIF Bid is simliar that used for the A120 Braintree to A12 study. Again, this methodology and the assumptions inherent in it were approved by Highways England's TPG for the PCF Stage 2 appraisal and are outlined in detail in the ComMA report (Jacobs, 2018: *A120 Braintree to A12 ComMA Sections 11, 12 and 15, ref B3553T31-JAC-HGN-00-RP-TR-0006 and B3553T31-JAC-HGN-00-RP-TR-0008*). Again, these documents are attached as part of section 4.9.3 of this bid (Att. 4.9.3c and 4.9.3e). In addition, any differences to the A120 modelling methodology and the full results of the specific CBBGC HIF modelling are outlined in the technical note *4.9.3a_CBBGC_HIF_Transport Modelling and TUBA Assessment Technical Note* (Att. 4.9.3a)

The forecast year models used to evaluate the impacts of the dependent development traffic on network costs (journey time and distance) consist of two model runs (for year forecast year and time period) as follows:

- Do-Minimum network (without HIF infrastructure) and **without** the dependent travel demand; and
- Do-Something network (with HIF infrastructure) and **without** the dependent travel demand.

This assessment therefore measures the impact of the proposed infrastructure excluding the demand associated with the dependent development. That is, it is a standard transport appraisal that maintains the fixed land use assumption. The benefits associated with the infrastructure as it relates to the dependent housing are evaluated using land value uplift.

The DM network used for this appraisal corresponds to the DS network used from the Alternative Scenario (AS) of the A120 Braintree to A12 study. This includes the following infrastructure as agreed with Highways England for the A120 Study:

- Upgrade of the A12 between junction 19 and junction 25, with committed funding as per Highways England's Road Investment Strategy: for the 2015/16 – 2019/20 Road Period (RIS1);
- M11 J7a, committed funding as per RIS1; and
- Lower Thames Crossing, committed funding to be developed for next road period from RIS1.

In addition, the DM for the A120 HIF includes the A120 preferred option (option D) from the A120 Braintree to A12 study. Although this is not a committed scheme, it is currently being assessed for inclusion in RIS2 and considered necessary for the CBBGC to proceed.

Additional forecast years (2063 and 2071) were required for the HIF bid modelling on top of the forecast years developed for the A120 study. This is outlined in section 4.2.2.

A technical note on the forecast year modelling undertaken specifically for this HIF bid has been prepared and attached under section 4.9.3 (Att. 4.9.3a_CBBGC HIF Modelling and TUBA Assessment Technical Note). This includes a summary of the demand by sector both pre and post VDM, model convergence statistics, estimated forecast year traffic flows and estimated forecast year journey times.

The cost and demand data from the transport model was then output for use in TUBA for all relevant forecast years and all modelled time periods, which were as follows:

- AM weekday average hour (0700-1000);
- Inter-Peak (IP) weekday average hour (1000-1600); and
- PM weekday average hour (1600-1900).

The output costs (time and distance) and demand matrices (skims) were then formatted for inclusion in TUBA.

TUBA Assessment

The calculation of the monetised impact of the changes in network costs (journey times and distances) is undertaken using the DfT's TUBA software. The TUBA assessment takes as inputs the cost and demand data generated by the transport model. The parameters used for the TUBA assessment are the same as those used for the A120 Braintree to A12 study and approved by Highways England's TPG. These are outlined in the technical note produced specifically for the CBBGC HIF Bid (Att. 4.9.3a) as well as in more detail in the A120 ComMA report attached to this bid as part of section 4.9.3 (Att. 4.9.3d).

The standard economic parameters prescribed by DfT in the WebTAG Data Book were used in all cases although they are slightly different for this HIF appraisal compared to PCF Stage 2 of the A120 study as they are based on the use of an updated version of TUBA (v1.9.12 as opposed to v1.9.9), which reflects an updated version of the DfT WebTAG Data Book (November 2018 as opposed to July 2017). The other difference to the standard WebTAG assessment undertaken for the A120 study is that the appraisal period set for the HIF bids at 60 years from 2019, that is, 2019 to 2078, which is in line with the specific HIF guidance (MHCLG, June 2018: *HIF FF: Business Case Guidance*).

It should be noted that in addition to the modelled time periods, the TUBA assessment includes the impacts during off-peak and weekend time periods as outlined in section 4.2.2.

It should also be noted that a standard TUBA assessment provided outputs in 2010 market prices discounted to 2010. However, as per the requirement of the HIF Bid (MHCLG, June 2018: *HIF FF: Business Case Guidance*), the results from TUBA are adjusted to 2019 factor prices discounted to 2019. This adjustment has been undertaken outside TUBA using the GDP deflator to uplift prices to 2019, the standard discount factor (3.5%) to change to a 2019 base year and the indirect taxation factor (1.19) to move from market to factor prices. These values were taken from the WebTAG Data Book (November 2018).

Results

The outcomes from the TUBA assessment are the monetised impact of the infrastructure in terms of changes in journey times and vehicle operating costs (VOC) (user benefits) as well as the impact on carbon emissions and indirect taxes (fuel duty). As mentioned above, the results from TUBA were adjusted to 2019 factor prices discounted to 2019 in line with HIF guidance.

The results are described in detailed disaggregated terms in a technical note attached in section 4.9.3 (Att. 4.9.3a). The headline results (before displacement) are summarised in the following table.

Table: Transport impacts by type (£ millions, 2019 factor prices discounted to 2019)

Item	Preferred Option	Do-Less
Time savings	92.3	92.3
Changes in vehicle operating costs (VOC)	-12.5	-12.5
Carbon emissions	-4.2	-4.2
Indirect taxes	8.6	8.6
Total	**84.3**	**84.3**

The total impact of the infrastructure on user benefits (time savings plus VOCs) for the preferred option is about £79.8 million in 2019 factor prices discounted to 2019. This is the same impact for both the Preferred Option and the Do-Less scenario since this assessment does not include the dependent housing, which is the only difference between these two options (the marginal difference in the A12 alignment in the Do-Less was not modelled, although this would marginally increase benefits by reducing the distance travelled). The magnitude of this impact is in line with expectation given that i) it represents the incremental impact of the infrastructure over and above the current proposal for upgrading the A12 and ii) it does not include the transport benefits associated with the infrastructure with respect to the travel demand arising from the dependent housing, which is measured by land value uplift.

By far the largest impact of the additional traffic would be a benefit associated with a reduction in journey times. This is in line with expectations for a transport scheme that is improving network capacity. There is expected to be a slight negative impact on vehicle operating costs, with analysis indicating an increase in both fuel and non-fuel VOCs. In the context of the proposed infrastructure, this implies that people are travelling faster and as such using more fuel and also travelling slightly further to take advantage of the improvement in capacity on the A12. In addition, there is a slight increase in carbon emissions, implying that vehicles are using additional fuel as a result of higher speed travel and journey length resulting in higher emissions. TUBA also provides outputs with respect to the impact on indirect taxes (fuel duty), which represent an impact on Central Government revenues through fuel duty receipts. Indirect taxes are reported in section 4.4.1. All these impacts are considered reasonable given the scale of the infrastructure proposed and the reduced demand assumed to exclude the impact of the dependent housing.

COMMERCIAL DEVELOPMENT

Overview

In accordance with the HIF guidance (MHCLG, June 2018: HIF FF Business Case Guidance) the land value uplift associated with commercial development (after additionality) has been included in this section.

The methodology used to undertake the assessment of housing benefits is in line with MHCLG guidance (DCLG, December 2016: *DCLG Appraisal Guide*) supplemented by the MHCLG HIF Bid guidance (MHCLG, June 2018: *HIF FF Business Case Guidance*).

The NPV of Commercial Development Benefits is the private benefit associated with a change to a commercial development land use. It is represented by the change in land value arising from land moving from its current use to a more productive use. In this case, the change is defined as the value of the land in its new commercial use minus the value of the land in its existing agricultural use. This can be represented by the equation:

Net private value of housing = Commercial land value – Existing land use value

The present value (PV) of commercial land value – before deadweight and displacement – was calculated as £150.9 million and the existing land use value as £1.9 million for a total net private value of housing of £148.9 million.

Deadweight for the commercial development was calculated as 42%, which is higher than for the residential development reflecting that the build out of the commercial development is assumed to be earlier compared to the housing based on the trajectory in the evidence base for the emerging Shared Section 1 Local Plans (HYAS, April 2017: *North Essex Local Plans (Section 1) Viability Assessment*). Displacement is assumed at 15% as per the housing since the commercial development is directly linked to the provision of the residential development ethos as a Garden Community. After deadweight and displacement – combined additionality of 49% compared to 61% for the housing – the total net private value of the commercial development is equal to a PV of £73.1 million.

The methodology and assumptions for calculating each of these elements – commercial land value and existing land use value – are outlined below. Since the assessment of the commercial land value is to inform the economic case only, the assumptions inherent are consistent with scenario 3 as outlined section 4.1.7, which includes land value appreciation and cost inflation.

Existing Land Use Value

The existing land use value is based on data published by MHCLG (May 2017: *Land Value Estimates for Policy Appraisal*), which excludes hope value in line with guidance for the economic case. The value from MHCLG for the South East LEP area is £22,500 per hectare in 2017 factor prices, which has been adjusted to 2019 prices for £23,592 per hectare using the UK HPI for 2017 to 2018 (1.6%) and the supplementary economic tables from the Office for Budgetary Responsibility for 2018 to 2019 (3.2%).

The resulting total PV of the existing land use value, before deadweight and displacement, on a total of 60.5 hectares of agricultural land is £1.9 million. When deadweight and displacement is taken into account the total PV of the existing land value is £1.0 million.

Commercial Land Value

The commercial land value is the equivalent to the Gross Development Value (GDV) of the site minus the costs incurred by the developer and a minimum level of profit for developing the site. This can be expressed as follows:

Commercial land value = GDV – (developer costs + fees + profit)

The GDV of the site is the estimated total revenue a developer could obtain from the land. This is based on the expected rent per square metre, the total net internal area (NIA) in square metres per year, the yield and an estimate of void and rent-free months. The expected GDV values by land use type were provided via an independent assessment by Lambert Smith Hampton (LSH), with their key assumptions as follows:

- Rent in 2018 prices:
    - Employment B2/B8 industrial: £86.10 rent per NIA square metre,

- Employment B1 offices: £199.10 rent per NIA square metre,
- Retail and leisure: £107.64 rent per NIA square metre.

- Ratio of Gross Internal Area (GIA) to Net Internal Area NIA:
  - Employment B2/B8 industrial: 97%,
  - Employment B1 offices: 80%,
  - Retail and leisure: 80%.

- Yield:
  - Employment B2/B8 industrial: 6.8%,
  - Employment B1 offices: 6.6%,
  - Retail and leisure: 7.5%.

- Void and rent free:
  - Employment B2/B8 industrial: 18 months,
  - Employment B1 offices: 18 months,
  - Retail and leisure: 18 months.

The resulting GDV was then calculated and prices uplifted to 2019 prices using the GDP deflator (DfT, November 2018: WebTAG Databook v1.11). The final values used, expressed in terms of GDV per GIA sqm in 2019 factor prices as follows:

- Employment B2/B8 industrial: £1,122 GDV per GIA square metre,
- Employment B1 offices: £2,212 GDV per GIA square metre,
- Retail and leisure: £1,037 GDV per GIA square metre.

The resulting total PV of GDV on 60.5 hectares (322,015 GIA sqm) is therefore £543.0 million.

Developer costs with respect to the development of the commercial land are based on background work done by Cushman & Wakefield and included in the evidence base for the emerging shared Section 1 Local Plans (HYAS, April 2017: *North Essex Local Plans (Section 1) Viability Assessment*). These developer costs include the base build costs plus external works and estate roads, professional fees, contingency, sales costs and developer profit. All other on-site and external costs are included under “private sector developer contributions” in section 4.4.1 of this proposal document with a detailed explanation in section 4.4.2.

A list of each item with a description of the costs and assumptions included under developer costs, fees and profit for the calculation of commercial land value are outlined below in terms of their present value costs (2019 factor prices discounted to 2019) together with the corresponding nominal prices and the basis for the values:

- Build Costs: £257.5 million PV (£1,047.4 million in nominal prices) made up of the following elements:

    - Base build cost: £212.8 million PV (£865.6 million in nominal prices) The base build cost values are from the North Essex Local Plans (Section 1) Viability Assessment (HYAS, April 2017) and are based on location-adjusted figures from the Build Cost Information Service (BCIS) for Quarter 2 2016, supplemented with agency consideration of prevailing build cost rates. The base cost is £804 per square metre (psm) for B2/B8 industrial buildings, £1,527 psm for B1 offices and £759 psm for retail and leisure.

    - Externals: £21.3 million PV (£86.6 million in nominal prices). The BCIS build costs do not include an allowance for on-plot externals, connections and estate roads. This is added here as 10% of the build cost, as per the HYAS report (April 2017).

    - A level of contingency/risk is added to both build costs and on-plot externals at 10%. This represents a PV of £23.4 million (£95.2 million in nominal prices). This is based on standard building construction contingency values as set out in background evidence from AECOM, Cushman & Wakefield and Hyas Associates.

    - Note that optimism bias is not added on top of this contingency/risk here but is only added to private sector costs as a sensitivity test. The assumptions inherent in the application of optimism bias are outlined in detail in section 4.7.

- Professional Fees: £20.6 million PV (£76.5 million in nominal prices) based on 8.0% of build costs, which is in line with guidance (MHCLG, May 2017: Land Value Estimates for Policy Appraisal Annex A).

- Sales Costs: £19.0 million PV (£91.3 million in nominal prices) based on 3.5% of sales value in line the North Essex Local Plans (Section 1) Viability Assessment (Hyas, 2017).

- Developer Profit: £95.0 million PV (£456.6 million in nominal prices) based on 17.5% of GDV in line with the North Essex Local Plans (Section 1) Viability Assessment Hyas, 2017).

- Finance Costs: These are captured in the appraisal of the residential development.

The total on-plot commercial developer costs including fees, sales costs, and profit is therefore £392.1 PV (£1,671.8 million in nominal prices). The equation for the NPV of commercial land value (before displacement and deadweight) can therefore be written as follows:

NPV Commercial Land Value = £543.0million – (£257.5 million + £39.6 million + £95.0 million) = £150.9 million

Note that private sector costs do not include optimism bias based on guidance by Steers as outlined in detail in section 4.7. Optimism bias is however included in all private sector costs as a sensitivity test as outlined in section 4.6.

Appraisal Period, Discounting and Inflation Assumptions

All parameters and assumptions related to the appraisal period, discounting and inflation are consistent with the appraisal of the residential development and are outlined in detail in section 4.1.7.

No attachments

NPV of scheme costs

Please provide the estimated NPV (in 2018/19 prices) of infrastructure scheme costs (and revenues) as incurred by the following groups under the preferred option relative to the do-nothing option, ensuring no double counting of any costs included in prior answers – NPV of housing benefits, NPV of external impacts of additional housing, and NPV of infrastructure impacts

Type		Total Nominal Amount	NPV (18/19 constant prices)
HIF funding	Cost	**£248,642,899**	**£197,211,150**
	Revenue	**£0**	**£0**
Central Government	Cost	**£0**	**£0**
	Revenue	**£192,044,396**	**£15,052,612**
Local Authority	Cost	**£0**	**£0**
	Revenue	**£0**	**£0**
Other public sector	Cost	**£0**	**£0**
	Revenue	**£0**	**£0**
Private sector (not developer contribution)	Cost	**£0**	**£0**
	Revenue	**£0**	**£0**
Private sector (developer contribution)	Cost	**£1,995,017,460**	**£437,080,297**
	Revenue	**£0**	**£0**
Optimism Bias applied to *Total Public Sector Costs*	Cost	**£22,737,990**	**£18,034,640**
Optimism Bias applied to *Total Private Sector Costs*	Cost	**£0**	**£0**
Real Net Present Public Sector Cost		**£200,193,178**	
Real Net Present Private Sector Cost		**£437,080,297**	

Please provide a detailed explanation of the method and assumptions underlying all estimated costs, as outlined in the Economic Case guidance

HIF Funding

The HIF funding in table 4.4.1 refers to the funding of the proposed Preferred Option infrastructure required to deliver the additional 15,081 houses at the CBBGC site. As previously mentioned, this includes the following infrastructure items:

- Realignment of the A12 between J24 and J25;
- Widening of the A12 from dual 3-lane to dual 4-lane between J23 and J24 (Kelvedon bypass);
- Upgraded new A12 J25; and
- Provision of traffic signals at the southern dumbbell roundabout at A12 J23.

A breakdown of the costs by item are outlined in the following table including risk and inflation but excluding optimism bias (OB).

Table: CBBGC HIF Funding Cost Estimates (£million 2019 prices)

Item	Base Cost	Risk	Cost including risk	Inflation adjustment	Cost including inflation

A12 realignment infrastructure	62.1	21.1	83.1	21.2	104.3
A12 realignment land	12.7	4.3	17.0	0.0	17.0
Sub-Total: A12 Realignment	**74.7**	**25.4**	**100.1**	**21.2**	**121.3**
1. New A12 J25	28.5	10.2	38.8	9.9	48.6
2. Local works associated with new A12 J25	12.8	4.6	17.4	4.4	21.9
3. Widening of A12 Kelvedon bypass	20.7	7.4	28.1	7.2	35.3
4. Signalisation of J23 dumbbell	0.20	0.07	0.27	0.07	0.34
Land costs for other works	0.87	0.31	1.2	0.0	1.2
Sub-Total: Other Works	**63.1**	**22.7**	**85.8**	**21.5**	**107.3**
Total HIF Funding	**137.9**	**48.0**	**185.9**	**42.7**	**228.6**

The sources of the data in the above table are as follows:

- A12 realignment: the cost estimate for infrastructure and land, including risk and inflation, was provided directly by Highways England's benchmark team in 2016 prices, which was uplifted to 2019 prices by Jacobs in line with an understanding of the construction inflation values used by Highways England as derived by Jacobs.

- Other works infrastructure: the cost estimate for the other works infrastructure is based on an estimate of quantities by Jacobs and unit rates derived from Highways England benchmark team for A12 Route 3A. The level of risk is based on a quantified risk assessment (QRA) undertaken by Jacobs and outlined in more detail in section 4.8.1 and attached here as file "4.4.2a_A12 HIF Project Risk Register QCRA.pdf".

- Other works land: the land costs for the other works were estimated by Lambert Smith Hampton (LSH) specifically for this HIF bid.

The base costs for the A12 Realignment provided directly by Highways England in 2016 prices are outlined in the table below together with the adjustment to 2019 prices undertaken by Jacobs based on derived Highways England cost inflation rates (see below for more detail).

Table: A12 Realignment Base Costs as provided by Highways England (£million)

Base Cost	2016 prices	2019 prices

Infrastructure, Planning, Other	51.7	62.1
Land	12.0	12.7
Risk	21.7	25.4
Inflation adjustment	29.4	21.2
Total	**114.8**	**121.3**

It should be noted that an independent cost estimate of the Other Works was undertaken by Jacobs as a validation of the Benchmark derived unit rates and was found to be about 21% lower than the above estimates, at £50.0 million (excluding risk and inflation) compared to £63.1 million. This is outlined in the document attached in section attached document “4.4.2b_Order or Magnitude Cost Estimate for CBBGC Bid Highway Infrastructure.pdf”. As such, the estimates adopted and used for the economic appraisal are considered conservative and robust.

A spend profile has been developed for the HIF Funding (including risk) in nominal prices and real 2019 prices as outlined in the following table.

Table: CBBGC HIF Funding Profile in Nominal and Real 2019 Prices (£million)

Item	Total	2020/21	2021/22	2022/23	2023/24
Total cost incl. risk in nominal prices	**248.6**	24.9	21.3	49.2	153.3
Real 2019 prices	**228.6**	23.9	20.1	45.5	139.0

The spend profile outlined in the above table is based on the cost profile assumed by Highways England for the overall A12 Junction 19 to 25 RIS1 Scheme (Route 2 alignment) in scheme cost estimates carried out in 2018. The overall A12 scheme's construction programme will extend beyond 2024 and, as such, the HIF Bid infrastructure would not be in use until the delivery of the full A12 scheme. However, the HIF funding would contribute to the overall A12 scheme "pot" to be spent as outlined in the table above. ***Highways England have indicated that above spend profile is achievable within the context of their current forecasts for the overall A12 scheme spending during this period.***

The overall HIF funding required includes an adjustment for inflation and is therefore in 2019 real prices. The standard method for calculating the inflation adjustment is to inflate costs to the spend year by nominal infrastructure inflation and to then deflate to the price year (2019) using the GDP deflator (DfT, November 2014: *TAG Unit A1.2 Scheme Costs*). The nominal cost inflation rates assumed are as follows:

- A12 realignment infrastructure: assumed nominal construction cost inflation derived by Jacobs based on estimates for the A12 realignment by Highways England's Benchmark team and an assumed profile for A12 Route 2 also provided by Highways England, resulting in a nominal rate of 6.25% per annum.
- A12 realignment land: assumed nominal cost inflation at GDP deflator rate based on treatment of land costs for the A12 scheme cost estimates provided by Highways England Benchmark team.
- Other works: the same values are assumed for the other works as for the A12 realignment in order to be consistent.

In order to convert the nominal costs back to 2019 prices, the nominal costs were adjusted using the GDP deflator (DfT, November 2018: *WebTAG Databook v1.11*).

These real costs were then discounted using the discount rates specified in the MHCLG HIF guidance (MHCLG, June 2018: *HIF FF Business Case Guidance*) to calculate the present value of costs (PVC). The resulting PVC in 2019 factor prices discounted to 2019 are outlined in the following table.

Table: Present Value of Costs for HIF Funded Infrastructure (£million 2019 factor prices discounted to 2019)

Item	**PVC**
PVC excluding OB	£197.2 m
Optimism bias	£18.0 m
PVC including OB	**£215.2**

The total PVC for use in the economic appraisal is therefore £215.2 million. The application of OB is outlined in section 4.7.

CENTRAL GOVERNMENT

Central government revenues related to the impact on indirect taxes (fuel duty) of the infrastructure and the external impact of the additional demand associated with the dependent development were calculated through the transport modelling and appraisal as outlined in sections 4.2 and 4.3.

PRIVATE SECTOR DEVELOPER CONTRIBUTIONS

Private sector developer costs represent the more strategic works associated with a master developer as opposed to the plot developer costs outlined in section 4.1.7. As such, these costs are in addition to those outlined in previous sections.

Almost all these items are based on cost estimates from AECOM (November 2018) and include additional on-site as well as strategic transport infrastructure, education, community and health facilities, open spaces, leisure and sports and site management and governance. These costs are outlined in the following table in present value terms (2019 prices discounted to 2019) before deadweight and displacement. The ID number corresponding to the costs, cost plans and cash flow as part of sections 6.1.7, 6.1.8 and 6.4 respectively.

Table: Private Sector Developer Costs

ID	Type	Description	Cost (£ million PV)
7	Infrastructure	Site preparation and enabling costs	194.6
8	Infrastructure	On-site Transport: A3 – Active Mode Link (Church Road to Marks Tey Station)	0.4
9	Infrastructure	On-site Transport: PT1a – Rapid Transit Loop (bus only roads)	18.4
10	Infrastructure	On-site Transport: PT4 – West Tey Transit Hub	4.6
11	Infrastructure	On-site Transport: Walking and cycling connection	1.1
12	Infrastructure	On-site Infrastructure: Internal bridges over rail line (dual-lane Town Centre Bridge, dual-lane second car bridge with walk/cycle, 3 x walk/cycle bridges)	18.7
13	Abnormals	On-site education	83.4
14	Abnormals	On-site community and health	11.3
15	Abnormals	On-site open spaces, leisure and sports	37.5
16	Abnormals	On-site environment/waste	6.5
17	Abnormals	Travel plan measures	6.1
18	Abnormals	Employment support	12.3
19	Infrastructure	Off-site utilities - electric sub-station, gas supply and telecoms	33.4

20	Infrastructure	Off-site utilities: potable and waste water	22.5
21	Infrastructure	Off-site infrastructure: A2 and A4 - Active Mode Connections to Rural Hinterland, Cycle Links	1.0
22	Infrastructure	Off-site infrastructure: PR1 and PR2 - Marks Tey Station and Junction Package and Staine St. Reduction	17.6
23	Infrastructure	Off-site infrastructure: Contributions to A120	28.9
24	Infrastructure	Off-site infrastructure: Contributions to Rapid Transit System	28.7
25	Contingency	Contingency/Risk on infrastructure/abnormals items at 10.0% of construction costs	52.7
26	Abnormals	Management and governance	12.3
27	Professional Fees	Fees on infrastructure/abnormals items at 6.0% of construction costs	34.8
28	Developer Profit	Master Developer Profit at 15%	86.9
	Total	**Total Private Developer Costs**	**713.7**

The total present value of private sector developer costs is £713.7 million (£3,257.5 million in nominal prices) before deadweight and displacement (excluding optimism bias – see section 4.7). Based on 61% additionality as outlined in section 4.1.5 this represents a present value of £437.1 million (£1,995.0 million in nominal prices).

Each of the above items is described in the following paragraphs.

Item 7 covers site preparation and enabling costs includes site preparation (general demolition and site clearance, cut and fill across the site, remediation), highways (primary and secondary road network to create reasonable sized plots for disposal) and on-site utilities/drainage (electrical, gas, water and telecommunications network). The cost

assumed for this item is based on a recent review by Gleeds (January 2019), with a value of £15,829 per household in 2018 prices.

Items 8 to 11 cover additional on-site transport infrastructure items covered by the developer including internal rapid transit roadways, active modes infrastructure and a transit hub (AECOM).

In addition, item 12 covers the cost of internal bridges over the mainline rail line required for the site has been included with the costs developed by Jacobs. This includes private vehicle, rapid transit and walk/cycle crossings of the mainline rail line. The costs are based on updated estimates by Jacobs and assume two dual carriageway bridges plus pedestrian and cycle facilities as well as three pedestrian/cycle bridges.

Items 13 to 16 are non-transport on-site infrastructure that include education, community and health, open spaces and environment/waste. These costs are based on an assessment by AECOM.

Items 17 and 18 cover travel plan measures (£516 per household) and employment support (£1,031 per household) as outlined by AECOM.

Items 19 to 24 cover off-site transport infrastructure costs and contributions. This includes the cost of off-site utilities (items 19 and 29), transport infrastructure providing key active mode links, a package of works to improve access to Marks Tey rail station and facilitate rapid transit on Stain Street as well as contributions to both the proposed A120 upgrade and provision of the rapid transit system as provided by AECOM.

Item 25 covers the contingency of 10% on the other private sector developer costs outlined above as items 7 to 24 in line with advice from AECOM, Cushman & Wakefield and Gleeds.

Item 26 is an allowance for the entity charged with the governance and maintenance of the site of £1,000 per household (as a working assumption relating to long term stewardship in accordance with Garden City principles of development).

Item 27 covers professional fees on the strategic infrastructure provision undertaken by a master developer in items 7 to 24 at 6.0% of the infrastructure costs in line with the assumptions in the North Essex Local Plans (Section 1) Viability Assessment (Hyas 2017).

Item 28 covers the master developer profit, assumed at 15% in line with the North Essex Local Plans (Section 1) Viability Assessment (Hyas, 2017), informed by advice from Cushman & Wakefield.

No attachments

Non-monetised impacts

Are there any impacts it is not feasible or proportionate to monetise?

Yes

Details, including an indicative scale of impact and why these have not been monetised

OVERVIEW

The key impacts that have not been monetised are based on the impacts not monetised but outlined in the standard Appraisal Summary Table (AST) as required by DfT as part of a transport assessment (attached as part of section 4.9.3) plus some additional environmental items. These impacts are outlined in the following table with a qualitative score where appropriate.

NON-MONETISED IMPACTS SUMMARY

IMPACT QUALITATIVE SCORE
Journey Time Reliability Slight Beneficial
Accidents (safety) Slight Adverse
Physical Activity Slight Beneficial
Journey Quality Slight Beneficial
Security Neutral
Access to Services Slight Beneficial
Affordability Neutral
Severance Neutral
Option & Non Value Use Slight Beneficial

Noise, Air Quality, Landscape, Historic environment/cultural heritage, biodiversity, Water Environment, Geology & Soils, People & Communities, Health - discussion only as outlined below.

The 7-point scale for the qualitative scoring, in line with guidance from DfT, is as follows:
• Large beneficial;
• Moderate beneficial;
• Slight beneficial;
• Neutral;
• Slight adverse;
• Moderate adverse;
• Large adverse.
Each of these items is addressed in the following sections.

JOURNEY TIME RELIABILITY – slight beneficial
The scheme is expected to marginally improve journey time reliability on the A12 and the surrounding road network by reducing congestion related delay and improving network resilience, particularly with respect to the upgrade of the A12 Kelvedon bypass. This improvement not only considers the impact of the additional lane under a fixed demand assessment but also when including the additional traffic associated with the dependent development. That is, even with the additional traffic associated with dependent development the volume capacity ratio is still lower than in the Do-Nothing case, implying reduced congestion related delay.

SAFETY – slight adverse
The impact on safety needs to be considered in two parts: i) the impact of the infrastructure proposed to be funded by HIF on safety, and ii) the impact of the additional road users associated with the dependent development on the existing road user safety.

The overall impact of the infrastructure on safety is considered likely to be a slight positive impact. This slight positive impact would likely be through the reduction in accidents on lower standard roads as some reassignment of traffic occurs to the upgraded higher standard A12 in future years. Improvements in safety are not expected simply due to the widening of the Kelvedon bypass. The manual for the DfT's COBA-LT software, which calculates accident benefits associated with road infrastructure schemes, outlines accident rates for different road types. The manual identifies that the accident rate for 3-land and 4-lane dual carriageway roads is the same, resulting in no likely reduction in accidents on the Kelevdon bypass itself. The addition of an upgraded A12 junction 25 (J25) is also not likely to result in any significant change in road safety in itself as traffic is reassigned from one set of roundabouts at

the existing J25 to another.

The impact on existing road users from the trips associated with the dependent housing is considered likely to be a moderate negative impact. Additional traffic on the road network results in an increase in accidents. There would be a significant amount of traffic generated by the dependent housing at the site creating an impact on the number of accidents. However, mitigating conditions exist in that given the location of the site the majority of the traffic is likely to largely use relatively high standard and therefore safer roadways, such as the new A12 and A120 corridors. In addition, the proposed high standard rapid transit system would also mitigate the impact on accidents. However, the impact is still likely to be significant with a moderate negative considered reasonable.

PHYSICAL ACTIVITY – slight beneficial
There is not expected to be any additional impact on public rights of way over and above the current A12 proposals that would not be mitigated. However, it should be noted that the infrastructure does facilitate the conversion of the existing A120 to a public transport and NMU corridor through Marks Tey, which may encourage additional walking and cycling.

JOURNEY QUALITY – slight beneficial
Journey quality is a measure of the real and perceived physical and social environment experienced while travelling (DfT, November 2014: TAG Unit A4.1 Social Impact Appraisal).

It is considered that the scheme may reduce driver stress on the corridor by reducing the frustration associated with congestion related delay by improving road capacity. At the same time, the additional traffic associated with the dependent development would increase congestion contributing to driver stress for existing road users. However, given the magnitude of the increase in capacity, the overall level of congestion including the dependent development traffic is expected to be lower than under the DN scenario.

SECURITY - neutral
Security is considered neutral as there is likely to be no change to the incidence of crime or fear of crime related to road users (including non-motorised) and the scheme is not designed to address the issue of security.

ACCESS TO SERVICES – slight beneficial
Access to services considers the impact on people's access to services via the transport system, especially those households without a car.

The scheme design at this stage does not directly address public transport routes. However, the provision of the upgraded A12 J25 facilitates the conversion of the existing A120 through Marks Tey to a public transport corridor and the enables the provision of the proposed RTS, which would provide improved access to services via public transport.

AFFORDABILITY - neutral
The scheme is not expected to significantly impact on public transport fares (potential slight downward pressure due to reduced operator costs for local bus journeys resulting from an expected decrease in congestion related delay).

An overall slight negative change on vehicle operating costs to commuters and other users is expected based on the results of the TUBA assessment (PV £8.9 million).

SEVERANCE – neutral
Community severance is defined here as the separation of residents from facilities and services they use within their community caused by transport infrastructure or traffic flows (DfT, November 2014: TAG Unit A4.1 Social Impact Assessment).

Although the alignment of the current A12 proposal runs through the proposed CBBGC site, it is considered that the barrier to mobility would be such that the portion of the development site severed by the A12 would not be developed in the context of the Garden Community concept. As such, no actual significant impact due to severance would be expected, except to say that the full development would not proceed.

OPTION USE VALUE – moderate beneficial
Option and non-use value is the willingness-to-pay to preserve the option of using a transport service for trips not yet anticipated or currently undertaken by other modes, over and above the expected value of any such future use. The scheme is expected to facilitate the conversion of the existing A120 through Marks Tey into a dedicated public transport corridor including the proposed RTS as part of a wider rapid transit system.

NOISE
No noise assessment work has been undertaken to date.

There are existing noise important areas (NIA) along the existing A12 carriageway. These include large areas at Rivenhall End, Feering and around junction 25 (Marks Tey). There are existing sensitive receptors along the A12 and include residential areas to the north of the existing A12 corridor.

The HIF Preferred Option would involve moving traffic further away from the existing A12 and moving it closer to properties that currently lie at a distance to the A12. This is likely to result in some positive effect (reduction in noise) for properties along the bypassed sections and in existing NIA. However, it is likely to increase noise levels in areas that currently experience low noise levels. Mitigation could include noise barriers being installed along the route. The effects are expected to be similar to Option 2.

LOCAL AIR QUALITY
No air quality assessment work has been undertaken to date.

There is an Air Quality Management Area (AQMA) at Junction 26 (Eight Ash Green). Sensitive receptors include residential areas located along the A12 corridor, including residential properties at Feering, Marks Tey and Copford.
The HIF Preferred Option could have effects on sensitive receptors away from the A12, as the HIF Preferred Option brings traffic closer to them. This has currently been determined as a neutral effect due to the balancing out of effects with some receptors experiencing worse effects and some benefiting from the proposals. However, air quality modelling would need to be undertaken at the next stage to understand whether there are likely to be breaches in air quality standards in any particular locations. The effects are expected to be similar to Option 2.

LANDSCAPE
There are no national landscape designations within the study area. Areas of Ancient Woodland and trees with Tree Preservation Status (TPS) are located within the study area. The River Blackwater valley forms an important feature within the landscape character. Key visual receptors include local residents, road users and users of public open space and rights of way.

The HIF Preferred Option will have a visual impact on receptors including residential properties located further away from the existing A12. It will also have a greater effect on rights of way than Option 2, as it is in a more rural location. The HIF Option will also have a significant effect on the landscape character of the area, as it would result in additional infrastructure through a generally rural landscape. Mitigation is likely to include landscape inputs into the designs and mitigation planting. The HIF Option is likely to have slightly greater effects than Option 2 on the existing landscape baseline. However, the landscape baseline would also change significantly if the CBBGC development goes ahead, as the landscape character would change from rural to urban under this scenario.

HISTORIC ENVIRONMENT/CULTURAL HERITAGE
Rivenhall long mortuary enclosure scheduled monument lies close to the offline section at junction 23. This lies within a wider Palaeolithic landscape of undesignated features. There are a number of listed buildings within the study area including Hole Farmhouse (Grade 2*) near junction 23 and Prested Hall (Grade II), Badlocks Farm (Grade II*), Doggets Hammer Farm (Grade II) and 172 London Rd (Grade II) which lie between junctions 24 and 25.

The HIF Preferred Option could impact upon the setting of historic assets, including listed buildings and the scheduled monument. The HIF Preferred Option is likely to have greater effects on setting at Badcocks Farmhouse (Grade II* Listed Building) and the

cluster of Listed Buildings at Easthorpe, as it is closer to these features than Option 2. However, the HIF Preferred Option could have less of an effect on Easthorpe Green Farmhouse and Flispes (both Grade II Listed Buildings) than Option 2, as it is further away from these features. Mitigation is likely to include a detailed programme of survey and evaluation to inform the option design and detailed mitigation strategies.

BIODIVERSITY

There are no SPA, SAC, Ramsar sites, or NNR located within the 5km study area. There are no SACs designated for bats within the 30km study area. There is a local wildlife site along the floodplain to the south of Kelvedon, one to the southwest of Easthorpe and one to the north of junction 25. There are a number of priority woodlands within the study area including near junction 23, to the east of Prested Hall and to the northwest of Easthorpe.

The HIF Preferred Option affects more areas of priority habitat than Option 2 due to physical land take or due to disturbance to the habitat as a result of noise disturbance being closer. There are also likely to be greater effects to protected species due to the impact on more rural locations. This would need to be determined following detailed surveys. Mitigation is likely to include avoiding sensitive features, translocation of species and additional habitat creation. The HIF Preferred Option is likely to have slightly greater effects than Option 2 on the existing ecology baseline. However, the ecology baseline would also change significantly if the CBBGC development goes ahead, as habitats would be lost in the vicinity of the development.

WATER ENVIRONMENT

There are a number of main rivers and their associated floodplains which are crossed by the A12 in the study area. These include: The River Blackwater, east of J23 and Domsey Brook, east of Kelvedon. Surface water flood risk is predominantly at watercourse crossings.

The HIF Preferred Option is likely to require increased works in flood zone 3 compared to Option 2. It could alter existing flood flows and would potentially require additional flood compensation and flood defence consent. Proposed mitigation is likely to include floodplain compensation areas and discussions with the Environment Agency and Lead Local Flood Authorities to understand the design requirements of drainage systems and culverts. The HIF Preferred Option is similar to Option 2, as it would require extensions of the carriageway and culverts over a number of existing river/watercourse crossings. It will also require several new crossings and associated drainage, which could result in physical modifications to rivers / watercourse.

PEOPLE AND COMMUNITIES

Residential property includes individual properties and those within settlements along the A12 corridor including Rivenhall End, Kelvedon, Feering, Marks Tey and Copford. Community and private assets are located in these settlements. There are also various cycle ways, footpaths and public rights of way (PRoW) within the study area. The A12 is paralleled for much of its length by the Great Eastern Main Line (GEML).

There are likely to be impacts associated with severance of fields and land parcels for the HIF Preferred Option, potentially making the size of the remaining agricultural parcels unviable for their current agricultural use. This is likely to be greater on the HIF Preferred option compared to Option 2, as it is further into rural areas. This could be mitigated by following existing field boundaries to minimise severance where possible and providing temporary and permanent access tracks / roads for landowners.

There will be severance of a number of PRoW during construction. The effects of the HIF Preferred Option are likely to be broadly similar to Option 2. Mitigation would include providing both temporary and permanent diversions.

GEOLOGY AND SOILS

Marks Tey Brickpit is designated as a Site of Special Scientific Interest (SSSI) primarily for its geological interest. It is located 150m north west of junction 25. The majority of the study area is designated as a Mineral Safeguarding Area (MSA) for sand and gravels. The area to the north and east of junction 25 is also designated as MSA for brick clay. The land in the study area is mostly grade 2 and 3 agricultural land. There are former land uses within the study area that may have resulted in contaminated land, including former industrial sites and the railways sidings at junction 25.

The SSSI is unlikely to be affected. The HIF Preferred Option could affect any future potential to extract sand and gravels along the route and potentially sterilise these deposits to a greater extent than Option 2 due to the distance away from existing infrastructure. There may be requirements to extract minerals prior to construction. The HIF Preferred Option is likely to have slightly greater effects than Option 2 on the existing minerals baseline. However, if the CBBGC went ahead, the minerals would either be extracted or sterilised as part of that development. Further work would be required to understand the risks and mitigation associated with contaminated land within the study area.

Sensitivity Analysis

Please describe sensitivity analysis conducted (if not covered above)

OVERVIEW

Sensitivity analysis has been undertaken to understand the impact of variations in some of the key assumptions on the results of the economic assessment. The assumptions for sensitivity analysis are selected due to both their potential impact on the outcomes and the level of uncertainty in information supporting the assumption. As such, the following parameters have been assessed:

- Land value appreciation: Although the best available local historic long-term data has been used to provide the basis for the calculation of the nominal land value appreciation, the long-term nature of the housing development implies that there is still highly significant uncertainty inherent in the value in terms of both the magnitude of the value and its profile over time.
- Displacement: DCLG Appraisal Guidance (DCLG, 2016: paragraph 4.5) highlights that ex-ante assessments of displacement are extremely difficult to quantify and should therefore be subject to sensitivity analysis.
- Capital value of residential development (GDV): GDV is the key metric in an analysis of the benefits of an intervention to unlock housing. GDV is based on an estimate of the sales price of the housing development. An independent assessment of the GDV was provided by LSH and given the key nature of this metric, sensitivity testing at +/-10% and +/-20% has been undertaken.
- Optimism bias: based on guidance by Steer, optimism bias has only been applied to public sector costs. However, in the interests of robustness, a sensitivity test has been carried out to assess the impact of applying optimism bias to all private sector developer costs as well.

LAND VALUE APPRECIATION

The base value used for nominal land value appreciation is 7.0%, based on 20 years of historic data from the UK HPI as described in section 4.1.7. It should be noted that this is consistent (exactly, by chance), with the 7.0% nominal land value appreciation identified by DCLG (December 2016: *DLCG Appraisal Guide paragraph C14*) for 20-year average annual growth in residential values.

Sensitivity testing on the outcomes of the economic appraisal (scenario 3) at a variety of nominal land value appreciation rates has been undertaken. Tests at a flat rate of 4.0%, 5.0% and 6.0% over the entire 60-year appraisal period have been carried out. In addition, an even more conservative approach has been tested where each of the flat rates has been applied over only the first 20 years of the appraisal period with a flat 4.0% assumed thereafter. The value of 4.0 is in line with long term nominal income growth as outlined in the DCLG Appraisal Guide (December 2016: *paragraph 4.25*).

These values are set in the context of the nominal construction inflation values assumed, based on long-term historic data from Build Cost Information Service (BCIS) of 3.5% for infrastructure and 3.9% for house building costs. The results of these tests, in terms of the total present value of benefits (PVB), the percentage change from the base value and the implied BCR can be summarised in the following table.

Table: Land Value Appreciation Sensitivity Test Results (£ millions 2019 factor prices discounted to 2019)

Scenario	Total PVB	% Change from Base	BCR
Base: Inflation at 7.0%	£3,932.9		19.6
Flat rate over 60-year appraisal period			
Flat rate at 6.0%	£2,358.9	-40%	11.8
Flat rate at 5.0%	£1,225.1	-69%	6.1
Flat rate at 4.0%	£393.6	-90%	2.0
Flat rate over 20 years and 4.0% thereafter			
Flat rate at 7.0%	£2,074.2	-47%	10.4
Flat rate at 6.0%	£1,427.2	-64%	7.1
Flat rate at 5.0%	£873.9	-78%	4.4
Flat rate at 4.0%	£393.6	-90%	2.0

It should be noted that the estimated PV of costs (PCV) is £200.2 million, indicating that at 7% nominal land value appreciation over the 60-year appraisal period the PVB is over 19 times the estimated PVC. Using a more conservative approach of dropping the rate to 4.0% after 20 years, the BCR is still above 10. Even at nominal land value appreciation rates set at the long-term nominal income growth rate of 4% for the whole 60-year appraisal period, the PVB is still higher than the PVC of costs with a healthy BCR of 2.0, which represents high value for money according to the DCLG definition at a BCR greater than 2.0 (December 2016: *DLCG Appraisal Guide paragraph 2.56*). This indicates that the value for money of the proposed scheme is extremely robust.

DISPLACEMENT

As outlined in section 4.1.6, displacement has been assumed to be 15%. Given the uncertainty inherent in estimating the level of displacement values of 0%, 25% and 50% have been tested. The results of this test in terms of total PVB, the percentage different from the base value and the implied BCR are outlined in the following table.

Table: Displacement Sensitivity Test Results (£ millions 2019 factor prices discounted to 2019)

Scenario	Total PVB	% Change from Base	BCR
Base: displacement 15%	£3,932.9		19.6
Displacement 0%	£4,615.0	+17%	23.4
Displacement 25%	£3,478.1	-12%	17.2
Displacement 50%	£2,341.2	-40%	11.3

As noted above, the base PVC is £200.2 million, which increases marginally at 50% displacement to £206.4 million (due to the impact on indirect taxes), indicating that even at 50% displacement there is still a very high NPV and BCR at about 11.

RESIDENTIAL CAPITAL VALUE (GDV)

As outlined in section 4.1.7 and section 6.3.3, estimates of residential capital value for the site were based on an independent assessment by LSH. Given the importance of GDV as the basis for the economic appraisal of the site, sensitivity testing at +/-10% and +/-20% was undertaken on these values. The results of this in terms of total NPBV, their percentage different from the base value and the implied BCR are outlined in the table below.

Table: Capital Value Sensitivity Test Results (£ millions 2019 factor prices discounted to 2019)

Scenario	Total PVB	% Change from Base	BCR
Base: CV	£3,932.9		19.6
Base CV minus 20%	£2,742.4	-30%	13.7
Base CV minus 10%	£3,339.1	-15%	16.7
Base CV plus 10%	£4,525.6	15%	22.6
Base CV plus 20%	£5,117.3	30%	25.6

The above results indicate that the impact on PVB is over and above the actual change in capital value itself, with a multiplier effect of about 1.5 times. However, given that the PVC is £200.2 million, the PVB under a scenario of lower than expected capital value remains very high at 13.7 to 16.7 times the PVC. Higher than expected capital value would increase the PVB to around 22.6 to 25.6 times PVC. It should be noted that it is considered more likely that the capital values realised by the developed are higher than the base values as no allowance has been made by LSH for the higher quality of place-making envisaged for the Garden Community concept.

OPTIMISM BIAS

In the base case economic appraisal, optimism bias (OB) has been applied to public sector costs – in this case the infrastructure costs associated with the HIF funding – in accordance with HMT Green Book as outlined in section 4.7 and following advice from Steers. However, in order to provide a more conservative appraisal, the impact of also applying OB to all private sector developer costs was assessed. As per section 4.7, this followed the method prescribed in HMT Green Book (2018) as outlined below.

Step 1 involves identifying the category of adjustment most appropriate. For this sensitivity test the following categories have been used:

- Standard buildings: this was applied to the residential and commercial development construction costs for buildings and on-plot externals, education buildings and community and health buildings;
- Standard civil engineering: this was applied to all infrastructure costs for both the public and private sectors; and
- Outsourcing: this covers the provision of management services and as such has been applied to the management and long-term governance cost item under private sector developer costs.

The upper bound OB adjustments applied to each of the above categories are taken from HMT Green Book Table 7 and are outlined below:

- Standard buildings: 24%;
- Standard civil engineering: 44%; and
- Outsourcing: 41%.

For the purposes of this bid the upper bounds are considered appropriate.

Step 3 then applies the relevant optimism bias adjustment such that the OB added excludes the level of risk contingency already costed into each item in the financial case estimates. The results are outlined in the table below. This results in an average OB for the private sector costs of about 30%.

Table: Optimism Bias Sensitivity Test Results (£ millions 2019 factor prices discounted to 2019)

Scenario	Total PVB	% Change from Base	BCR
Base: OB not included on private sector costs	£3,932.9		19.6
OB included on all costs	£3,511.4	-11%	17.5

The above results highlight that the addition of OB onto all private sector developer costs results in an 11% reduction in the PVB. However, given that the PVC is £200.2 million, this still represents a very high BCR at about 17.5.

SUMMARY

The outcomes from the sensitivity tests indicate that the economic case is very robust to reasonable variations in key parameters used to estimate the PVB.

Optimism bias

Please describe how optimum bias has been applied in line with the Green Book guidance (and where relevant DfT WebTAG guidance (if not covered above))

Optimism bias is the demonstrated systematic tendency for appraisers to be over-optimistic about key project parameters, including capital costs, operating costs, project

duration and benefits delivery. It should be noted that as per the HIF guidance (HIF FF FAQ, Oct. 2018), optimism bias is only applied within the economic case, i.e., it is not applied in the financial case, or in standard viability work for private sector led development projects.

For this HIF bid, optimism bias has been applied to all public sector costs as per guidance from Steer. This has therefore only been applied to the infrastructure subject to the HIF bid. The method for applying optimism bias is taken directly from the HMT Green Book (2018) four step methodology as outlined in paragraph A5.7.

Step 1 involves identifying the category of adjustment most appropriate. For this appraisal the following categories have been used:

- Standard civil engineering

The upper bound optimism bias adjustments applied to the above category is taken from HMT Green Book Table 7 and are outlined below:

- Standard civil engineering: 44%

Step 2 involves a consideration as to whether the optimism bias adjustment can be reduced. This is a function of the stage of the project and the extent to which risk has already been identified and included in the cost estimates. As identified by the HMT Green Book, "*in practice this will mean reducing the optimism bias adjustment from the upper bound to the extent that risk has been costed*." The total contingency is therefore the sum of the measured risk and optimism bias adjustments (HMT Green Book, paragraph A5.38). As such, the level of optimism bias applied has been adjusted for each cost item depending on the risk contingency already applied in the financial case cost estimates. While the A12 project is currently passing through Highways England´s PCF Stage 2, the additional infrastructure required is designed to a more preliminary level. As such, the upper bound values are considered appropriate and represent a conservative approach to the economic appraisal.

Step 3 then applies the relevant optimism bias adjustment. For example, the level of quantified risk identified by Highways England´s benchmark team for their estimate of the costs of the A12 realignment indicate a value of 34% risk contingency that has been applied to the estimated costs in the financial case. The level of optimism bias applied in the economic case on top of this total cost estimate including risk is therefore 10% for a total contingency of 44%.

In the interests of a robust and conservative approach to the economic appraisal, a sensitivity test adding optimism bias to all private sector developer costs has also been undertaken and is outlined in section 4.6.

The HMT Green Book also identifies that optimism bias can be applied to the delivery of benefits if an appropriate optimism bias factor is available. However, it is considered that given the complexity of calculating the benefits, sensitivity analysis around the key parameters is a more appropriate method for assessing the implication of uncertainty on the scale of benefits. The sensitivity of the net present value of benefits to variations in various parameters has been undertaken and is outlined in detail in section 4.6.

Risk Analysis

Please describe how risk has been assessed and appraised in line with HMT Green Book guidance (if not covered above). The risk analysis should focus both on the risks to the delivery of the infrastructure and the delivery of housing

INFRASTUCTURE SCHEME

The values for risk included in the cost estimates for the HIF infrastructure identified in section 4.4.2 were based on the following sources:

- A12 Realignment: Highways England benchmark team;
- Other works: A quantified risk assessment (QRA) was undertaken by Jacobs.

The cost estimate provided by Highways England for the A12 realignment works included £21.7 million for risk in 2016 prices, or 34% of the base cost. This represents £25.4 million in 2019 prices.

The other infrastructure works, including the new A12 J25, local access widening, provision of an additional lane on the A12 between J23 and J24 (Kelvedon bypass) and the provision of signals at the southern dumbbell of A12 J23, were the subject of a QRA by Jacobs. This assessment identified a total risk of £22.7 million in 2019 prices, or 35.9% of the base cost.

The QRA is outlined in detail in the attachment “4.4.2a_A12 HIF Project Risk Register QCRA.pdf” in section 4.4.2.

HOUSING SCHEME

Risk/contingency for the individual cost items for the housing and commercial development scheme costs has been addressed directly in relevant sections as follows:

- On-plot residential developer build costs: section 4.1.7;
- Commercial building developer costs: section 4.3.2; and
- Other private sector developer contributions: section 4.4.2.

All risk and contingency assumptions are based upon advice provided by professional cost, infrastructure and planning advisors and accord with industry standard approaches.

Supporting material and additional economic considerations

Please provide any other information not covered above to support the economic case

Attached economic models.

Attach file: "4.9.2a_CBBGC_HIF_Economic_Model_v25_FB21k.xlsx" for Preferred Option (Option 1)
Attach file: "4.9.2b_CBBGC_HIF_Economic_Model_v25_FB15k.xlsx" for Do Less (Option 2)

Filename	Description
4.9.2a_CBBGC_HIF_Economic_Model_v25_FB21k.xlsx	4.9.2a HIF Economic Model
4.9.2b_CBBGC_HIF_Economic_Model_v25_FB15k.xlsx	4.9.2b HIF Economic Model

Please attach all economic modelling done as part of the economic case (other than that provided in specific questions)

Filename	Description
4.9.2a_CBBGC_HIF_Economic_Model_v25_FB21k.xlsx	HIF Economic Model
4.9.2b_CBBGC_HIF_Economic_Model_v25_FB15k.xlsx	HIF Economic Model

Schemes with Transport Impacts

For any transport modelling conducted, please refer to Annex B of the guidance and attach

Filename	Description
4.9.3a_CBBGC_HIF_Transport Modelling and TUBA Assessment Technical Note.pdf	4.9.3a
4.9.3b_b3553t41-jac-hgn-00-rp-tr-0004.pdf	4.9.3b
4.9.3c_b3553t41-jac-hgn-00-rp-tr-0006.pdf	4.9.3c
4.9.3d_b3553t41-jac-hgn-00-rp-tr-0007.pdf	4.9.3d
4.9.3e_b3553t41-jac-hgn-00-rp-tr-0008.pdf	4.9.3e
4.9.3f_A12HIF_TEC_17k.OUT	4.9.3f
4.9.3g_A12HIF_TEC_17k.tbn	4.9.3g
4.9.3h_A12HIF_TEC_21k.OUT	4.9.3h
4.9.3i_A12HIF_TEC_21k.tbn	4.9.3i
4.9.3j_A12HIF_TUBA_21k_AM_IP_PM.OUT	4.9.3j
4.9.3k_A12HIF_TUBA_21k_AM_IP_PM.tbn	4.9.3k
4.9.3m_A12HIF_TUBA_21k_OP.OUT	4.9.3m
4.9.3n_A12HIF_TUBA_21k_OP.tbn	4.9.3n
4.9.3o_CBBGC_HIF_AST.xlsx	4.9.3o
4.9.3p_CBBGC HIF Option Assessment Report.pdf	4.9.3p

Commercial Case

Market analysis

Please provide details of how the proposed scheme fits with the local housing market and with local demand. Please provide supporting evidence of relevant value assumptions in the area

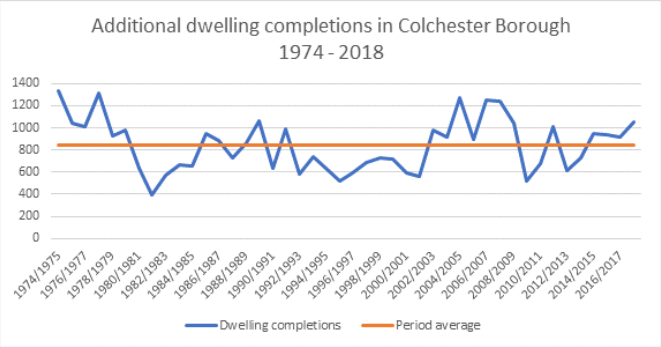
The strategic and local housing market area

The scheme sits within a strategic housing market area which has been defined as including the districts of Braintree, Colchester, Tendring, and Chelmsford. These districts all fall within the same housing market area due to the high containment levels of migration within the area (69% of moves are internal) and the high levels of internal commuting within its boundaries (83% of commutes are within the area).

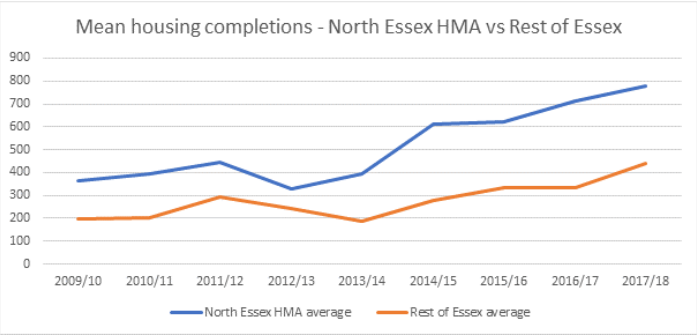
Being situated adjacent the urban area of Colchester, the scheme benefits from its buoyant housing market as is demonstrated by the consistently high levels of housing growth in Colchester seen over the past couple of decades with rates exceeding regional and national comparators. The proposed Garden Community therefore lies within a local housing market with high levels of local demand and new supply.

In terms of general housing activity within the area, the level of turnover has levelled out at approximately 5% of the private housing stock since 2014, which compares favourably with the regional and national comparators and reflects the resilience of the local new build market.

During recent history Colchester Borough has seen an average annual increase in its new housing stock of over 840 dwellings with more recent years providing new housing of over 1,000 units per year, well in excess of the National Planning Policy Framework 'objectively assessed housing needs' requirements (920 dwellings per year).



In terms of local comparators, the average annual housing completions with the North Essex housing market area (HMA) (the NEAs plus Chelmsford) has significantly surpassed average annual completions for the rest of Essex in every recent year.



Colchester and Braintree's housing growth has been achieved through numerous strategic housing developments in and around the town. These sites have provided a consistent level of supply demonstrating the Councils' appetite for growth as well as the strength of the local housing market's ability to absorb new housing. Key sites and approximate delivery rates (many delivered in tandem with each other) include:

- Former Colchester Garrison – circa 236 dwellings per annum (over 11 years)
- Lakelands – 62 dpa (over 8 years)
- Turner Rise – 66 dpa (over 5 years)
- Former Flaktwoods/Tufnell Way – 125 dpa (over 2 years)
- North Colchester – multiple adjacent sites including the former Severalls Hospital – 60 dpa (over 2 years but ongoing) & Chesterwell – 45 dpa (over 3 years but ongoing)

Most of these strategic sites, have largely been built out and it is anticipated the Garden Community will provide a new stream of strategic development supply to Colchester and Braintree in the coming decades. These high levels of strategic growth, both recent and current, demonstrate the propensity for the housing market area to absorb significant amounts of new housing over a prolonged period.

Full details of future housing supply can be found in the appendix which includes housing trajectories for Colchester Borough and Braintree District.

Local prices and trends

The local housing market has been strong, with price growth exceeding national averages, whilst still delivering strong rates of new house building as detailed above. The table below illustrates average per annum value increases over the last (recorded) year (to Jan 2018), then at 5, 10, and 20 year averages. This shows that values for both Colchester and Braintree have outperformed the national averages across almost all time frames and by some margin.

Average Price Change per annum (arithmetic)	House Price Index - Land Registry			
	Braintree	Colchester	England & Wales	UK
20 years pa	8.11%	8.08%	7.30%	6.59%
10 years pa	3.59%	3.48%	2.46%	2.14%
5 years pa	7.24%	8.19%	6.29%	6.01%
1 year	3.54%	6.40%	4.16%	4.38%

Local house prices data suggests a resilient local housing market reflecting the relative affordability of new homes in North Essex compared to districts to the west, towards London and Cambridge. This resilience is demonstrated by the gradual increase in house sale prices over recent years.

More recent data extracted from Hometrack's Housing Intelligence System demonstrates the current state of the local housing market. Key highlights are:

- The average house price in Colchester was £286,406 in August 2018, compared to £282,046 in August 2017.
- The average lower quartile house price in Colchester was £200,000 in August 2018, compared to £195,500 in August 2017.
- The overall change in average house prices in Colchester between August 2017 and August 2018 increased by £4k or 1.5%. The overall lower quartile prices increased over this period with the average increase being £5k or 2.5%.

Such changes reflect the current housing market uncertainty yet has not constrained the level of local supply with multiple developers locally active and sites still delivering across the area.

Affordability

Although the housing market area offers a level of affordability not generally found to the west of Braintree due to the inflationary effects of closer proximity to Cambridge and London, the housing market is still unaffordable to a large proportion of households. For example, a first time buyer of a flat/maisonette at an average purchase price of £141,176 will need to be earning an income of £30-35k and for a terraced property at £203,00 an income of £45-£50k is needed. The average salary in Colchester £24,908 (ONS).

The map in Att.5.1.1a shows affordability in Braintree and Colchester by income ratio for all property types, with deep red representing house price to income ratio being in excess of 8.68 x income, with the lightest colour scaling down to 6.72 x income ratio.

The affordability for different groups is best demonstrated in the Price/Affordability chart in Att.5.1.1b which shows the number of households in different household income bands in the area compared to the lower quartile price for different property types in the same area. In essence the chart shows that the level of unaffordability experienced by first time buyers is similar to that experienced by those who already own a home and are looking to move.

In terms of the percentage of households which are unable to access different housing products, the general trend of unaffordability (based 25% deposit and securing a mortgage at 4 x income) is apparent across property types. The proportion of households priced out of the market varies from 43% of first-time buyers being unable to afford a flat to 85% of first time buyer households being priced out of purchasing a detached property.

The local housing register covering the districts currently has 3,583 households waiting to be housed in suitable accommodation.

Demographics

Whilst Colchester Borough and Braintree District are contiguous and within the same housing market area, they have different demographic profiles. The key differences between the two districts is that Colchester Borough has a typically younger population, more people of working age, and fewer older people than Tendring District.

	%0-15Yrs	%15-64Yrs	%65+yrs
Colchester	**18.5**	**64.6**	**16.9**
Braintree	**17.1**	**59.2**	**23.7**

A corollary of this difference, and within the context of the districts' population growth forecasts, is that there is a diverse range of housing needs across the two local authority areas which translates into strong latent local demand for new housing. The Garden Community being situated between the 2 districts is therefore in a prime location to be able to accommodate this population growth and provide maximum absorption of new build properties by delivering the range of housing the areas need over the coming decades.

Filename	Description
5.1.1a - CBBGC House prices to incomes.docx	5.1.1a House Prices to Incomes all property types
5.1.1b - CBBGC House price affordability chart.docx	5.1.1b House Price Affordability Chart

Delivery strategy

Please provide details of who will be delivering the infrastructure

The wider A12 widening scheme which will be delivered by Highways England is classified as a 'Tier 1' scheme meaning that the project is above £500 million and is approved at the DfT's Board Investment and Commercial Sub-Committee (BICC). However, Tier 1 projects will need to have first passed through the Highways England Investment Committee who would have recommended the investment for approval.

Currently the Scheme is progressing through the Strategy Preparation Stage (Stage 0) of the PCF process. Key outputs / deliverables to be produced during the next phase (PCF Stage 1) are defined within PCF documentation.

If approved this HIF application for £228.6 million would form a contribution to the wider Tier 1 project and would be delivered at the same time and would therefore be included within the implementation timescales for the procurement of the wider project.

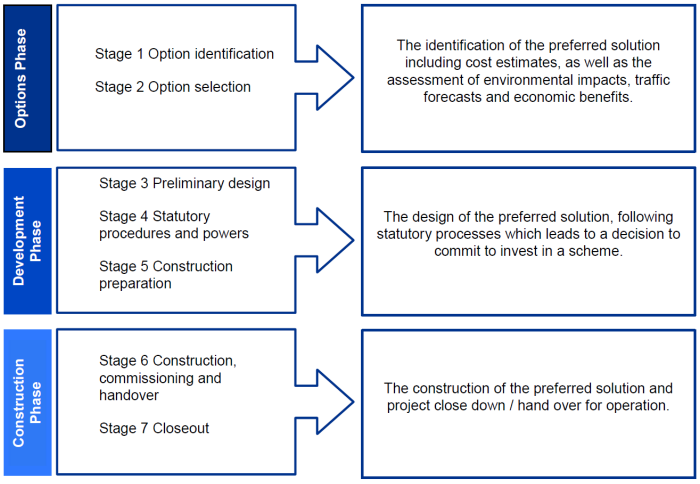
As with all construction projects, there is a need for time, cost and quality issues to be managed and their inevitable tensions balanced. The process of contract selection and formulation will help to ensure the scope of project and project-specific risks are controlled through procurement.

The development and delivery of the elements contained within this HIF application will be combined with the wider A12 widening project. The A12 widening project will be managed via the Project Control Framework process which is an established mechanism to manage major projects. Currently the A12 widening project is at the strategy shaping stage.

Procurement strategy

Please provide details of engagement with contractors to date and the procurement strategy for delivery of the infrastructure scheme

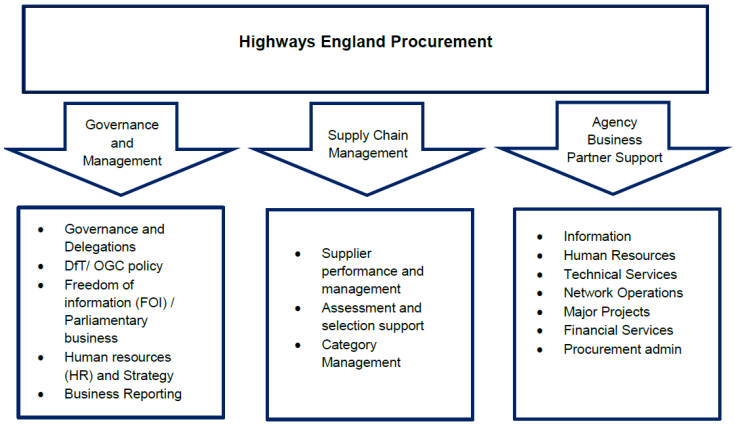
The PCF is a joint DfT and Highways England approach to managing major projects. It comprises a standard project lifecycle, standard project deliverables, governance arrangements and project control processes, which all major projects must adhere to as part of the development and delivery of a scheme. The diagram below sets out the different phases/stages of the process.



Stage Gate Assessment Reviews (SGAR) will measure the success of the project at the end of each stages above to ensure all outputs have been produced. It will also provide evidence and outputs for the Senior Responsible Owner (SRO) and key stakeholders on the continued viability of the project.

These outputs will provide the basis for monitoring and evaluating the success of the Scheme in delivering the key objectives set out in Highways England's RIS, and will be updated as necessary as the business case develops.

If the project is entering into an Early Contractor Involvement (ECI) Scheme the procurement process as highlighted below can begin within Stage 3 of the PCF process. However if a more traditional approach is taken procurement processes will commence under Stage 4 of the PCF process.



Payment Mechanisms:

In line with other Highways England sponsored projects an open book accounting approach would be operated, with the contractor providing a monthly breakdown of costs with

a set of Key Performance Indicators (KPIs) used to assess service delivery and the allocation of any fee entitlements. Payment would be made on the basis of actual outturn costs as set out in the contract documents, with an incentive mechanism for the contractor to minimise costs.

Pricing Framework:

Financial governance will be in accordance with Highways England's Investment Control Framework. Payment will be made in accordance with the terms and conditions of the contracts and within the targets set out in the Governments Prompt Payment Initiative.

Risk Allocation and Transfer:

Throughout the development of the Scheme risks will be, recorded and actively managed. Where appropriate, risk owners have been allocated and tasked with eliminating risks, where possible, or identifying mitigation measures for residual risks. The same ethos will be taken through to the delivery stages of the Scheme. External risk allocation and transfer will be defined as per Highway England's PCF process. The Highways England Project Manager would be primarily responsible for risk management and the dissemination of information at regular intervals to the SRO and Project Board.

Contract Management:

The contract will be managed through Highways England's contract terms and conditions and suppliers will be measured and evaluated against the Measuring Success Toolkit (MST) on a bi-monthly basis. The Highways England project team will be supported by specialists to ensure contract compliance. Earned Value Management techniques will also be used at the end of each month to assess the contractor's performance against the cost and schedule forecasts.

Weekly reporting/liaison may also be required. The frequency and content of reporting will be defined by the project manager in liaison with the supplier at the start of the contract. The project team will establish the processes for the management of Early Warnings and Compensation Events during start up.

Current Position

The wider A12 widening scheme is classified as a 'Tier 1' scheme meaning that the project is above £500 million and is approved at the DfT's Board Investment and Commercial Sub-Committee (BICC). However, Tier 1 projects will need to have first passed through the Highways England Investment Committee who would have recommended the investment for approval.

Currently the Scheme is progressing through the Strategy Preparation Stage (Stage 0) of the PCF process. Key outputs / deliverables to be produced during the next phase (PCF Stage 1) are defined within PCF documentation.

If approved this HIF application for £228.6 million would form a contribution to the wider Tier 1 project and would be delivered at the same time and would therefore be included within the implementation timescales for the procurement of the wider project.

It is anticipated that because of the size of the wider project the timescales for approving the procurement approach is expected to be approved at the BICC in Spring 2020. Further detail on the milestones is shown below:

Project Milestones	Anticipated Finish Dates
Highways England – Stage Gate Review	Feb 2020
Local Plan Part 1- Finalised Inspectors Report	April 2020
Highways England- Board Investment and Commercial Committee	April 2020
Highways England -Preferred Route Announcement	July 2020
Highways England -Development Consent Order	April 2023
Start of Works	May 2023
Completion of works	2027/28

Please outline the procurement strategy to ensure build out of the wider scheme, including engagement with development partners to date, including use of SPVs, other joint ventures and legal proposals to bring forward homes

The delivery of this ambitious vision of the Garden Communities across North Essex, of which the Colchester Braintree Borders Garden Community site plays a key part, will require a positive and active approach by both the public and private sectors.

Notably, and different from standard development approaches, The Councils have taken a proactive, leadership approach to delivery of the three Garden Communities planned across the North Essex area. The approach reflects an anticipated need for strong public-sector involvement and direction, but with flexibility to integrate appropriate partnership approaches and sharing of project risk and reward where these may be more appropriate and/or could deliver on the programme's objectives.

A dedicated and resourced delivery structure has been put in place by the Councils to provide a coordinated and structured mechanism to take the proposals forward. This delivery structure was approved by The Councils' respective Cabinets and Council Committees in November and December 2016 with North Essex Garden Communities Ltd (NEGC) formally established on 30th January 2017 (Company No: 10319743). In addition, site specific 'Local Delivery Vehicles' (LDVs) were also created on 30th January 2017 to potentially act as separate operating companies tasked with the delivery of each individual Garden Community.

NEGC was established as a wholly owned public entity between the Councils to act as the body to guide the proposed Garden Communities through the design process and into implementation, providing ultimate oversight and scrutiny of the delivery. It operates in a commercial way, while maintaining high standards of integrity and social purpose. As a private limited company, it is controlled by Board Members who have a duty to promote the success of the company for the benefit of its shareholders as a whole. The Shareholders are Essex County Council (Essex), Braintree District Council (Braintree), Colchester Borough Council (Colchester) and Tendring District Council (Tendring) (together referred to as “The Councils”) with each holding a 25% shareholding. Directors of NEGC have been appointed by each of the respective Councils and are senior political representatives (Leaders or equivalent). Cllr John Spence OBE currently acts as the Chairman of the NEGC Board.

In accordance with approved Cabinet decisions across The Councils, ‘in principle’ commitment was also secured to consider a direct role with project funding and delivery. Subsequent business cases would be required to determine a detailed set of funding requirements; including the scale of funding required, timescales, risks, security and repayment profiles. This further work would need to be presented back to the Councils and include full consideration of the most appropriate future funding mix including opportunities for leveraging in private sector and other sources of funding.

The Councils with NEGC Ltd have put in place a dedicated team to deliver with commercial, planning, communications and delivery skills. A technical consultancy team is also in place to support NEGC Ltd including legal, corporate finance, transport, property and viability advisors and masterplanners.

Delivery is likely to require a ‘strategic master developer’ approach to implement strategic infrastructure and enable developers to take serviced land and deliver new housing. This would enable the above landowners/promoters to bring forward their own sites in conjunction with a ‘strategic master developer' approach. Notwithstanding the agreement to a formal mechanism and structure, the anticipated approach to delivery is based upon the following broad sequence.

1. Work with existing landowners/promoters to secure appropriate controls and/or take ownership of the land through whatever means necessary (via negotiation or compulsory purchase);
2. Bring forward proposals in line with an approved masterplan and secure necessary approvals);
3. Undertake pre-development and facilitating works;
4. Deliver infrastructure works to meet requirements of the masterplan, planning application/s and conditions;
5. Create serviced development plots;
6. Market the development sites and seek the best price achievable in the open market, consistent with the achievement of desired design and quality standards;
7. Arrange development agreements including licences with the successful bidders;
8. Supervise the construction to ensure standards are achieved;
9. Distribute the receipts in accordance with the terms of and associated land, funding or delivery partner agreements; and
10. Ensure that public facilities and assets are adopted and/or transferred to appropriate bodies to secure their long-term stewardship.

For the delivery structure to succeed, deliver on the vision and realise the potential, there will need to be close working between The Councils, Government, landowners, developers, funding & delivery partners as well as local communities.

As part of this approach, discussions and negotiations have been ongoing with key landowners and site promoters for several years. Good working relationships exist with all key stakeholders, setting strong foundations to agree and implement an appropriate delivery structure as the sites make progress through the plan making stage.

The majority of land for the wider housing scheme is controlled by a small number of main landowner/promoter groups, who have been actively promoting the land for development through the planning system for many years.

Land to the north and west of the current A12 is owned by a consortium of landowners known as ‘Gateway120’ that have been working together since 2008 with the vision of creating a new settlement in the area.

The landowners have an agreement with Cirrus Land Ltd acting with L&Q which has created a single promotion and delivery partnership tied into a promotion agreement encompassing circa 980ha of land. This platform is an effective single ownership arrangement for the site and has the capacity to deliver around 15,000 homes within the Garden Community.

L&Q is one of the UK’s leading housing associations and one of the South East’s largest residential developers. They own or manage over 72,000 homes across the South East of England. L&Q provides a long-term view and commitment to creating places where people want to live with significant investment in the public realm and local infrastructure, helping to deliver thriving new communities for everyone to enjoy. They are active locally taking a lead role in the delivery of Bealieu Park at Chelmsford through a joint venture with Countryside Properties (Countryside Zest LLP).

L&Q is committed to the delivery of the new Garden Community at West Tey and has been engaging with the Councils over the past few years to explore potential options, including joint venture options, the Council led delivery proposals, direct delivery and funding roles. Such discussion and negotiations are continuing via a structured dialogue, led by NEGC with wider legal and corporate financing support.

L&Q has stated that they have the financial strength to provide the level and scale of funding that would be required to deliver the garden community in isolation. The 2017 L&Q Financial Statement states net assets at £10.8 billion, with a committed development facility of £2.6 billion. L&Q understand and accept the Councils level of commitment and approach to exploring alternative funding and delivery options.

The other main area of land to the east and south of the A12 is owned and promoted by 2 key landowners– the Wests and Sherwood.

Again discussions and negotiations have been ongoing with these parties and their advisors as to how bring forward their land for development. The Wests interest lie primarily adjacent to the existing Marks Tey settlement. They are experienced in dealing direct with developers, having had other interests further along the A12 at Stanway which has been traded and developed for housing.

Part of their interests are under option to Crest Nicholson who are keen to move forward quickly to development. NEGC have engaged with Crest to consider how proposals on that part of their site fit with the wider Garden Community ambitions.

The remaining land held by the Wests and Sherwood family lies further away from existing access and built development and is therefore more reliant upon a comprehensive approach to development and masterplanning to integrate their land interests.

The Councils have jointly worked to build working relationships with the relevant landowners and promoters of the sites with a view to securing a controlling interest in the land. Commercial negotiations for the land deals is ongoing; and it is anticipated that land agreements will be entered into between the relevant landowners / developers and the delivery structure.

There is however no obligation for either party to accept a deal on any terms, and any deals will need to be both reasonable and reflective of the nature of the project, including its infrastructure and placemaking requirements, which will be informed by the conclusion of the Local Plan Examination in Public and confirmation on policy requirements and wording.

The emphasis to date has been on exploring the acquisition of land voluntarily. It remains the preferred option that land deals will be entered into. Discussions have been ongoing for some time, and as a result the Board of NEGC Ltd (and subsequent Cabinets across each of the Councils involved) have agreed that should negotiations not proceed satisfactorily, a CPO approach should be initiated either by the relevant local Authorities and / or by a future Development Corporation. With regards the latter, the Neighbourhood & Planning Act has recently changed the climate and timetable for the possible use of compulsory purchase powers. The establishment of a Development Corporation would establish a clear and strong purpose and support the case for a CPO. However, CPO remains a last resort, and negotiations are continuing in a positive manner, with the powers only ever being used as a fall-back option. That does not, however, prevent authorities starting the process of preparing for a CPO alongside negotiations.

Whilst NEGC Ltd has been established for circa two years and a structure put in place which could form the basis of a delivery structure, negotiations with landowners and promoters to date have not concluded on a defined fixed mechanism. It has also been recognised that any potential delivery structure would need to adapt to local circumstances and adopt the most appropriate structure to deliver on the vision and objectives.

Over recent years there has also been an evolution in the potential the tools available to the Councils to take a direct lead on delivery of such projects. As such, the Councils have agreed that NEGC should explore the establishment of a locally-led new town style ‘Development Corporation’ as enabled by the Neighbourhood Planning Act 2017 and the establishment of the formal Regulations in 2018. The Councils consider that a locally-led Development Corporation could have great potential to provide a strong and focused body responsible for delivery with wide ranging powers in terms of land acquisition, funding and planning. Such an approach could also enable a flexible route to consider partnership working with the private sector, either acting within or alongside the structure on specific delivery components, but backed and supported by stronger in-house powers.

In terms of the short-term approach to evolve the delivery mechanism and ensure housing can come forward to programme, the Councils via NEGC will continue to take a lead role with preparing for delivery, with responsibility for bringing the Garden Community projects forward through further design and planning stages, and into implementation. The structure would facilitate the delivery of infrastructure and disposal of serviced plots to house builders/commercial developers potentially in combination with the public sector led delivery structure who would be responsible for physical building construction costs and property sales, within approved design parameters. The approach does not preclude the opportunity for other public and private sector stakeholders to directly deliver development should they wish, however it does enable The Councils and the delivery project vehicles to manage their risks.

Please attach any supporting evidence from contractors / developers which support your proposal

Filename	Description
2981_001.pdf	Support from L&Q
20 Mar 19 - Letter - Essex County Council.pdf	DG Sherwood Support
17012_11b Key Land Ownerships (2).pdf	Land Ownership Map

Implementation timescales

Please provide an overview of the implementation timescales for your procurement strategy

This HIF application forms a part of a wider scheme to widen the A12 from Junction 19 at Boreham, Chelmsford to Junction 25 at Marks Tey, Colchester. This wider scheme is classified as a 'Tier 1' scheme meaning that the project is above £500 million and are approved at the DfT's Board Investment and Commercial Sub-Committee (BICC). However, Tier 1 projects will need to have first passed through the Highways England Investment Committee who would have recommended the investment for approval.

If approved this HIF application for £228.6 million would form a contribution to the wider Tier 1 project and would be delivered at the same time and would therefore be included within the implementation timescales for the procurement of the wider project. The wider project could be procured one of two approaches as described below:

Regional Delivery Partnership Framework.

The Regional Delivery Partnership (RDP) is a new commercial model to support Highways England in delivering its objectives and Key Performance Indicators tied to its licence to function as a 'public company' owned wholly by the Secretary of State for Transport. The framework is for 6 years and is valued around £8.5 billion. Under the RDP various packages are broken down to regional levels or LOT's (8 in total) each with their own budget with each region being allocated several Delivery Integrated Partners who will work collaboratively with each other and HE while delivering their respective package of works such as road widening and junction improvements. Each of the contracts will be under the auspices of the NEC 4 standard terms and run from 2018 until 2024. It is anticipated this model will seek to bring the following benefits:

- Improve control and risk management
- Incentivise against efficient scheme budges
- Continually improve market capability towards high performance enterprises
- Establish supply chain resilience
- Deliver sustainable productivity improvements
- Align rewards to customer service and benefit realisation
- Align performance to sustainable development

- Mitigate stage transition risks
- Redefined success in delivery

Under the terms of the contracts successful bidders will be guaranteed an initial package of work under each lot with subsequent contracts allocated either on a direct award basis or under a mini competition which may include suppliers from other LOT's. Across all work packages successful bidders will be expected to carry out a range of activities ranging from preliminary design to giving specialist advice on whole life costing and future maintenance or inspection requirements and provisions and enabling works to digital platform transformations.

For the purposes of this HIF application and the wider A12 widening scheme it falls within LOT 7 East which has a total value of £2.8 billion.

Traditional Contract Tender Approach

Given that the wider A12 widening project from Chelmsford (Junction 19) to Marks Tey (Junction 25) is considered a Tier 1 scheme (which falls under DfT Major Projects portfolio) there will be an expectation from the Department to show that the scheme will deliver value for money to the taxpayer. Under a traditional delivery framework for a single scheme it would fall under the OJEU (or its equivalent post-Brexit) and would need to go through a competitive tendering process to show that contract that is being let is effectively the best for both quality and price but also programme. It will be for Highways England along with its client the DfT to decide and agree on what is the best delivery mechanism in terms of procurement. At this early stage of scheme development, the procurement strategy has only been developed to the Strategic Outline Business Case level, which only explores options and does not recommend an approach at this stage.

It is anticipated that because of the size of the wider project the timescales for approving the procurement approach is expected to be approved at the BICC in Spring 2020.

Please provide an overview of your phasing and implementation strategy for the wider scheme

Infrastructure Scheme

Given that the infrastructure identified in this HIF application will form part of the wider A12 widening Tier 1 project the phasing and implementation of the infrastructure will form part of the implementation of the wider project. The widening of the A12 scheme is approximately 25 km in length and for the large part mostly consists of on line widening i.e. the carriageway will be widening along its current alignment, however under this HIF application and between junctions 24 and Junction 25 there will be off line widening in order to accommodate the growth highlighted. Given that the majority of the A12 widening will be on line widening it is likely to take at least four years to construct due to the need to manage the impact of the construction works and to keep traffic flowing.

As highlighted in section 5.4.1 Highways England are currently considering the procurement approach with a delivery partner potentially being confirmed as early as Summer 2020, following this the delivery partner will be confirmed. The Delivery Partner will once commissioned be able to confirm the phasing and implementation for the construction strategy for the wider infrastructure scheme as well as incorporating the infrastructure elements highlighted in this HIF application. It is expected that the delivery partner undertaking the wider scheme will also undertake the infrastructure elements contained in this bid.

The implementation strategy for the wider higher network and the HIF bid infrastructure is as follows:

- Delivery of CBBGC housing from 2024/25 - initially accessed from existing A120 (low numbers)

- A12 Junction 19 to 25 RIS1 Widening Scheme complete by 2027/28 (including HIF Bid infrastructure) - CBBGC now accessed from realigned A12 via grade separated Junctions 24 and 25

- A120 scheme complete by 2030 - providing relief to the existing A120 through Marks Tey and essential capacity on the wider highway to enable CBBGC to grow to its full extent.

Wider Scheme (Housing Project)

The approach to housing implementation will align with and follow the route to securing planning approval for the Garden Community alongside definition of the most appropriate delivery model.

In relation to planning, the Garden Community site forms a key part of the shared Section 1 Local Plans for Colchester and Braintree. Following initial Examination in Public sessions in 2018, the Councils and scheme promoters are drawing together additional evidence to enable the Examination to be re-open later in 2019, to enable the Inspector to consider and report back in 2020.

Masterplanners have been procured by the Councils to take forward conceptual design work to evolve into a more detailed masterplan for the site working with the main scheme promoters. The masterplanning will form the basis of the preparation of a site-specific Development Plan Document to be produced (Preferred Option) by the end of 2020. This will be consulted on, finalised into a submission draft for examination late 2021/early 2022 and adopted to finalise the policy position by Summer 2022.

In parallel to the policy evolution, the masterplanning will generate material for potential submission alongside as outline planning application/s which can be considered shortly after adoption of the DPD. This then enables Reserved Matters applications for specific infrastructure and initial phases of housing and other development on the Garden Community site, albeit this could also be approached as a hybrid with site wide outline and first phase detail applications to allow for consideration in tandem. It is anticipated that planning approvals would be in place to commence wider on-site infrastructure and enabling works in 2023/24, with housing activity anticipated around 2024/25.

As the Councils working with and through NEGC are evolving an approach to establish a locally led Development Corporation, this would enable the planning work to be integrated into a site wide Local Development Order which would effectively give permission to the development and would act as a core implementation tool. This could provide a speedier alternative to traditional planning.

Clearly the approach to securing consent for the infrastructure works subject to this bid will need to align with such broader activity, but it is recognised that in order to deliver to the timescales of implementation of such works, certain aspects will need to come forward via separate applications/consenting regimes. These will occur in parallel to the wider evolution of policy and scheme design, with a degree of frontloading to the consideration of the route of the A12 (as setting a defensible eastern boundary for the Garden Community site) and junction (to establish a core route and access point) to define and secure these in a timely manner and enable prompt start on site.

In relation to delivery model, ongoing joint working is occurring with the main scheme promoters to define the most appropriate delivery route to combine the strengths and opportunities collectively provided by the public and private sectors working together.

The main scheme promoters (G120, with Cirrus & L&Q) are willing and able to deliver the majority of the site and have been proceeding on that basis as part of their approach to land promotion via the local plan process. They have a technical team in place and have evolved masterplan and technical work relating to the land under their control.

Negotiations have been ongoing for several years to consider opportunities for a form of public-private partnership approach, and the main promoters are willing to evolve a joint venture potentially within or outside of any formal wider delivery structure such as a development corporation that may be set up. They are mobilised to deliver on the agreement they have and move forward into implementation, with them (most likely via a separate operating company) being established to lead and act as a strategic masterdeveloper, implement strategic infrastructure and site opening up works. This is similar to the approach L&Q are successfully implementing at Beaulieu Park in Chelmsford (via Countryside Zest with Countryside Properties).

Additional negotiations have been ongoing with the other main parties (West & Sherwood families) who are more likely to pass the land into a suitable delivery structure as opposed to directly partake in delivery. An initial part of the West ownership is under option to Crest Nicholson who are keen to advance scheme through planning & design processes and would be able to implement via their traditional housebuilder or a joint venture model.

In tandem the Councils are advancing work to enable the establishment of a locally led development corporation, to evolve the current structure already in place through NEGC Ltd and site specific LDVs which already exist as wholly public owned private limited companies. This approach includes continuing work to prepare a suitable mandate and outline business case to confirm the extent of powers and functions to be bestowed into a locally led development corporation, to be approved by NEGC Ltd Board and the respective Councils to lead to a submission to Government around formal creation of the body in 2020. It is anticipated that designation would be made by the end of 2020.

Subject to progress with landowners and scheme promoters work will be ongoing with respect to potential site wide CPO, to enable the Development Corporation to make an Order upon establishment, for subsequent Inquiry and confirmation towards the latter half of 2021. The aim being to have resolved land control issues to enable final approvals and implementation soon after.

Once the scheme is underway it will be implemented through a phased approach to provide strategic infrastructure in line with needs and to open up suitable subsequent phases of development.

Contract management approach

Please provide details of your approach to contract management and any details of any arrangements already in place - this should include charging mechanisms

Contract Management Approach

As highlighted in sections 5.4.1 and 5.4.1 the preferred procurement approach will be approved at the BICC in Spring 2020 for the wider scheme in combination with the infrastructure measures identified in this HIF application. At this stage, therefore, it is too early to identify the contract management approach given that a deliver partner has yet to be appointed. However, any contract let under Lot 7 or any other Lot will be under the terms and conditions of the New Engineering Contract 4 (NEC4).

The NEC suite of contracts is a formalised system created by the Institution of Civil Engineers that guides the drafting of documents on civil engineering and construction projects for the purpose of obtaining tenders, awarding and administering contracts. The latest version of the NEC Contract (4) was announced in March 2017, the new edition reflects procurement and project management developments and emerging best practice with improvements in flexibility, clarity and the ease of administration. The suite of contracts includes a family of standard contracts each of which has the following characteristics:

- Its use stimulates good management of the relationship between two parties to the contract and hence of the work included in the contract
- It can use used in a wide variety of commercial situations, for a wide variety of types of work and in any location
- It is a clear and simple document – using language and a structure which are straightforward and easily understood.

NEC Contracts have been used on many high profile and successful projects over the last 20 years including London 2012, and Crossrail. They have delivered for clients in terms of project outcome as well as ensured fair and prompt payment for contractors and suppliers.

At this stage it is too early for Highways England to provide definitive responses on how the contract will be precisely managed but that it will be under the NEC style contract. Specific clauses or 'z' clauses unique to the contract will be identified once the procurement approach has been identified at the BICC in Spring 2020 meaning that there is likely to be an understanding of the contract composition and clauses post Summer 2020.

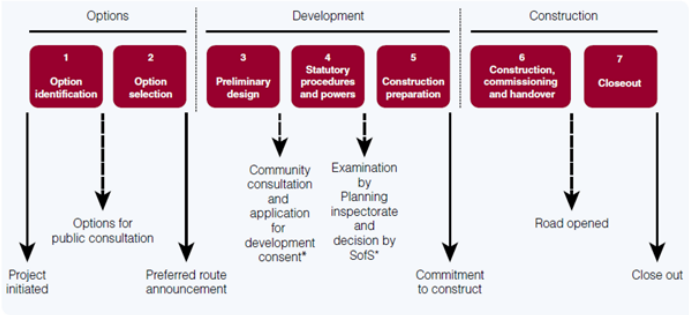
Project Management Approach

As identified in section 5.3 of this application Highways England have an established Project Control Framework (PCF) and is a joint approach with the Department for Transport to managing their projects. It is designed to help collaborative working to develop and deliver major projects. The framework comprises:

- A standard project lifecycle
- Standard project deliverables
- Project control processes
- Governance arrangements

There are five key roles within the framework and are identified and discussed in more detail in Section 7 of this application. **The Project Manager** who will be a Highways England role throughout the life of the project. **The Senior Responsible Owner** will have overall control for the delivery of the project ensuring the project remains focussed on achieving its objectives. The SRO has the authority to make decisions concerning the delivery of the project within a certain delegation. **The Project Sponsor** has overall ownership of the transport problem that is being addressed by the project, they are accountable for ensuring that the project provides the right solutions to the problems. **The Senior Users** represent the interests of other services within Highways England and act as focal points for liaison for the project. Finally, **The Project Board** oversees the delivery of the project and supports the SRO as appropriate.

The PCF process identifies that each project passes through a major projects lifecycle under three broad categories Options, Development and Construction. Under each of these categories are a number or stages, the following diagram shows the stages (to be discussed in section 7.3.1) and the relevant decision points:



The wider scheme is currently progressing through the pre-project phase (Stage 0) of the PCF process.

Highways England have recently announced the appointment of their Delivery Integration Partners in each of the RIP Regions. Costain, partnered with Jacobs, will deliver the A12 Chelmsford to A120 Widening scheme from preliminary design and planning application submission, through to construction. Full engagement with the delivery partner will start following completion of the options assessment and announcement of the preferred route.

Please provide details of the proposed key contractual clauses

As identified in previous sections at this stage it is too early for Highways England to provide definitive responses on how the contract will be precisely managed but that it will be under the NEC style contract. Specific clauses or 'z' clauses unique to the contract will be identified once the procurement approach has been identified at the BICC in Spring 2020 meaning that there is likely to be an understanding of the contract composition and clauses post Summer 2020.

Additional information

Please provide details of the proposed key contractual clauses

Previous Project Experience and Track Record of Successful Delivery:

Infrastructure delivery

ECC has demonstrated strategic and collaborative working with Highways England (HE) to plan for key infrastructure that will unlock

further economic growth for Essex, for instance on the M11, the A12 and the A120, with ECC currently progressing plans for the M11 Junction 7a to unlock new substantial housing associated with the Harlow Garden Town. Collaborative working with HE will be particularly important for the A133-A120 Link Road which has a major junction with the A120 Trunk Road and is the responsibility of HE.

Although the infrastructure is going to be delivered by Highways England, ECC has a strong history of delivering major £100M+ highway schemes in the county. Since 2000 these have included the A120 Braintree-Stansted dual carriageway for HE, the A130 dual carriageway linking Chelmsford and South Essex between the A12, A132 and A127, the A131 Great Leighs Bypass and the A13/A130 Sadlers Farm Improvement for the London 2012 Olympics.

Testament to the hard work and endeavour over a number of years, Essex Highways were successful in securing the Transport Local Authority of the Year 2017 at the National Transport Awards.

Housing delivery

The establishment of NEGC Ltd has directly involved appointing a team with sufficient commercial and delivery experience to take the programme forward. This was in response to a key known need and a direct recommendation set out in the Kerslake peer review of the approach in 2016. This flagged the need for sufficient skills to be in place to deal with large scale complex projects such as this. As a result, the key appointment of a Managing Director secured a key individual with direct experience of capital investment in large scale infrastructure works (having worked on Heathrow T5 and Gatwick expansion, including implementation of on airport rapid transit service) and the delivery of large scale mixed use developments (having led the promotion and delivery of the Manydown scheme at Basingstoke, including asset management, scheme advancement through planning, and securing a funding and delivery partner. The wider NEGC approach has been to create a small team of commercially minded and experienced in-house resources, supplemented by the best available consultant team (across legal, corporate finance, delivery structures, property & CPO, viability, masterplanning, utilities and transport planning). The core team have wide knowledge and experience and demonstrable track record of delivery.

No attachments

Financial Case

What are the total scheme costs?

£15,412,071,407

Will the infrastructure costs be 100% funded through HIF?

Yes

Please provide a summary of the total infrastructure costs of the project

Description	Type	HIF Funding
A12 Realignment: infrastructure	Infrastructure	£62,060,210
A12 Realignment: Land	Land (exc. Sunk costs)	£12,686,645
A12 Realignment: Risk	Contingency	£25,388,601
A12 Realignment: Inflation Adjustment	Other	£21,155,169
1. New A12 J25: Design & Planning	Preparation costs (design and planning)	£2,243,974
1. New A12 J25: infrastructure	Infrastructure	£24,933,040
1. New A12 J25: statutory undertakers etc	Other	£1,358,851
1. New A12 J25: Risk	Contingency	£10,244,376
1. New A12 J25: inflation adjustment	Other	£9,867,765
2. Local Access Widening: Design & Planning	Preparation costs (design and planning)	£1,008,644
2. Local Access Widening: Infrastructure	Infrastructure	£11,207,157
2. Local Access Widening: Statutory Undertakers etc	Other	£610,790
2. Local Access Widening: Risk	Contingency	£4,604,747
2. Local Access Widening: Inflation Adjustment	Other	£4,435,464
3. A12 Widening J23 to J24: Design & Planning	Preparation costs (design and planning)	£1,626,697
3. A12 Widening J23 to J24: Infrastructure	Infrastructure	£18,074,415
3. A12 Widening J23 to J24: Statutory Undertakers etc.	Other	£985,056
3. A12 Widening J23 to J24: Risk	Contingency	£7,426,335
3. A12 Widening J23 to J24: Inflation Adjustment	Other	£7,153,323
4. A12 J23 Traffic Signals: Design & Planning	Preparation costs (design and planning)	£15,461
4. A12 J23 Traffic Signals: Infrastructure	Infrastructure	£171,794
4. A12 J23 Traffic Signals: Statutory Undertakers etc	Other	£9,363
4. A12 J23 Traffic Signals: Risk	Contingency	£70,586
4. A12 J23 Traffic Signals: Inflation Adjustment	Other	£67,991
Land acquisition and Part 1 costs for items 1 to 4: Land	Land (exc. Sunk costs)	£873,000
Land acquisition and part 1 costs for items 1 to 4: Risk	Contingency	£313,407

Please provide a summary evidencing how you have assumed these costs

The costs in section 6.1.7 are in real 2019 prices (including inflation) and represent one of three scenarios (scenario 3) developed for the bid designed to illustrate different facets related to viability and the economic and financial cases. Scenario 3 represents the financial model scenario that is consistent with the economic model except that it includes hope/expectation in the existing use land

values (see section 6.1.10). This scenario excludes the cost of the infrastructure related to the HIF bid and assumes 7.0% nominal land value appreciation, 3.9% nominal general build cost inflation, 3.5% nominal infrastructure cost inflation. Scenarios 1 and 2 are viability scenario that assume a zero-inflation world as outlined in section 2.5 and 4.1.7.

The cost table as per Table 6.1.7 for each of the three scenarios are contained in the file attached to this section (Att. 6.1.8a) in both nominal prices and real 2019 prices. The basis for the costs however, is the same for each scenario and is outlined in detail below.

The costs related to the housing development are based on a number of different sources and represent the best available data at this point in time. The primary two sources of data are the North Essex Local Plans (Section 1) Viability Assessment (HYAS, April 2017) (Att. 6.1.8b and 6.1.8c) and an update on many of the costs in the HYAS report by AECOM. The sources and assumptions for each cost item are outlined below. All prices have been uplifted to 2019 prices.

Housing Development Costs (items 1 to 5)
Items 1 to 5 are related to the housing development costs of the plot developer that are equivalent to the items included in the calculation of Residential Land Value in the economic case. These items do not include other private sector developer costs such as additional internal and external roads infrastructure, education and health facilities etc, which are covered in a later section.

Item 1 is the house build construction cost which is based on location-adjusted figures from BCIS for quarter 2 2016 and supplemented by agency consideration of prevailing build cost rates for a value of £1,060 per square metre. This was uplifted to 2019 prices based on housing build inflation by RICS using a factor of 1.116 resulting in a value of £1,183 per square metre. For private housing at an assumed floor area of 100 sqm this results in a unit cost per household of £118,320, while for affordable housing with an assumed floor area of 80 sqm we have a unit cost of £94,656 per household.

Item 2 covers on-plot external costs such as immediate access, gardens and utility connections, which are not included in the above BCIS rates. In line with industry standard allowances and as per viability work done for the emerging Shared Section 1 Local Plans (Hyas, 2017), which is also consistent with guidance by MHCLG (May 2017: Land Value Estimates for Policy Appraisal), a value of 15% of base build costs (item 1) has been used.

Item 3 is the level of contingency/risk applied to the housing development cost items 1 and 2. A level of 4% has been applied, as an industry standard value for housing construction relating to housebuilder activity in standard housing construction.

Item 4 covers professional fees on construction items 1 to 3. A value of 8.0% has been used based on MHCLG guidance (May 2017) and consistent with the economic case.

Item 5 covers sales costs associated with the sale of the residential units. A value of 3.0% of the sale price (market value) has been used based on MHCLG guidance (May 2017) and consistent with the economic case.

Other Private Sector Developer Costs (items 6 to 28)

Other private sector developer costs are more strategic works associated with a master developer as opposed to the plot developer. Almost all of items 6 to 28 are based on cost estimates that form part of ongoing work by AECOM and include additional on-site as well as strategic transport infrastructure, education, community and health facilities, open spaces, leisure and sports and site management and governance. More detail is provided in the following paragraphs.

Item 7 covers site preparation and enabling costs, which includes site preparation (general demolition and site clearance, cut and fill across the site, remediation), highways (primary and secondary road network to create reasonable sized plots for disposal) and on-site utilities/drainage (electrical, gas, water and telecommunications network). The cost assumed for this item is based on a recent review by Gleeds (January 2019), with a value of £15,829 per household in 2018 prices.

Items 8 to 11 cover additional on-site transport infrastructure including internal rapid transit roadways, active mode infrastructure and a transit hub (AECOM as reviewed by Jacobs).

Item 12 is an additional on-site transport infrastructure item with the costs developed by Jacobs. This item covers the cost of internal bridges for private vehicle, rapid transit and walk/cycle crossings of the mainline rail line. The costs are based on updated estimates by Jacobs and assume two dual carriageway bridges plus pedestrian and cycle facilities as well as three pedestrian/cycle bridges.

Items 13 to 16 are non-transport on-site infrastructure that include education, community and health, open spaces and environment/waste. These costs are based on an assessment by AECOM based upon previous analysis undertaken as part of the shared Section 1 Local Plans evidence base.

Items 17 and 18 cover travel plan measures (£516 per household) and employment support (£1,031 per household) as outlined by AECOM and based upon previous analysis undertaken as part of the shared Section 1 Local Plans evidence base.

Items 19 to 24 cover off-site transport infrastructure costs and contributions. This includes the cost of off-site utilities (items 19 and 20), transport infrastructure providing key active mode links, a package of works to improve access to Marks Tey rail station and facilitate rapid transit on Stain Street as well as contributions to both the proposed A120 upgrade and provision of the rapid transit system as provided by AECOM, and reviewed by Jacobs (transport works) and Gleeds (other elements).

Item 25 covers the contingency of 10% on the other private sector developer costs outlined above as items 7 to 24 in line with advice from AECOM as reviewed by Gleeds and in line with industry standard approaches to considering contingency for general infrastructure related to such projects.

Item 26 is an allowance for the entity charged with the governance and maintenance of the site of £1,000 per household to allow for local stewardship of assets in line with delivering development to Garden City standards.

Item 27 covers professional fees on the strategic infrastructure provision undertaken by a master developer in items 7 to 24 at 6.0% of the infrastructure costs in line with the assumptions set out in the (viability) evidence base for the emerging shared Section 1 Local Plans.

Item 28 covers the master developer profit, assumed at 15% in line with advice by AECOM and Cushman & Wakefield and as adopted in the (viability) evidence base for the emerging Shared Section 1 Local Plans.

Commercial Development Related Costs (items 29 to 34)
The developer is also proposing a significant amount of land for commercial use. All costs are based on advice provided by AECOM and Cushman & Wakefield and adopted within the (viability) evidence base as part of the shared Section 1 Local Plans. These are outlined in detail in section 4.3.2.

Land Costs (item 35)
This is outlined separately in section 6.1.10.

Finance Costs (item 36)

The finance costs have been calculated based on the cashflow described in section 6.4. A rate of 6.0% has been used in line with MHCLG guidance (May 2017).

No attachments

Can you provide detailed costing for the housing element of the wider project that forms part of your total scheme costs?
Yes

Description	Type	Cost
1. Housing Build Costs	Construction	£3,880,726,594
2. On-Plot Externals	Construction	£582,108,989
3. Contingency/Risk on construction items at 4% of construction costs	Contingency	£178,513,423
4. Fees on construction items at 8.0% of construction costs	Professional fees	£371,307,921
5. Sales fees at 3.0% of sale price	Professional fees	£937,200,772
6. Profit for plot developer at 17% of GDV	Allowance for developer profit	£5,310,804,372
7. Site preparation and enabling costs	Infrastructure	£515,635,406
8. On-site Transport: A3 – Active Mode Link (Church Road to Marks Tey Station)	Infrastructure	£452,747
9.On-site Transport: PT1a – Rapid Transit Loop (bus only roads)	Infrastructure	£48,743,985
10. On-site Transport: PT4 – West Tey Transit Hub	Infrastructure	£7,629,410
11. On-site Transport: Walking and cycling connection	Infrastructure	£1,491,474
12. On-site Infrastructure: Internal bridges over rail line (dual-lane Town Centre Bridge, dual-lane second car bridge with walk/cycle, 3 x walk/cycle	Infrastructure	£42,462,208
13. On-site education	Abnormals	£206,277,974
14. On-site community and health	Abnormals	£28,934,801
15. On-site open spaces, leisure and sports	Abnormals	£93,831,332
16. On-site environment/waste	Abnormals	£17,102,065
17. Travel plan measures	Abnormals	£16,287,681
18. Employment support	Abnormals	£32,575,362
19. Off-site utilities - electric sub-station, gas supply and telecoms	Infrastructure	£58,801,664
20. Off-site utilities: potable and waste water	Infrastructure	£31,655,035
21. Off-site infrastructure: A2 and A4 - Active Mode Connections to Rural Hinterland, Cycle Links	Infrastructure	£2,237,649
22. Off-site infrastructure: PR1 and PR2 - Marks Tey Station and Junction Package and Staine St. Reduction	Infrastructure	£34,657,561
23. Off-site infrastructure: Contributions to A120	Infrastructure	£35,536,704
24. Off-site infrastructure: Contributions to Rapid Transit System	Infrastructure	£81,398,614

25. Contingency/Risk on infrastructure/abnormals items at 10.0% of construction costs	Contingency	£125,571,167
26. Management and governance	Abnormals	£32,575,362
27. Fees on infrastructure/abnormals items at 6.0% of construction costs	Professional fees	£82,876,970
28. Master Developer Profit at 15%	Allowance for developer profit	£207,192,426
29. Commercial Build Costs	Construction	£484,419,976
30. Commercial Externals at 10% of Build Costs	Construction	£48,441,998
31. Commercial Contingency/Risk on construction items at 10.0% of construction costs	Contingency	£53,286,197
32. Fees on commercial construction items at 8.0% of construction costs	Professional fees	£42,795,179
33. Sales fees on commercial at 3.5% of sale price	Professional fees	£47,987,331
34. Developer Profit on commercial at 17.5%	Allowance for developer profit	£239,936,654
35. Land costs (including hope/expectation)	Land (exc. sunk costs)	£1,240,459,831
36. Finance costs on all development costs	Finance costs	£61,561,712

Please provide a summary evidencing how you have assumed these costs

The costs in section 6.1.7 are in real 2019 prices (including inflation) and represent one of three scenarios (scenario 3) developed for the bid designed to illustrate different facets related to viability and the economic and financial cases. Scenario 3 represents the financial model scenario that is consistent with the economic model except that it includes hope/expectation in the existing use land values (see section 6.1.10). This scenario excludes the cost of the infrastructure related to the HIF bid and assumes 7.0% nominal land value appreciation, 3.9% nominal general build cost inflation, 3.5% nominal infrastructure cost inflation. Scenarios 1 and 2 are viability scenario that assume a zero-inflation world as outlined in section 2.5 and 4.1.7.

The cost tables as per Table 6.1.7 for each of the three scenarios are contained in the file attached to this section (Att. 6.1.8a) in both nominal prices and real 2019 prices. The basis for the costs however, is the same for each scenario and is outlined in detail below.

The costs related to the housing development are based on a number of different sources and represent the best available data at this point in time. The primary two sources of data are the North Essex Local Plans (Section 1) Viability Assessment (HYAS, April 2017) (Att. 6.1.8b and 6.1.8c) and an update on many of the costs in the HYAS report by AECOM. The sources and assumptions for each cost item are outlined below. All prices have been uplifted to 2019 prices.

Housing Development Costs (items 1 to 5)

Items 1 to 5 are related to the housing development costs of the plot developer that are equivalent to the items included in the calculation of Residential Land Value in the economic case. These items do not include other private sector developer costs such as additional internal and external roads infrastructure, education and health facilities etc, which are covered in a later section.

Item 1 is the house build construction cost which is based on location-adjusted figures from BCIS for quarter 2 2016 and supplemented by agency consideration of prevailing build cost rates for a value of £1,060 per square metre. This was uplifted to 2019 prices based on housing build inflation by RICS using a factor of 1.116 resulting in a value of £1,183 per square metre. For private housing at an assumed floor area of 100 sqm this results in a unit cost per household of £118,320, while for affordable housing with an

assumed floor area of 80 sqm we have a unit cost of £94,656 per household.

Item 2 covers on-plot external costs such as immediate access, gardens and utility connections, which are not included in the above BCIS rates. In line with industry standard allowances and as per viability work done for the emerging Shared Section 1 Local Plans (Hyas, 2017), which is also consistent with guidance by MHCLG (May 2017: Land Value Estimates for Policy Appraisal), a value of 15% of base build costs (item 1) has been used.

Item 3 is the level of contingency/risk applied to the housing development cost items 1 and 2. A level of 4% has been applied, as an industry standard value for housing construction relating to housebuilder activity in standard housing construction.

Item 4 covers professional fees on construction items 1 to 3. A value of 8.0% has been used based on MHCLG guidance (May 2017) and consistent with the economic case.

Item 5 covers sales costs associated with the sale of the residential units. A value of 3.0% of the sale price (market value) has been used based on MHCLG guidance (May 2017) and consistent with the economic case.

Other Private Sector Developer Costs (items 6 to 28)

Other private sector developer costs are more strategic works associated with a master developer as opposed to the plot developer. Almost all of items 6 to 28 are based on cost estimates that form part of ongoing work by AECOM and include additional on-site as well as strategic transport infrastructure, education, community and health facilities, open spaces, leisure and sports and site management and governance. More detail is provided in the following paragraphs.

Item 7 covers site preparation and enabling costs, which includes site preparation (general demolition and site clearance, cut and fill across the site, remediation), highways (primary and secondary road network to create reasonable sized plots for disposal) and on-site utilities/drainage (electrical, gas, water and telecommunications network). The cost assumed for this item is based on a recent review by Gleeds (January 2019), with a value of £15,829 per household in 2018 prices.

Items 8 to 11 cover additional on-site transport infrastructure including internal rapid transit roadways, active mode infrastructure and a transit hub (AECOM as reviewed by Jacobs).

Item 12 is an additional on-site transport infrastructure item with the costs developed by Jacobs. This item covers the cost of internal bridges for private vehicle, rapid transit and walk/cycle crossings of the mainline rail line. The costs are based on updated estimates by Jacobs and assume two dual carriageway bridges plus pedestrian and cycle facilities as well as three pedestrian/cycle bridges.

Items 13 to 16 are non-transport on-site infrastructure that include education, community and health, open spaces and environment/waste. These costs are based on an assessment by AECOM based upon previous analysis undertaken as part of the shared Section 1 Local Plans evidence base.

Items 17 and 18 cover travel plan measures (£516 per household) and employment support (£1,031 per household) as outlined by AECOM and based upon previous analysis undertaken as part of the shared Section 1 Local Plans evidence base.

Items 19 to 24 cover off-site transport infrastructure costs and contributions. This includes the cost of off-site utilities (items 19 and 20), transport infrastructure providing key active mode links, a package of works to improve access to Marks Tey rail station and facilitate rapid transit on Stain Street as well as contributions to both the proposed A120 upgrade and provision of the rapid transit system as provided by AECOM, and reviewed by Jacobs (transport works) and Gleeds (other elements).

Item 25 covers the contingency of 10% on the other private sector developer costs outlined above as items 7 to 24 in line with advice from AECOM as reviewed by Gleeds and in line with industry standard approaches to considering contingency for general infrastructure related to such projects.

Item 26 is an allowance for the entity charged with the governance and maintenance of the site of £1,000 per household to allow for local stewardship of assets in line with delivering development to Garden City standards.

Item 27 covers professional fees on the strategic infrastructure provision undertaken by a master developer in items 7 to 24 at 6.0% of the infrastructure costs in line with the assumptions set out in the (viability) evidence base for the emerging shared Section 1 Local Plans.

Item 28 covers the master developer profit, assumed at 15% in line with advice by AECOM and Cushman & Wakefield and as adopted in the (viability) evidence base for the emerging Shared Section 1 Local Plans.

Commercial Development Related Costs (items 29 to 34)
The developer is also proposing a significant amount of land for commercial use. All costs are based on advice provided by AECOM and Cushman & Wakefield and adopted within the (viability) evidence base as part of the shared Section 1 Local Plans. These are outlined in detail in section 4.3.2.

Land Costs (item 35)

This is outlined separately in section 6.1.10.

Finance Costs (item 36)

The finance costs have been calculated based on the cashflow described in section 6.4. A rate of 6.0% has been used in line with MHCLG guidance (May 2017).

Filename	Descriptio
6.1.8a_CBBGC_HIF_Table_6.1.7_HousingCosts.xlsx	6.1.8a: Housing Costs
6.1.8b_EB013_1_2_Garden_Communities_North_Essex_Local_Plan_Strategic_Section_1_Viability_Report.pdf	6.1.8b: Viability Report
6.1.8c_EB013_2_2_Garden_Communities_North_Essex_Local_Plan_Strategic_Section_1_Viability_Report_Appendices.pdf	6.1.8c: Strategic Section Viability Report

Please provide a detailed cost plan for the scheme proposed to be fully or part funded by HIF.

Filename	Description
6.1.9a_CBBGC_HIF_InfrastructureCostPlan.xlsx	6.1.9a Infrastructure Cost Plan
6.1.9b_CBBGC_HIF_HousingCostPlan.xlsx	6.1.9b Housing Cost Plan

Please provide detail on how the land cost included in your scheme costs has been arrived at and the basis of this assumption (if you have included these costs in either your infrastructure or housing costs)

Land Costs Related to HIF Infrastructure

Land cost estimates for the A12 infrastructure scheme have come from two sources; Highways England and Lambert Smith Hampton (LSH). Lambert Smith Hampton's report is contained in Att. 6.1.11c.

LSH estimated the land costs for both the realignment of the A12 and the other, non-realignment elements, of the infrastructure scheme based on preliminary land take estimates. For the non-realignment elements (widening of Kelvedon Bypass, new Junction 25, associated link roads and traffic signals at Junction 23), LHS estimated the total land cost to be £873,000.

Highways England have estimated the potential land costs associated with the A12 realignment and concluded that a significantly higher cost could be incurred than was estimated by LHS. This is because there are number of properties in the vicinity of the A12, where it crosses the B1023, that could be affected by the scheme if the assumed alignment were to change by 100m or so during detailed design. Highways England have estimated the potential land costs for the realignment of the A12 at £12.7M.

In order to ensure that a robust estimate of land costs is assumed in the HIF bid, the Highways England estimate of land costs has been used for the A12 realignment and the LSH estimate for the other infrastructure works.

Land Costs Related to Housing

The base land costs related to housing are taken from MHCLG (May 2017: Land Value Estimates for Policy Appraisal) for agricultural land for the South East LEP at £22,500 per hectare. This has been uplifted to 2019 prices using an average for Colchester Borough and Braintree District from the UK House Price Index for 2017 to 2018 (1.6%) and the national forecasts by the Office for Budgetary Responsibility for 2018 to 2019 were used (3.2%) (October 2018: Supplementary Tables). This results in a base agricultural land value of £23,592 per hectare in 2019 prices or £9,547 per acre.

This base agricultural land value provides the basis for all scenarios assessed as part of the viability, financial and economic assessment in this bid.

For the purposes of the viability assessment scenarios outlined in section 2.5 and section 6.1.8 - scenario 1 and scenario 2 – it was shown that the site is not viable at this base agricultural land value and assuming 0% land value appreciation if the developer must fund the infrastructure included in this HIF submission (scenario 1). When the infrastructure is assumed to be funded by the HIF, the site is viable at up to about 9 times this base agricultural value (about £86,000 per acre in 2019 prices). This accords with common planning viability assumptions as referred to in the emerging shared Section 1 Local Plans (viability) evidence base where AECOM and Cushman & Wakefield referred to a threshold of £100,000 per acre (Att.6.1.11b) and the Inspector´s written comments (Att.6.1.11a) which indicated a need to see a reasonable uplift.

For the purposes of the economic modelling, nominal land value appreciation was applied to the base agricultural values (which exclude hope/expectation) at 7.0% as outlined in section 4.1.7 based on local data from the UK HPI. These were then deflated using the GDP deflator and converted to a NPV in 2019 prices discounted to 2019.
For the purposes of the financial model consistent with the economic model (scenario 3), hope value was added to the base agricultural values to arrive at a value consistent with about £100,000 per acre (in 2016 prices) as per the AECOM & Cushman & Wakefield evidence suggested in Volume 3 of the GC Concept Feasibility Study. When uplifted to 2019 prices this value is about £114,000 per acre or £281,000 per Ha.

The profile for the land purchase is outlined in the cost plans (Att. 6.1.9b). This is based on purchasing the land one year prior to construction for each identified phase of the development. The phases are those identified by AECOM.

Please attach any evidence to support how the land cost has been assumed

Filename	Description
6.1.11a Inspectors Corespondence 8th June Land Cost.pdf	6.1.11a: Inspectors Correspondence
6.1.11b AECOM NEGC Concept Feasibility Options Evaluation.pdf	6.1.11b: Concept Feasibility Options

Funding and Financing Sources

Have you applied for or received, other public funding or financing for the scheme?

No

What are the overall funding sources for the infrastructure scheme?

Description	Source	Total amount	Amount secured	Amount to secure	18/19	19/20	20/21	21/22	22/23	23/24	Future years
	HIF (this bid)	£228,592,861	£0	£228,592,861	£0	£0	£23,949,671	£20,139,796	£45,540,257	£138,963,137	£0

What is the proposed funding and financing strategy for the infrastructure scheme? If funding sources have not been secured you should also provide commentary of how this is expected to be secured and progress against this - please reference the above table in your answer

The infrastructure scheme will be funded entirely through HIF. The funding awarded to ECC will be passed directly to Highways England to add to the overall funding "pot" for the A12 scheme being delivered as part of RIS1. The spending profile is discussed in more detail in section 6.1.4.

No attachments

What are the overall funding sources for the housing scheme (excluding this bid)?

Description	Source	Total amount	Amount secured	Amount to secure	18/19	19/20	20/21	21/22	22/23	23/24	Future years
Private Sector Developer	Private Sector (Developer)	£15,183,478,546	£0	£15,183,478,546	£0	£0	£0	£0	£60,708,009	£41,607,645	£15,081,162,892

What is the proposed funding and financing strategy for the housing scheme? If funding sources have not been secured you should also provide commentary of how this is expected to be secured and progress against this - please reference the above table in your answer

As set out in this bid, the housing scheme is currently being promoted by the private sector through the Local Plan/s. As such, in the absence of a more proactive role of the public sector, the project would be led and funded directly by the private sector through traditional routes of development finance and a blend of equity and investment products aligned to the business needs and model being deployed by current land promoters & owners. These would therefore be expected to raise funding form the market to initiate work on strategic infrastructure to take the site forward into delivery.

The majority of the land is controlled via a promotion agreement with Cirrus and backed by L&Q. L&Q are a significant entity with a number of large high value schemes across London, with other assets and projects across the south east including the joint venture partnership at Beaulieu Park at Chelmsford, and the wider portfolio of sites within Gallagher Estates which was purchased in 2017. The land within their control is being promoted on the basis they will directly deliver and fund the scheme via their own funding arrangements, supplemented by raising new finance directly from the market.

Given the overall scope, scale and timescales involved with a site of this magnitude, it is anticipated that some further dedicated structure would need to be put in place by the developers which could then act directly as a 'strategic master developer', especially as the project will span several key landowners/promoters who are not as yet working to a shared/equalised scheme.

This could be similar to the approach at Beaulieu Park, where a joint venture was established with Countryside, L&Q would be likely to set up a separate entity to deliver and fund the strategic works, potentially in partnership with one or more other housebuilders. Such an approach would enable L&Q to maintain a key role in directly investing in housing delivery across a multiple of tenures, also acting as a traditional housebuilder to take plots on an ongoing basis, construct and dispose them to the market. They would operate alongside other housebuilders (with multiple outlets ongoing at any one time) to enable multiple products to be made available to the market, and to ensure a suitable build-out rate to enable a sufficient income stream to come forward to repay debt or related expectations on strategic infrastructure cost outlays.

The remaining key area of land is owned and promoted by 2 main families – the Wests and Sherwood. Neither of these parties are

anticipated to play a direct role in funding and delivery, with the Wests having already entered into an option agreement (with Crest) for part of their land, with an expectation that this would be directly delivered by that housebuilder. This is similar to their approach to other land they have disposed of to the market elsewhere in the local area at Stanway. Likewise the remainder of the West's interests and the adjoining Sherwood land is likely to come forward as a direct sale (and/or via option/promotion agreements) with subsequent delivery and funding being related to the developers who take the interests.

Notwithstanding how the key landowners decide to proceed, the overall scheme will need a structured approach and strong public sector involvement to ensure it comes forward to meet the required timescale, to the quality required by policy and to ensure delivery of necessary infrastructure. L&Q are most understanding of this and are willing to enter into a suitable form of joint venture or equivalent, to potentially blend financing and delivery expertise with a structured approach from the public sector.

Alongside consideration and evolution of the above approaches, the Councils have been considering the full implications of taking a more proactive and direct role in scheme delivery. NEGC Ltd has been leading the Councils consideration of their direct role in scheme delivery, including the potential scope and scale of finance required to deliver a locally led delivery model.

In terms of the approach to funding, this will be closely related to scheme progress and changes in risk. Subject to the outcome of the EiP, the potential adoption of the Shared Section 1 of the Local Plans would provide an important milestone in providing greater certainty that the garden community programme could proceed. Until this point, funding partners would treat the opportunity with an appropriate level of risk. After this point the risk profile will reduce and be further influenced by related key milestones such as the approval of infrastructure funding commitments (such as per this bid), confirmation on the delivery model and associated powers (for example creation of a locally led Development Corporation), and progress with Compulsory Purchase Order (to ensure creation of the asset). Funding providers and the Councils will be monitoring the categorisation of risk and market attractiveness of the proposition as the project moves between each milestone.

The potential approval of the Local Plan is likely to be a pre-requisite for establishment of a suitable delivery model, including the level of agreement between the current scheme promoters/developers and the public sector and overall approach to longer term funding for the delivery of capital investment to a broader time horizon.

NEGC Ltd has prepared financial models to consider revenue and capital implications going forward and therefore understand the scale of funding needed over the necessary timescales. Currently there are two parts or elements of the funding position for NEGC over the immediate period.

For the initial short-term period, the approach is being funded by grant funding from the Councils, Government and key partners. This will continue and is set out in the NEGC Business Plan for the timescale up until reaching the milestone of the receipt of the Inspectors letter/report or adoption of the Local Plan/s.

NEGC have initiated soft market testing to explore medium term financing arrangements for the anticipated levels of project expenditure and current position on risk. These are seeking to explore a move away from a reliance on Council and Government grant funding given the amount already provided and desire to move the project to gear up towards delivery phase.

The soft market testing is exploring both the appetite and potential terms likely to be associated with an appropriate medium-term finance product. Such discussions have been positive with market interest in the proposal albeit at present indicative only and not formalised by relevant parties. The position appears clear that based upon the current scheme parameters including the proposed approach to delivery (with a strong public sector role) there is strong appetite from the market to get involved.

At the point that the emerging Shared Section 1 of the Local Plans were adopted the risk level would decrease. At the point that the DPDs/LDO/OPAs are in place, it is considered that the level of risk would be low (especially in the context of a Development Corporation to provide a suitable corporate structure, governance and clarity on planning process, and importantly control of an asset base). At that point there would be less need (depending on size/complexity of proposition) for specific support or a guarantees to be given to funders by either Government and/or the Councils.

The intention would be to refinance and pay off the medium-term finance at the point in time when a suitable delivery model would be fully operational, and that agreements to the secure the land would have been finalised and implemented.

From then on the project would have entered a more structured delivery phase to include capital investment in the acquisition of land an the delivery of strategic infrastructure to prepare serviced plots for disposal to the market. At that point a longer-term funding facility would be in place, again considering the options for Government and/or private market funding, or partnering with a suitable delivery body who would be able to bring suitable finance into the project.

Options are still open here in terms of the most appropriate approach and delivery structure. It could be that the delivery model becomes the strategic master developer, either directly as part of the core development corporation structure, or as a separate operating company within or outside of a development corporation. Alternatively a strategic partner or transfer of land/asset base may be considered, including options similar to in use by the DIO or other Councils that have secured delivery partners to help bring forward land under their control for strategic development. This could move funding requirements and commitments away from the public sector entity, albeit would involve a different balance being taken on risk and reward.

No attachments

Gross Development Value

How much is the assumed Gross Development Value (GDV) for the scheme?

£32,611,092,312

Please provide a breakdown of the assumed GDV of the scheme in relation to the below:

Private sale	£25,909,973,936
Rent income	£2,665,025,891
Affordable sales income	£2,665,025,891
Commercial income	£1,371,066,594
Other	£0

Please provide a summary evidencing how you have assumed the GDV subject to this bid

Overview

The GDV of the site is the estimated total revenue a developer could obtain from the land. The prices of the values in sections 6.3.1 and 6.3.2 above are real 2019 prices, which are consistent with all values in the financial case. These are contrasted with nominal values later in this section.

The assumptions behind the calculation of GDV is outlined in the following sections.

Residential Development

For the residential development, the GDV was based on the expected house price multiplied by the total number of houses in each year for each type of housing – private sale, affordable rent and affordable shared ownership. The expected housing prices were provided via an independent assessment by Lambert, Smith, Hampton (LSH) with the resulting market values in 2018 prices:
• Private sale: £3,573 per square metre;
• Affordable rent: £1,787 per square metre; and
• Affordable shared ownership: £2,680 per square metre.

These values were uplifted to 2019 prices using forecasts from the Office for Budgetary Responsibility (OBR). This resulted in the following values in 2019 prices:
• Private sale: £3,687 per square metre or about £369,000 per Ha;
• Affordable rent: £1,844 per square metre or about £147,000 per Ha; and
• Affordable shared ownership: £2,766 per square metre or about £221,000 per Ha.

These values per hectare were then multiplied through by the residential land area by type for a total GDV of £31,240 million in real 2019 prices (£71,190 million in nominal prices).

It should be noted that this evaluation did not consider any premium uplift in value to account for the envisaged quality of place-making for this Garden Community development and is therefore likely to be a conservative estimate.

Commercial Development

The GDV for the commercial development was also based on an assessment of capital value by LSH and the assumed build out of commercial area by type as outlined by in the shared Section 1 Local Plan evidence base (North Essex Local Plans (Section 1) Viability Assessment), Hyas 2017)

The assumptions and rents provided by LSH are outlined below:
• Rent in 2018 prices:

- Employment B2/B8 industrial: £86.10 rent per NIA square metre,
- Employment B1 offices: £199.10 rent per NIA square metre,
- Retail and leisure: £107.64 rent per NIA square metre.
• Ratio of Gross Internal Area (GIA) to Net Internal Area NIA:
- Employment B2/B8 industrial: 97%,
- Employment B1 offices: 80%,
- Retail and leisure: 80%.
• Yield:
- Employment B2/B8 industrial: 6.8%,
- Employment B1 offices: 6.6%,
- Retail and leisure: 7.5%.
• Void and rent free:
- Employment B2/B8 industrial: 18 months,
- Employment B1 offices: 18 months,
- Retail and leisure: 18 months.

The resulting GDV was then calculated and prices conservatively uplifted to 2019 prices using the GDP deflator (DfT, November 2018: WebTAG Databook v1.11). The final values used, expressed in terms of GDV per GIA sqm in 2019 factor prices as follows:
• Employment B2/B8 industrial: £1,122 GDV per GIA square metre,
• Employment B1 offices: £2,212 GDV per GIA square metre,
• Retail and leisure: £1,037 GDV per GIA square metre.

The GIA by commercial land use type is based on information in the shared Section 1 Local Plan evidence base (North Essex Local Plans (Section 1) Viability Assessment), Hyas 2017) and is as follows:
• Employment B2/B8 industrial: 115,005 GIA square metres,
• Employment B1 offices: 46,002 GIA square metres,
• Retail and leisure: 161,008 GIA square metres.

The resulting total PV of GDV on 60.5 hectares (322,015 GIA sqm) is therefore £1,371.1 million in 2019 real prices (£2,609.3 million in nominal prices).

Inflation Assumptions

As outlined in section 6.1.8, three main scenarios were tested for this HIF bid. Scenarios 1 and 2 considered a 0% inflation scenario to assess viability while scenario 3 includes 7.0% nominal land value appreciation, 3.9% nominal building cost inflation and 3.5% nominal infrastructure inflation. The GDV outlined in table 6.3.2 corresponds to scenario 3. The total GDV under all three scenarios is outlined below:
• Scenarios 1 and 2: Total £6,911.7 million in 2019 real prices (same in nominal prices)
• Scenario 3: Total £32,611.1 million in 2019 real prices (£73,799.6 million in nominal prices)

No attachments

Please provide a cashflow for both the infrastructure and the overall development or housing scheme (if available). Please provide details on any growth and inflation assumptions made

Filename	Description
6.4_CBBGC_HIF_HousingCashflow.xlsx	6.4 Cashflow

Recovery

Do you aim to recover any of the funding (to be retained locally)?

Yes

Please provide assumed profile of recovery

Up to 2020	£0
2020-2025	£0
2025-2030	£0
2030-2035	£0
Future years	£228,592,861

How will the funding be recovered?

Based on the financial model developed for this HIF bid, it is expected that the full recovery and recycling of the HIF funding is achievable through the distribution of the residual value, with the profile depending largely on the growth in future housing prices and the mechanism adopted. The recovery profile outlined in this section above represents a conservative approach to recovery. Note that depending on the actual rates of land value appreciation and the details of the recovery agreements, HIF funding could be recovered sooner than this (see Att. 6.6.1).

There is a sequence for a potential recovery/recycling process for the project that creates an overall threshold:
1. Section 1 of the Local Plan(s) adopted by the Local Planning Authorities (LPAs)
2. DPDs for the project adopted by the LPAs
3. Planning approvals and viability assessments of the project to determine the appropriate amount of planning obligations
4. Delivery of the identified planning obligations audited by the LPAs
5. Delivery of any additional infrastructure or initiatives that would provide social and economic benefit to the project and the surrounding area audited by the LPAs

Any identified surplus in excess of thresholds determined through the planning process could then be subjected to recovery and recycling through discussions with Homes England or its successor.

The mechanism will be influenced by the planning and delivery route being deployed and the nature of direct role that the public sector will play in scheme delivery. Where the private sector delivers the housing scheme via traditional planning processes then recovery could be secured via the planning process (such as Section 106 agreements) as:
1. contributions to accrue on a rolling ‘£ per unit’ basis as housing units after the threshold identified by the sequence above is completed, similar in form to a ‘roof tariff’ type of approach; or
2. contributions to accrue as lump sum repayments at defined points after the threshold identified by the sequence above is completed (either time limited or at trigger points in terms of quantum of housing delivered, with a long stop date).

The application of a threshold-based approach to contributions would enable the impact on scheme cashflow to be minimised thus improving the scope to secure future payback. Both approaches would need to be considered in light of overall scheme viability and wider requirements to address policy objectives as being set by the Local Plans.

The financial analysis indicates that the ability of the scheme to recycle funding under current day circumstances (zero inflation world) would be challenging. As such, any recovery/clawback mechanism could be aligned with a wider scheme viability review mechanism, potentially linking payback to material changes in scheme viability during implementation and in particular house price inflation. Such review mechanisms are common in long term developments.

As a further alternative, negotiations around a public/private sector partnerships approach, potentially via a joint venture would be based upon a clear appreciation of the role of capital investment to the project (via HIF). The nature of such an agreement would be to ensure such early investment was factored in to the sharing of risk and reward, and ultimately be accounted for in returns accruing back to the public sector, commensurate to its role in enabling delivery of the scheme. The precise nature of recovery/recycling would be subject to the scope and form of any such legal agreement between the key parties.

Should the scheme advance via a more active public sector role in direct delivery, potentially via a development corporation or

equivalent, then the approach to the recycling of funding would take a different form where value capture would be retained in full by the delivery body. The approach and process would be similar to that outlined above and subject to audits by the Councils concerned.

How do you intend to use recycling to support future housing delivery in your area?

Monies secured will be recycled into the scheme to safeguard and ensure that it can continue to deliver new housing at an increased pace and to the required quality of Garden Community principles. It will also be key to provide a wider range of accessible and affordable housing that can enable the broadest range of potential occupiers across multiple tenures thus boosting build-out rates.

As such it is envisaged that monies would be recycled to help support and advance the Garden Communities across North Essex, to be administered via an appropriate structure aligned to the nature of the delivery model or via an agreed locally accountable governance structure. A funding programme would be established to define suitable projects and activities, to be prioritised and phased in line with the profile of receipts. Suitable projects and related funding would be administered, monitored and potentially directly implemented by the delivery model/structure, or potentially via one or more of the Councils. The approach would also seek to maximise other sources of funding to supplement monies being recycled, therefore exploring opportunities for match funding (to align with local, national or international initiatives) and therefore seeking to expand and enhance the overall funding capacity.

The following activities are anticipated be considered via the approach:

• Broadening the range of housing tenures to be made available, thus enhancing build-out and take up rates. This may require certain subsidies to be provided to ensure a wide range of housing products can be viably delivered across the site;
• Supporting the development of local business space, such as through the development of workspace, managed facilities or offering subsidies to support private sector led direct development;
• Wider economic development initiatives such as local training, business support, promotion and place marketing to stimulate local economic growth;
• Enabling the acquisition of assets for inclusion in the local stewardship body, therefore providing a strong portfolio and asset base to enable high quality maintenance and management of open space, community facilities and potentially revenue generating assets such as local retail or employment space;
• Investment in wider infrastructure and place-making quality, potentially to bring forward the supply of new services and facilities than may otherwise be the case and/or by investing in the public realm & civic buildings.

Should a full land value capture model be implemented, a similar approach would be deployed, albeit with wider consideration of suitable contributions from the overall uplift into such a fund, alongside wider consideration of equitable sharing of risk and reward between the key stakeholders involved.

Additional Information

If you have any further information to support the Financial Case for your project, which has not already been captured in the above, please include this here

Further information on recovery (section 6.5)

Given the status of the project, it is not yet possible to establish a definitive recovery profile at this stage. However, to illustrate the potential for full recovery of the HIF funding a number of scenarios have been tested using the financial model looking at the implications of key factors on the recovery profile including, i) the rate of nominal land value appreciation, and ii) the percentage of any residual value in a particular year that contributes to recovery.
The results of these tests indicate that full recovery could be expected under all scenarios but with varying profiles, except in a zero inflation world (with "reasonable" land prices assumed to be paid to land owners). These profiles vary from full recovery by 2036 assuming 7% nominal land value appreciation (in line with last 20 years of local data) and 100% of any residual value going to recovery until the full amount is covered, to full recovery by 2070 with only 4% nominal land value appreciation (worst-case in line with long-term nominal income growth forecasts) and 50% of the residual contributing to recovery.

See the attached file (Att. 6.6.1) for the recovery profiles “6.6.1_CBBGC_HIF_RecoveryProfiles.xlsx”.

Filename	Description
6.6.1_CBBGC_HIF_RecoveryProfiles.xlsx	6.6.1 HIF Recovery Profiles

Management Case

Project Dependencies

Description	Critical	Outside of direct control
LOCAL PLAN. Status: The Shared Section 1 of the Local Plans has been through the following stages: Issues and Options; Preferred Options; Publication Draft Local Plan; and Submission. Section 1 of the emerging Local Plans defines a strategy to plan and deliver three new Garden Communities including Tendring Colchester Borders Garden Community which is the subject of this bid. Examination by the Planning Inspectorate (PINS) is currently paused, expected to re-open in Autumn 2019. Adoption of Local Plans is critical to delivery of housing on the Garden Community sites. Key Issues: The Inspector found that the approach to assessing housing need was sound but that further work was needed to assess the Garden Community proposals. The three local authorities – Braintree, Colchester and Tendring – have resolved to continue with examination of Section 1 and are compiling further evidence for when the examination re-opens. Close out by: Subject to the outcome of the Examination in Public, adoption of the Shared Section 1 Local Plan is expected in 2020.	Yes	Yes
A12 PROGRAMME. Status: The provision of the infrastructure subject to this HIF bid is in addition to works already committed for the A12 between J19 and J25, which are considered necessary for the housing scheme to go forward. The A12 programme between J19-25 will be delivered by Highways England under the Project Control Framework. (PCF) This scheme is included in RIS1 with funding already secured Key Issues: Although Essex County Council has an excellent working relationship with Highways England, we are reliant on Highways England to design, programme and deliver the works. The HIF money for CBBGC-specific A12 improvements will all go into one “pot” for the wider scheme and needs to be spent by April 2024. Close out by: Start of construction May 2023	Yes	Yes
A12 PLANNING CONSENT. Status: The A12 works will require consent through Development Consent Order (DCO) Key Issues: Without consent, neither the wider A12 programme works nor the HIF-funded improvements will be delivered. Close out by: Current programme expects DCO in 2022	Yes	Yes
A12 LAND NEGOTIATIONS/CPO. Status: The improvements to the A12 around CBBGC require acquisition of land. Some of the route runs through the broad area of search for this site and is on land which will also benefit from the housing. In this case, we expect land to become available by negotiation. Other land required is owned by those who will not directly benefit from new housing. Key Issues: Land owned by those who will not immediately benefit from the new housing will be acquired by Highways England through CPO. We have commissioned some work from LSH who are of the view that this land could be acquired at approximately £873,000 (excluding risk and inflation). We have included this in our cost assumptions for the infrastructure part of the bid Close out by: Land acquisition expected to conclude by 2025/26	Yes	Yes
A120 PROGRAMME. Status: The upgrade of the A120 between Braintree and the A12 is considered necessary for the CBBGC site to be developed in full. The A120 scheme has been passed Highways England’s Project Control Framework Stage 2 review and is being considered for inclusion in RIS2. Key Issues: The A120 Braintree to A12 scheme is a key dependency for CBBGC as it will be required to mitigate the impact of development related traffic before 2,500 homes are built on the site. CBBGC expects 2,500 homes to be delivered by 2033. Therefore, inclusion of the A120 scheme in RIS2 (2020-2025) or even RIS3 (expected 2025-2030) would enable CBBGC to be developed at the proposed rate. Close out by: Announcement of schemes to be included in the RIS2 programme is expected Q4 2019	Yes	Yes
RAPID TRANSIT SYSTEM (RTS) Status: The RTS is a key component of the three new garden communities in north Essex and our traffic modelling for this bid has included some assumptions around provision of RTS and modal shift. Key Issues: It is assumed that the developer will contribute about £53.9 million to the capital costs of the RTS (excluding inflation and risk), which is expected to cover the majority of the capital costs associated with the external sections serving CBBGC as well as £32.3 million for internal RTS infrastructure.	Yes	No

These costs have been built into the financial model for this bid and those being explored by NEGC Ltd. Close out by: Although the RTS linking to this site is anticipated to be delivered in phases, for the purposes of this bid it has been assumed to be fully in place at 2051 as part of the transport modelling. It is expected that this would be implemented earlier than this with finalised developer contributions negotiated at planning application stage or as part of the Locally-Led Development Corporation model.		
Assessment timescales for HIF bids Status: The HIF bid is due to be submitted to MHCLG on 22nd March 2019. Current indications are that assessment of the bids and a resultant decision will be released within a 12-week period. Whilst the outcome of the bid is awaited, work on delivery of the A120-A133 Link Road and Rapid Transit System will be progressing at risk in order to meet a challenging programme. Key Issues: If there is a significant delay in receiving the outcome of the bid, then ECC may decide that they cannot continue to progress the scheme at risk due to cash flow uncertainty. Close out by: 12 weeks post bid submission by MHCLG	Yes	Yes

Project governance, organisation structure and roles

Please outline the authority's approach to governance and oversight of the delivery of the proposal. This should include how you will work with any other key delivery partners (such as other landowners)

Essex County Council as Lead Authority promoting this HIF application also has a promoting role in other HIF applications including the Tendring Colchester Borders A120/A133 Link Road (including Rapid Transit) and the North Chelmsford Growth Hub, as well as a supporting role in the Harlow Gilston Garden Town application promoted by Hertfordshire County Council.

As a result of promoting a number of HIF applications Essex County Council has adopted a robust and tiered approach in order to effectively provide oversight and governance to the proposals at a number of levels. Overall however the approach involves:
• Scrutiny and oversight from senior politicians and senior officers at Essex County Council, Colchester Borough Council, Braintree District Council as well as Central Government Officials through MHCLG, DfT, Homes England and Highways England
• A Commercial and Delivery Working Group at the North Essex Garden Communities Level
• A dedicated Project Board for the A12 Project which will include the elements requested in this HIF application
• Statutory and Stakeholder Groups including Natural England, Environment Agency, Historic England, neighboring local authorities, politicians, community groups, businesses, developers and landowners amongst others.

The structure in Att. 7.2.3 (page 2) shows the overall programme governance for the HIF applications in total.

The Programme Board has been instrumental in supporting, resourcing and developing a number of high quality business cases at both the Expression of Interest and Co-development states. Post funding award the Programme Board will ensure that the programme of Essex infrastructure projects and related projects remain focusses on achieving their objectives and realising their agreed outputs to bring forward essential housing and economic growth.
The Programme Board will be responsible for authorising ongoing funding and ensuring sufficient quality and quantum of resource to implement the schemes. The Board will also take a holistic overview of Essex's schemes and housing needs to provide oversight and ensure shared efficiencies and lessons learned are applied across each of the projects awarded funding.

The Programme Board will typically meet quarterly with other meetings (virtually and formally) as required to make effective decisions. The Programme Board will continue to be staffed by leading officials from across ECC's Localities (Housing) and Highways & Transportation directorates and its supply chain. In this particular scheme the Programme Board will have a very close working relationship with Highways England to ensure the deliverables for the elements contained in this bid are delivered as part of the wider A12 widening scheme.

North Essex Garden Communities Oversight

At the NEGC Programme level and as set out in this application, NEGC Ltd has been established to provide a coordinated approach to the evolution and delivery of Garden Communities across North Essex, acting as a wholly public sector owned private limited company. The NEGC Board oversees and provides strategic direction to the overall programme and is made up of senior political

representatives from each of the North Essex Authorities as well as Essex County Council. The Board meets quarterly and agrees the direction and approach as guided by a formal approved Business Plan.

The day-to-day working of NEGC is overseen by the company's Group Managing Director and supported by a dedicated Programme Delivery Team who coordinate all work and programme-related activity, including overall programming and budget management.

The work of the core NEGC team also involves close joint working with a range of internal and external stakeholders, including officers from the Councils and key partners across a number of key areas.

The Programme workstreams will focus on the following specific areas:
• Planning & Infrastructure: to advance masterplanning (from a delivery perspective) and project infrastructure requirements and dependencies.
• Commercial & Delivery: to evolve a commercial delivery and land model, financial analysis, legal and corporate financing and tax considerations, including input to the evolution of associated Business Cases.
• Economic & Engagement: to evolve an economic strategy and manage programme-wide external engagement, communications and public relations activity.
• Stewardship & Innovation: to evolve an appropriate approach to innovation and a local approach to long term stewardship, including the management and governance of local community assets.

Task & Finish project groups are set up, as appropriate, and report into the workstreams to take forward specific pieces of work. An overarching Steering Group oversees and monitors the work across the workstreams, including the budget, enabling input into the NEGC Board. This is led by the Group Managing Director of NEGC and comprises of Senior Officers from the Councils, together with key staff in NEGC and external stakeholders, including representatives from Homes England.

Additionally, a number of specialist groups are in place formed by the Council leads on key statutory functions to ensure there is close working between the NEGC programme and the wider statutory functions of the Councils. This approach ensures that there is distinction between the operational activities of NEGC, such as in relation to the evolution of land use proposals and its business model, and the statutory functions/duties and wider roles of the Councils. The statutory function groups will enable close communication, regular structured liaison and effective joint working between NEGC and The Councils across the following themes:
• Finance: to establish regular liaison between the programme and Council finance representatives (s151 Officers).
• Legal: to establish regular liaison between the programme and Council legal representatives (Monitoring Officers).
• Planning: to consider the approach alongside statutory planning functions of The Councils with respect to plan making and development management.
• Transport: to consider the approach alongside statutory transport functions and initiatives.

Each Council also draws together specific inputs to the programme via internal project groups to ensure coordination across separate Council officers who are working with NEGC. The operational structure is set in Att. 7.2.3 (page 3).

At a project level Essex County Council's Commissioning Managers together with Highways England and North Essex Garden Communities will jointly be responsible for the oversight and governance ensuring that the scheme's desired outcomes are achieved specifically Highways England's project control processes will provide oversight in design, construction and following its completion.

A proportionate approach to monitoring the progress of the A12 re-alignment project has already been set up via an already established project board, which includes monthly template reporting and escalation of issues if, and when required to the political leadership team and / or capital investment board. As the focus moves from business case development to further design and construction the nature of the metrics will change. While the infrastructure component of this HIF applications will be delivered by a different organisation, ECC will select a set of common reporting metrics (with the option for additional scheme specific metrics) for ease of dashboard reporting, with these evolving as the projects move from design and into delivery. The Project Board will manage issues and risks arising by exception, with escalation in line with ECC's corporate risk management strategy where required.

The following sections in this application provide further details on the governance and oversight of this proposal:

7.2.2 – Resourcing the proposal
7.2.3 and 7.3.1 – Project Management Arrangements and Project Plan (respectively)
7.3.2 – Project Delivery Plan
7.4.1 – Project Milestones
7.6.1. – Project Assurance

Please provide details of the authority's resourcing for the proposal

Introduction

Highways England are well resourced to deliver the proposal contained in this HIF application given that it forms a key part of the overall A12 widening project. In addition, Essex County Council, Colchester Borough Council and Braintree District Council are all well-resourced to provide oversight to the proposal.

Effective Governance arrangements are already in place to develop the infrastructure project that is the subject of this business case and the housing that this bid will facilitate.

Housing

Each authority has the resources in place to be confident that the housing delivery set out in this business case can be delivered.

Essex County Council

ECC is committed to facilitate new homes and communities, as laid out in its Organisation Strategy 2017-21. ECC has invested in a new housing growth team to drive this agenda. ECC's Head of Housing Growth, Lee Heley, will ensure that ECC's housing policy and ambition is central to the delivery of the housing and the supporting HIF infrastructure. Lee is supported by a Housing Growth Team with significant experience in large project delivery.

Colchester Borough Council

Within its Policy and Place Directorate, CBC has a well-resourced Planning and Strategic Housing Policy Team. In addition, CBC has an extensive team of specialists including dedicated officers for urban design, heritage, transport, archaeology and landscape planning, as well as an experienced development management team to take forward the development of master planning and the subsequent management of planning applications (or whichever planning mechanism is used for the Garden Communities). These disciplines have worked together on a variety of strategic projects in the Borough. CBC also shares a strategic planning resource with Braintree District Council and Tendring
District Council.

Braintree District Council

Within its Economic Growth and Planning Service, BDC has a wealth of planning resources to support the delivery of the Garden Communities. It has an experienced team of planning policy officers with extensive knowledge of the strategic issues and opportunities within the district as well as a well-resourced development management team which benefits from specialist urban design support. Together these teams have a proven track record of strategic growth delivery within Braintree District and therefore have the experience and expertise to successfully support the master planning of the Garden Communities through to the?subsequent management of planning applications (or whichever planning mechanism is used for the Garden Communities). BDC also shares a strategic planning resource with Colchester Borough Council and Tendring District Council.

North Essex Garden Communities Ltd

In 2017 the NEAs and ECC formed a new body to progress the delivery of the Garden Community programme's key objectives and ensure the delivery of the three new settlements. NEGC Ltd has been established as a private limited company wholly owned by the Councils to act as the body to guide the proposed Garden Communities through the design process and into implementation,

providing oversight and scrutiny of the delivery. The NEGC operating model is based on a small core team which has responsibilities for:
• Project leadership and vision; business strategy and structure; programme and project management, including the coordination of workstreams and commissioned work;
• Concept development through the evolution of site-specific masterplans; planning for infrastructure, identifying and securing funding; evolving the economic strategy and
• Exploring opportunities for innovation and effective long-term stewardship;
• Community outreach and engagement, communications and marketing to ensure proposals evolve with local community involvement and are understood by wider audiences. The operating structure also draws on the support of a range of specialists across the other partners, including on planning, legal and financial officers within each of the Councils. A service level agreement is in place to provide support services for NEGC such as accommodation, ICT, human resources and payroll.

The following provides an overview of the current team and supporting resources:
• Employees: Group Managing Director, Head of Programme; Programme Manager; Communications Manager; Delivery Team Administrator;
• Expert contractors: Commercial; Procurement; MMC/Construction; Finance; Engagement & Marketing;
Consultants: Economic Strategy; Delivery & Financial; Tax; Planning & Property; Legal; Land & Valuation; Masterplanning & Transport; PR & Communications; Company Secretary.

Infrastructure

The Highways England Project Delivery Team will be tasked with delivering the wider A12 widening project as well as the infrastructure elements requested in this HIF application through their remaining PCF stages.

Essex County Councils Transport Planning and Infrastructure Lead – Alan Lindsay will ensure a joined-up approach to transport planning across the delivery of Local Plan Growth and the HIF funded schemes through an ongoing liaison role for Highways England.

Additional discipline specialist expertise will be requested to attend the Project Delivery Team as and when required. Moving into project implementation, Highways England's Project Manager (or a named deputy) will be responsible for the administration of the NEC contract management arrangements described in the Commercial Case. The NEC Project Manager will be supported by a Supervisor and site-based supervision team. The NEC Project Manager and Supervisor will also provide a site presence to deal with all contract variations/issues and early warnings/compensation events.

Please attach an organogram depicting the governance structure and/or roles and responsibilities within the authority

Filename	Description
7.2.3_CBBGC_HIF Governance Structure.pdf	CBBGC HIF Governance Structure

Project management arrangements and project plan

Please provide details of the overall project management delivery arrangements for the project, including any challenges or constraints to delivery of the project

As identified in previous sections the wider A12 widening project of which the infrastructure contained in this HIF application will form a part is identified as a Tier 1 scheme with costs above £500 million and as such is considered to be a nationally significant infrastructure project (NSIP). Given the size of projects such as this they are approved at the DfT's Board Investment and Commercial Sub-Committee (BICC). It is likely that this wider project will be approved in Spring 2020.

To manage a project of this size Highways England and DfT will use the Project Control Framework process. This framework contains details of how the wider A12 (including the HIF infrastructure) will be managed, governed and assured. There are a number of core principles of the framework. The first is the lifecycle principle which splits the project up into components with several PCF stages within each component (Pre-project phase, Options phase, Development phase, and Construction phase). The second is project deliverables within which the aim is to produce standard product deliverables, define roles and responsibilities and a focus on what

needs to be delivered within each stage. The third is around processes including statutory processes and established processes concerning best practice e.g. the Design Manual for Roads and Bridges. The fourth principle is around governance, the PCF process exists within the context of governance arrangements defined by the investment control framework and the investment appraisal framework. Finally, the fifth principle is around flexibility, the PCF process can be used flexibly within the context of the other principles. The PCF process itself is broken into seven distinct stages around four phases, the following provides a description of these stages under each of the phases:

The first is stage is contained under the pre-project phase, specifically strategy shaping and prioritisation (Stage 0) i.e. identifying the strategy and its priority. For the A12 wider project this is the stage it is currently at, however it should be noted that work to transition to the next stage is underway.

The next stages under Options Phase are option identification (Stage 1) and option selection (Stage 2) these stages include identifying options to take to public consultation reviewing them in terms of environmental impact, traffic forecasts and economic benefits, refining the cost estimates, produce an outline business case and announce the preferred option.

Under the Development Phase there are three stages; preliminary design (Stage 3), statutory procedures and powers (Stage 4) and construction preparation (Stage 5). During the preliminary design stage, planning exhibitions are held, preliminary design is completed and frozen, planning documents are prepared, and the environmental assessment is completed. During the statutory procedures and powers stage notices of the development consent orders are published, arrangements are made for a public inquiry (if required) and if necessary holding the inquiry itself. The final stage under this phase is construction preparation here orders will be confirmed with approvals sought to advance works such as utility diversions, the final business case will be produced and notices to proceed will be obtained.

The final phase the construction phase contains two key stages; the construction, commissioning and handover (Stage 6).

The A12 widening project will be pass through the above stages, but the project will only pass to the next stage once the correct governance is in place. As a result, the project on a day to day basis will be managed according to the following processes:
• Regular Reporting – regular reports that must be completed according to a defined schedule. The Project Manager is responsible for completing the reporting
• Exception Reporting – Project Managers could be required to produce an exception report for a number of reasons including:
- The expected cost of the current stage is forecast to be higher than the approved budget
- The Stage End is projected to be more than three months behind the baselined end date of the stage
- Where, in the opinion of the Department for Transport sponsor, the scope of the scheme has changed sufficiently to warrant re-authorisation
• Sign-off products as they are produced for example cost estimates, risk assessments etc.
• Stage gate assessment reviews
• Gateway reviews or peer reviews undertaken by the Office of Government Commerce again at several stages of the project but these are considered to be separate from the PCF Stage Gate assessments.

This reporting process can take place at various levels depending on a number of factors including the size of project and the nature of the issue, these levels also act as points for escalation/intervention:
• Project Committee (Chaired by the Sponsor) >
• Regional Programme Committee (Chaired by the Regional Delivery Director) >
• Regional Investment Programme (RIP) Committee (Chaired by the RIP Director).

Identified Constraints at the stage

At a high level the following have been identified as constraints for the project at this stage of development. More detailed constraints or risks can be found in the Management Case under risks:

Financial – HE will require more funding without HIF, plus on a wider scale Housing growth and challenges around growth, without

HIF not as much housing growth can be delivered without the realignment.

Speculative Development – Without the HIF funding there is a constraint on the quantum of development which can be built out at the Colchester Braintree Borders site meaning that there is a risk of increased speculative applications outside of the Local Plan.

Please summarise your project delivery plan to deliver the infrastructure, this should include your anticipated land ownership / control strategy

Given that the infrastructure requests contained in this HIF application are a part of the wider A12 Widening project which is considered to be a nationally significant infrastructure project (NSIP), the management and delivery will be in accordance with the DfT/HE project control framework. Once the wider project reaches PCF Stage 4 (Statutory Processes) the scheme will be subject to a Development Consent Order or DCO under the Planning Act 2008.

DCO's are a statutory instrument as part of the planning process for national infrastructure projects and take approximately 18 months to be completed end-to-end, the steps involved in submitting and completing the DCO process are detailed below:

- Submission of DCO application to the Planning Inspectorate (PINS)
- Acceptance by PINS: 28 calendar days (1 month)
- Pre-examination: period: 3 months
- Examination: period: 6 months
- Planning Inspector's report and recommendation period: 3 months
- Secretary of State decision period: 3 months
- DCO coming into force period: 21 days
- Judicial review period: 6 weeks

Once the DCO process has completed the project will move into a Stage Gate Review and will if successful move into the next stage (stage 5) or the Construction Preparation. During this stage the orders will be confirmed and responses to any high court challenges made. At this point advanced works can commence including utility diversions as well as the schemes details around land acquisition being placed on deposit. At the end of this stage approval will be sought on whether to proceed to the next stage (stage 6) Construction Period when commencement of construction for the scheme can begin in earnest.

Please provide details of your project delivery plan to deliver the homes unlocked by the infrastructure. Please detail any expected controls or levers you will put in place to ensure the delivery of housing comes forward on the sites

Project delivery plan 2019 to 2071 to deliver homes unlocked by the infrastructure

2019/20 Key Activities – Focussing on Local Plan Elements

- Consultation on additional evidence to support the Examination in addressing the Planning Inspectors concerns
- Submission of further evidence
- Recommencement of the examination in public with subsequent Inspectors Report
- Commence modifications consultation
- Preparation of Development Plan Documents (DPD's)

2020/21 Key Activities – Focussing on Local Plan and Infrastructure Elements

- Local Plan adoption
- Local Development Order preparation
- Continuation of the preparation of the DPD's
- Consultation on preferred DPD option
- Highways England preferred route announcement on the A12 widening project incorporating the infrastructure improvements outlined this HIF application

2021/22 Key Activities – Focussing on DPD Elements

- Draft DPD public consultation
- DPD examination
- DPD Inspectors Report
- Modifications consultation

2022/23 Key Activities – Focussing on DPD and Infrastructure Elements

• DPD Adoption
• Local Development Order Adoption
• Highways England Development Consent Order
2023/24 Key Activities – Focussing on Implementation Elements (Housing and Infrastructure)
• On site preparatory work
• Infrastructure start of works
2024/25 Key Activities – Focussing Housing Delivery
• Delivery of first fifty homes at Colchester Braintree Borders
2027/28 Key Activities – Focussing Housing and Infrastructure Delivery
• Infrastructure completed
• Delivery of 750 homes at Colchester Braintree Borders
2030/31 Key Activities – Focussing Housing and Infrastructure Delivery
• A120 improvements in place as part of the Roads Investment Strategy
• Delivery of 1,800 homes at Colchester Braintree Borders
2032/33 Key Activities – Focussing Housing Delivery
• Completion of the Local Plan (2033)
• Delivery of 2,500 homes at Colchester Braintree Borders
2033/2034 to 2036/37 Key Activities Focussing on Local Plan Elements (New)
• New local plan preparations commence
2039/40 Key Activities – Focussing Housing Delivery
• Delivery of 5,850 homes at Colchester Braintree Borders (representing the maximum number of homes without the HIF Transport infrastructure)
2040/41 to 2070/71 Key Activities – Focussing Housing Delivery
• Delivery of final 15,081 dependent homes at Colchester Braintree Borders

Further information can be found in sections 5.2 and 7.4.4 concerning more details on the delivery of the infrastructure and housing elements respectively.

Expected controls and levers to deliver Colchester Braintree Borders Community

It is important to note that there are a number of elements and delivery bodies contributing to the Colchester Braintree Borders Garden Community including Highways England and North Essex Garden Communities. As well as a number of promoting authorities including Essex County Council, Braintree District Council and Colchester Borough Council. Our project delivery plan attached (reference) sets out how the infrastructure associated with this HIF application as well as the housing plans will be delivered alongside smaller social and transport infrastructure to unlock this significantly sized community.

The Councils have recognised from the outset that the delivery of this ambitious vision of the Garden Communities across North Essex will require a positive, coordinated and active approach by both the public and private sector bodies. Given this importance, a shared Statement of Common Ground was signed in January 2018 to support the initial examination in Public (Att.2.2.2c). The site has only been included within the emerging Shared Section 1 Local Plans on the basis that it can provide a high quality development, at a sufficient scale to contain a wide range of supporting services and facilities, and enable the provision of strategic infrastructure to both address impacts caused by the development but also support other improvements across the wider North Essex area.

There is full awareness of the importance and significance of putting in place the Local Plan/s with the Councils working hard to ensure resources and corporate attention is placed on taking matters forward in an appropriate manner to facilitate a successful outcome from the Examination in Public following it being reopened later in 2019 and with adoption later in 2020. Given the strategic significance of the Garden Communities to the Local Plans, senior planning officers are allocated from each of the Councils to work on the project, supplemented by a centralised project management resource (within Colchester Borough Council) to ensure appropriate coordination and joint working is implemented. Other Council officers across economic development, transport and infrastructure, finance and legal teams are working on the project to advance the separate thematic considerations and workstreams. Whilst key decisions are made individually by each Council, a strong joint working process is in place to draw together

key officers and directors to consider matters of joint importance and to share information and consider appropriate joint ways forward.

In addition, NEGC Ltd is assembling a broader body of evidence to address certain aspects, including a detailed articulation of the potential public sector led delivery route, either via a locally led development corporation structure, or other forms of partnering with landowners/developers and scheme funders. The Business Plan for NEGC Ltd sets out key workstreams underway, provides the governance structure and budgetary oversight to deliver the necessary workload.

Subject to the Local Plans being found sound, these policy controls will guide future planning stages. In addition, once a sound plan is identified the Councils will move quickly to prepare more detailed site specific Development Plan Documents (DPD) to provide a further layer of policy control. This will evolve current concepts into a more specific masterplan for the site, enabling more detailed thematic policies to be set out to guide subsequent delivery. The preparation of the DPD's will draw from evidence already prepared for the Local Plan/s, supplemented and updated as necessary with additional detail such as on housing & employment mix and phasing, transport infrastructure, sustainability appraisal, updated viability evidence. The approach will draw heavily on community and stakeholder engagement delivered to take forward the debate once the principle of development has been secured thorough the Local Plan process.

Work is already underway to evolve these development plan document proposals to greater detail than the initial Concept Frameworks prepared in 2016. The master planning will form the basis of the preparation of a site-specific Development Plan Document to be produced (Preferred Option) by the end of 2020. This will be consulted on, finalised into a submission draft for examination late 2021/early 2022 and adopted to finalise the policy position by Summer 2022.

Work undertaken on the DPD will be directly transferable into the preparation of material to secure planning approvals for development on the site, enabling work to be undertaken in tandem on policy and development management activity. A site wide (or suitably phased) outline planning application will be prepared for submission (or a Local Development Order if under the remit of a Development Corporation) as the core consenting order. The preparation of such material will be undertaken by the delivery body, either by the private sector working separate to but alongside the public sector, via some form of joint venture vehicle, or via the public sector directly should it have either acquired or be in the process of acquiring the land (voluntarily or compulsorily). This would enable planning consents (LDO and/or outline planning application/s) to be issued alongside or shortly after adoption of the DPD around the middle of 2022.

The Councils working with NEGC Ltd have assembled a technical team to take forward the DPD, masterplanning and development management processes. The team also includes specialist community engagement practice who will implement thorough local engagement to work through ideas and proposals with local communities and stakeholders. The approach is based upon a core project management resource, with a team of expert consultants drawn in to undertake technical work and evolve proposals as appropriate. Subject to the pace of progress, the core team resource would expand and contract accordingly to fit the scope and needs of the programme.

The delivery programme to date has been supported through a combination of MHCLG capacity funding (grant) and additional equal contributions from each of the four Councils. As at the end of 2018/19, the NEGC programme had received £3.2m funding from the MHCLG scheme and £2.4m funding from the Council shareholders. The level of funding commitment from the Councils together with the backing form Government show the level of commitment from all parties to undertake the necessary work required to take the programme into delivery, and meet the level of ambition that has been set.

Key activities during 2019/20 will ensure that the programme is able to get on site as soon as is practically possible after (and subject to the outcome of) the resolution of the Local Plans currently being examined. Essentially the work in 2019/20 will be a precursor and so enable the more detailed masterplanning work including public engagement and site-specific infrastructure/utilities planning that will need to be progressed in 2020/21 onwards. In addition, the further supporting work on transport infrastructure and economic growth work plan across the North Essex area during 2019/20 will provide the foundation for the programme to be progressed in 2020/21 onwards.

The level of funding required to deliver the programme workstreams contained in 2019/20 is planned to be funded by Council contributions, Government funding and from a combination of funds carried forward from 2018/19 and other stakeholders who benefit from the work undertaken. North Essex or NEGC is the largest programme in the MHCLG Garden Towns / Villages scheme. From the end of the 2020 period, it is anticipated that assuming a positive resolution of the Local Plan, the project will enter a new phase of financing, moving away from annual funding and Government capacity funding awards to a more structured longer-term approach to resourcing (by it via a combination of investment and equity), with the potential involvement of external funding and delivery partners.

Discussions and negotiations have been ongoing with key landowners and site promoters for several years. As a result good working relationships exist with all key stakeholders, setting strong foundations to agree and implement an appropriate delivery structure as the sites make progress through the development plan making stage.

The majority of land to the west of the existing A12 (for the wider housing scheme) is controlled by G120 with a promotion agreement with Cirrus backed by L&Q. L&Q are a major player with many large scale projects particularly in London and the south east. The other main area of land is owned by two families, part of which is under option to Crest Nicholson.

The landowners are committed to the delivery of the New Garden Community at Colchester Braintree Borders and have been engaging with the Councils over the past few years to explore potential options. The families are more likely to dispose of their land subject to a suitable price. The larger part of the site (G120, Cirrus & L&Q) recognize a potential need for some form of public private partnership approach given the overall scale and complexity of the undertaking. Such discussions and negotiations are continuing via a structured dialogue, led by NEGC with wider legal and corporate financing support.

The emphasis to date has been on acquiring land voluntarily and it is anticipated that land agreements will be entered into between the relevant landowners / developers and the delivery structure. Discussions have been ongoing for some time, and as a result the Board of NEGC Ltd (and subsequent Cabinets across each of the Councils involved) have agreed that should negotiations not proceed satisfactorily, a CPO approach could be initiated either by the relevant local Authorities and / or by a future Development Corporation. Confirmation of the Local Plan/s and policy expectations therein will be a key influence and therefore it is anticipated that CPO will be initiated in tandem to undertaking final discussions as to landowner / developer capacity to deliver on policy ambitions.

If compulsory purchase orders are required initial consideration has already been given to potential property cost estimates and these are already being factored into NEGC led delivery financial considerations. Further analysis and consideration, including initiation of statutory processes will occur in 2020/21 with a potential CPO Inquiry to be held in 2021/22 to fix timescales for control of the land and delivery approach.

Ongoing joint working will occur between the Councils and with the main scheme promoters to define the most appropriate delivery route to combine the strengths and opportunities collectively provided by the public and private sectors working together. In tandem the Councils will continue to advance work to enable the establishment of a locally led development corporation, to evolve the current structure already in place through NEGC Ltd and site specific LDVs which already exist as wholly public owned private limited companies. This approach includes continuing work to prepare a suitable mandate and outline business case to confirm the extent of powers and functions to be bestowed into a locally led development corporation. A proposed mandate would be considered by NEGC Ltd Board and the respective Councils, and subject to approval would lead to a submission to Government around mid-2020, and designation around the end of 2020.

Once the scheme is underway it is anticipated that it will be implemented through a phased ‘strategic master developer’ approach to provide strategic infrastructure in line with needs and to open up suitable subsequent phases of development, with ongoing land sales to house-builders/other developers to build up a strong delivery route. This will be undertaken across various entry points to the development to provide a range of distinctive character areas, typologies and housing products with multiple outlets at a small number of key parts of the site to maximise overall build out rates. The approach would step up in terms of resource and technical needs and be considered via the Business Planning process to ensure the delivery body was suitably geared up to deliver, as approved by the appropriate body, potentially the Board of the Development Corporation and with the approval of an appropriate

Oversight Authority/structure.

Should part of the land be brought forward via a public private partnership, it is anticipated that this may trade separately and directly deliver the scheme within its control, albeit carefully integrated into the wider delivery structure.

Please summarise your maintenance strategy for ongoing costs for the scheme

The proposed scheme would be working towards a D3AP standard for the A12 route between junction 19 and junction 25. The operational regime would include a number of elements designed to facilitate future maintenance. There would also be a five-year maintenance free period after completion.

The maintenance and repair strategy for civils infrastructure is outlined below:
• Maintenance access – safe access would be provided for civils infrastructure, including short paths from local roads, where feasible.
• Concrete barrier – this would virtually eliminate repair resulting from collisions, reducing exposure to risk for workers and road users, and increasing network availability.
• Geometric Standards – the use of high standard geometry would facilitate safer operation of routine maintenance and temporary traffic management.
• Structures – Each of the four alignment options would consist of new structures, minor structures for WCH crossing and various culverts as outlined in section 12.8. Safe access will be designed to facilitate maintenance of this infrastructure.
• Pavement – pavement would be maintained using standard methods, and would require lane closures.
• Drainage – Safe access would be provided to enable required maintenance of drainage facilities including channels, gulleys, attenuation and pollution control measures.
• Soft estate and fencing - Safe access would be provided to enable required maintenance of aspects these elements.

The maintenance and repair strategy for road side technology is outlined below:
• Maintenance Access – provision of emergency bays combined with maintenance access bays and technology cabinets, and variable message signs would facilitate safer maintenance of assets. Where feasible, access to technology assets will be provided by short walking routes form local roads.
• MIDAS Detectors – Above ground detection would reduce maintenance requirements on the carriageway, minimising loop detector repair, traffic management interventions and exposure to risk.
• Temporary Traffic Management – Rotating Temporary Traffic Management Signs (ROTTMS) would be provided based on designed fixed taper points to facilitate placing of TM signing without the need for road workers to work from or within the carriageway to place the signs. The signs could be turned on and would provide further protection to road workers engaged in placing cones and lamps from vehicles.
• Variable Message Signs – these can be used to further enhance advance warning of road works and implementation of temporary speed limits.

Project milestones

Please provide actual or estimated dates for the following infrastructure delivery milestones:

First infrastructure planning permission granted	01/04/2022
Last infrastructure planning permission granted	01/04/2023
All land assembly completed (if required)	01/04/2023
Project infrastructure works started	01/05/2023
Project infrastructure works completed	30/09/2028

Please provide actual or estimated dates for the following housing delivery milestones:

First residential units commenced	01/04/2024
Last residential units commenced	01/04/2070
First residential completion	31/03/2025

First residential completion 31/03/2071

Please attach an outline delivery programme for your proposal and the key milestones required to achieve it

Filename	Description
7.4.3b - CBBGC Delivery Programme.xlsx	7.4.3b Delivery Programme

Please list planning references for the infrastructure works

Once the wider project reaches PCF Stage 4 (Statutory Processes) the scheme will be subject to a Development Consent Order or DCO under the Planning Act 2008.

DCO's are a statutory instrument as part of the planning process for national infrastructure projects and take approximately 18months to be completed end-to-end, the steps involved in submitting and completing the DCO process are detailed below:

- Submission of DCO application to the Planning Inspectorate (PINS)
- Acceptance by PINS: 28 calendar days (1 month)
- Pre-examination: period: 3 months
- Examination: period: 6 months
- Planning Inspector's report and recommendation period: 3 months
- Secretary of State decision period: 3 months
- DCO coming into force period: 21 days
- Judicial review period: 6weeks

Once the DCO process has completed (anticipated to be April 2023) the project will move into a Stage Gate Review and will if successful move into the next stage (stage 5) or the Construction Preparation. During this stage the orders will be confirmed and responses to any high court challenges made. At this point advanced works can commence including utility diversions as well as the schemes details around land acquisition being placed on deposit. At the end of this stage approval will be sought on whether to proceed to the next stage (stage 6) Construction Period when commencement of construction for the scheme can begin in earnest.

Please list all statutory powers or consents required and already obtained to deliver the HIF works

In order to proceed with the wider scheme of which this HIF application forms a part a Development Consent Order or DCO will be required. The current programme places the approval of the DCO in April 2023 following a period of around 18 months to gain approval for the DCO. Further details can be found in Section 7.4.4 and 7.4.1 (questions above).

Stakeholder management

Please summarise how the key delivery partners will work together effectively

Key partners for the delivery of the schemes include:

- Essex County Council – the local transport authority responsible for the county's highways
- Essex Highways - a partnership between Essex County Council and Ringway Jacobs that maintain and improve the highways network in Essex. The partnership also has the ability to reach back into parent organisations for more specialised support such as business case preparation
- Braintree District Council – tier 2 local authority in the vicinity of the schemes
- Colchester Borough Council - tier 2 local authority in the vicinity of the schemes.
- North Essex Garden Communities (NEGC) – a company set up in 2017 comprised of a consortium of councils involved in bringing forward (subject to the outcomes of the examination of the Local Plans) proposals for garden communities across North Essex
- Highways England – government-owned company responsible for operating, maintaining and improving England's motorways and major A roads. It is also likely that any schemes required for implementation on or close to the Strategic Road Network would be via Highways England procurement routes
- Landowners & Developers – developer organisations chosen to implement the North Essex Garden Communities, particularly the Colchester Braintree Borders Garden Community

Key partners speaking with one voice

A communications plan will detail key messages throughout the lifecycle of the scheme. This will be a live document that will be updated as the scheme progresses. After each update, the communications plan will be circulated with all key delivery partners to ensure that they are all receiving and consequently transmitting messages which are consistent right across the board.

At project milestones, representatives from each of the key partner organisation will be briefed by the project team. This briefing can be in person or a briefing note can be circulated to the representatives. The representatives from each delivery partner organisation will then be responsible for sharing the information to the relevant teams.

Consistency across schemes

Regular meetings will be held between key delivery partners to share information about progress of projects (for example, housing developers sharing designs with the infrastructure developers) to ensure the compatibility of the housing with the infrastructure and continued consistency of objectives as the schemes develop.

More widely, with the potential for numerous infrastructure and housing projects being delivered concurrently during the delivery of the improvements to the Strategic Road Network, it will be important to maintain a dialogue between the organisations responsible for them. To that effect, a communications working group will be set up to give the provide a regular platform for representatives from the key delivery partner organisations and from other infrastructure or housing schemes in the area to discuss progress and any key information that needs to be shared to ensure the smooth and successful delivery of the schemes.

Scheme monitoring

Effectiveness of delivery, and as such the effectiveness of the key delivery partners working together, will be monitored by the Project Board.

The Project Board will be responsible for the direction and overall management of the scheme. It is chaired by the Senior Responsible Owner and made up of the Executive and Senior User for each of the partner statutory authorities, the Project Assurance Lead and the Business Change Lead. Project Board meetings are normally held every six weeks. The Project Manager reports regularly to the Project Board, keeping members informed of progress and highlighting any issues or concerns.

The responsibilities of the Project Board include:
• Setting the strategic direction of the project and monitoring of delivery against objectives;
• Defining the scope and setting the timescales for major project milestones;
• Approving the appointment of the Project Manager;
• Providing the Project Manager with the strategy and decisions required to enable the scheme to proceed to programme and resolve any challenges;
• Securing necessary approvals through the partner statutory authorities;
• Approving the project scope of work, programme and budgets, as well as any subsequent changes;
• Signing off completion of each stage of the project and authorising the start of the next stage; and
• Monitoring project risks and taking any appropriate action to mitigate risks.

Maximising the effectiveness of housing delivery

The Councils have recognised the need to play a key role in overseeing and leading the delivery process, with the establishment of NEGC Ltd which brings together Braintree District Council, Colchester Borough Council, Tendring District Council and Essex County Council into a formal and structured joint working framework. This has been commended via the Kerslake Review as providing an exemplar approach to effective joint working, and ensures that the Councils approach the wider programme in a collaborative manner.

The approach to the site's delivery is anticipated to take the form of a 'master-developer' type role, either via the currently established delivery structure, alternative suitable joint working arrangements with the private sector or a potential locally led

Development Corporation. This role will deliver serviced development plots to the market at a steady and constant pace over the lifetime of the project. Serviced land will be made available to a wide range of developers and housing providers who will undertake the final stage in terms of physical construction of the homes/buildings and sales to occupiers/consumers. This enables bodies such as housebuilders to focus on their areas of expertise (building and selling homes) without exposing them to the wider challenges of infrastructure funding and need for patient capital.

This level of involvement will help to ensure that a broad range of housing providers can come forward to accord with multiple Government programme objectives – such as by providing self-build opportunities, larger scale custom build, sites for PRS, opportunities for SME builders and direct contractor delivery. It will also help to accelerate and enhance build out rates by removing some of the blockages that can limit the pace of development from traditional schemes.

Please summarise how you will work with the other key stakeholders to ensure project success (i.e. local residents / businesses)

Key partners have been identified through a stakeholder mapping exercise. Partners broadly fit into one or more of the following groups:

- Delivery partners
- Business
- Disability groups
- Education including the University of Essex
- Environmental interest
- Walking, Cycling and Horseriding (WCH - formerly Non-Motorised Users)
- Political (MPs, County Council, and Local Councillors)
- Development
- Network users/traffic generators (includes Emergency Services and transport operators etc)
- Community (includes residents and residents' associations; landowners, parish councils etc)
- Statutory (i.e. utilities, Natural England, Environment Agency, Sport England and Historic England, etc.)

The method of working with partners will differ depending upon which group(s) they are associated with as different groups have differing levels of need, interest and influence.

Delivery partners
Close collaborative working will be undertaken with delivery partners

Businesses
Businesses will be likely to benefit from the schemes once they have been introduced but they may experience some disruption during construction so work undertaken with them will change throughout the process. It is proposed to mainly keep in contact with businesses via email to update on the scheme progress but will also set up a business forum to provide the opportunity for constructive dialogues to be held with business representatives throughout the project lifecycle.

For example, the business forum will be used to hold workshops early in the scheme development to share the initial plans and gather feedback on how the plans could affect their businesses. This will enable the project team to take into account the views of businesses to help shape the design development. There is also the opportunity to proactively engage business breakfasts or meetings arranged by the Federation of Small Businesses to update and gain feedback on any issues relating to the delivery of the scheme.

Disability groups
To enable the Project Team to consider the requirements of people with disabilities at a formative stage it is proposed to have early contact with disability groups, with the view to holding a meeting with disability representatives to discuss the plans and gather their feedback. This approach has been developed from previous Jacobs work proactively engaging residents with sensory impairments on the Chelmsford City Growth Package, which was recently nominated for the British Construction Industry's 'Community Engagement of the Year' award. It is proposed to ensure that all materials available online, on social media and distributed in relation to the scheme will be fully accessible.

Education
As with local businesses, educational establishments such as schools, colleges and in particular Essex University will benefit from the schemes once they have been implemented but there may be some disruption during construction so it will be important to meet with educational establishments to explain the long-term benefits of the schemes and get their feedback on how we could minimise disruption for them during construction.

Environmental interest
Environmental interest groups such as the Essex Wildlife Trust will have an interest in aspects of the scheme such as how to minimise the impact on the environment through the design and during construction. It is also often invaluable to be able to gather local knowledge from such groups. Therefore, an environment forum will be formed to engage on a regular basis with environmental interest groups. Some statutory stakeholders such as Natural England will be invited to the environment forums.

Walking, Cycling and Horse-riding
As with the environmental interest groups, WCH groups will be interested in certain aspects of the schemes such as how it is planned to manage severance of any public rights of way that may be cut off by the implementation the scheme(s). A workshop will be held early on in the process to share early designs and gather feedback as to how to best cater for WCH groups. Forums will also be held at some key milestones to provide WCH groups with updates on scheme process.

Political
Keeping local authority councillors and Members of Parliament informed of progress enables them to respond to constituents who contact them about the schemes and can also gather political support and backing for the scheme. Political figures will be briefed either in person or via a paper/email briefing in advance of any major public announcement or contact with their constituents which they could be contacted about.

Development
The Project Team will coordinate with house builders to ensure the scheme helps to deliver the predicted housing numbers with minimal disruption and at speed and to provide progress checks against the stated objectives as part of any monitoring and evaluation plan. This will involve face-to-face meetings with engineers to ensure scheme construction and the need for building materials to be moved onto development sites do not clash.

Network users/traffic generators
Key businesses, transport providers and emergency services will be invited to a workshop early in the development of the schemes to discuss how the design could be altered to better cater for their requirements. A separate workshop will be held for the same users to discuss how their operations may be affected during construction and how we plan to keep disruption to a minimum.
It is proposed to engage with members of the public that use the network by advertising information events in the local area and updating the scheme websites when new information becomes available. The Essex County Council customer contact centre will be briefed to deal with telephone enquiries about the schemes and an email address may be set up for people to contact if they have comments, queries or concerns. A website will host information on the scheme with social media from local councils and other accounts pushing people towards this information stream.

Community
There will be close working with communities and community representatives to ensure they are kept informed of the progress of the schemes and build positive relationships that foster a constructive dialogue.
Community representatives such as parish councils and residents' associations will be invited to join a community forum which will provide a platform for information sharing – the project team sharing information about the schemes and the community representatives imparting their local knowledge.
The project team will gather their views and incorporate them into the design where possible. Letter drops and mailing lists will be used initially to introduce the residents to the schemes that are relevant to them and we will provide the opportunity to be kept up-to-date with the development of the schemes.
Advertising for information events will also be displayed in hubs of residential areas (such as Post Offices, village halls and schools)

and the scheme website will be a central location for the latest information that residents will be able to access at any time.

Statutory
Close working with statutory bodies as set out in planning requirements for the schemes will be undertaken as a matter of course.

Public sources of information
A dedicated webpage will be created and updated with the latest information to keep people up-to-date with the progress of the schemes. Public information events will be held during any consultation or engagement periods that are held during the lifecycles of the schemes.

Project assurance

What are your project assurance processes, such as gateways reviews, to ensure project delivery against the business case?

Highways England and Department for Transport have well established processes to govern the development of nationally significant projects from very early stages of development right through to construction and close out. The use of the PCF as well as independent peer review process in giving direction and guidance to the level of assurance is critical and an important part of the process. There are distinct differences between the PCF assurance role of SGAR and the independent gateway peer review. At its simplest a SGAR review focusses on the quality assurance of the A12 project. This means the assessment of whether products have not only been completed but also signed off as being fit for purpose having followed the correct procedures in the producing of the various products. Detailed quality assurance is carried out as products are signed off but this review acts as the overarching quality assurance, assessing the completion of the produce set for the stage as a whole. Upon satisfactory assurance the assessment determines whether the project can move to the next stage.

A gateway review however provides a more strategic overview at key decision points in the project lifecycle tailored to the projects current situation and for the purposes of the wider A12 project it is likely that the majority of gateway reviews shown in the table below will be undertaken. It is undertaken independently to provide an impartial view and is aimed at providing assurance to the Senior Responsible Owner. The review itself will focus on the overall confidence that the wider A12 project will deliver its intended outcomes in line with the business case but will also place an emphasis on lessons learned from other similar projects. One of the biggest differences between SGAR and OGC reviews is that the review team can request to see any member of the integrated project team and specialists/stakeholders external to the team whereas the SGAR review process does not make such as an assessment. The following table provides a snapshot of the key differences:

	PCF SGAR	Gateway review
Timing	Two to three hour review	Three to four day review
Composition	Reviewers are member of project team/organisation. The review is chaired by the SRO	Reviewers are independent of the project team/ organisation and appointed on the basis of their skills and experience
Assessment criteria	For the stage being completed, the SGAR confirms that: The risk potential assessment has been reviewed and updated; the products are signed-off; any variance from the planned products are understood; cost and time performance are within acceptable tolerances; there is evidence that project board meetings have been held and plans, risks and issues have been regularly reviewed; lessons learned have been captured for the stage For the next stage the SGAR confirms that: The project manager has identified which products will be delivered; risks associated with any proposed stage derogations are identified and assessed; there is a plan and cost estimate for delivering those products; the resources needed to deliver the plan have been identified and a plan is in place for securing the resources	The review team's delivery confidence of the project is based on its ability to meet its objectives and is assessed by drawing on the evidence, interviews and experience of project delivery
Type of preparation material	Prior to the SGAR the project manager must compile a review submission pack comprising of a current monthly management report; end of stage report; completed project checklist for the current stage; product checklist for the next stage identifying the products to be produced with baseline dates for completion; project schedule; change control log; the risk register; funding for the next stage (via the scheme cost estimate)	The project team must make available all relevant key documentation to the review team plus any other documents that they request to enable them to make their delivery confidence assessment
Personnel	Varies depending on the RPA score but typically the senior responsible owner, the DfT project sponsor, the project manager, Major Projects portfolio office representative, NDD / TM senior user and any other interested parties. Contractors / consultants do not attend	The external review team, the integrated project team and other key stakeholders as requested by the review team to be interviewed
Outcomes	Green: Proceed to next stage Amber: Proceed to next stage, but complete certain products or actions Red/amber: Do not proceed to next stage until required products and actions have been completed – then repeat the stage gate assessment review Red: Do not proceed – stop	The report, giving findings and recommendations with categories of critical, essential or recommended as necessary and the delivery confidence assessment giving a colour status and a statement from the review team outlining what they believe to be the likelihood of success

PCF Assurance

Within the PCF project assurance processes provides the basic framework of controls that assure that:

- The project is being managed and controlled as directed by the Senior Responsible Owner
- Basic standards are being followed
- The project is being well managed with regular reporting – further information around the reporting regime can be found in section 7.3.1.

As part of the assurance role regular Stage Gate Assessment Reviews (SGAR) are undertaken at the end of each of the key stages within PCF. The SGAR review provides assurance that:

- The PCF stage is complete and is within tolerance
- The PCF process has been followed
- The project is ready to proceed to the next PCF stage subject to investment authorisation

The SGAR processes are an evidence based review which is intended to draw on documentation and activities that the project team have already produced. In terms of the timing of when SGAR's are carried out these are normally at the end of every project stage as part of managing stage boundaries, every 12 months if a project stage is planned to last more than 19 months or prior to seeking investment authorisation to move into the next stage.

In terms of attendees these will include the Senior Responsible Owner, Highways England Project Manager, Department for Transport Project Sponsor, Highways England major projects portfolio office, Senior Users, and the Highways England project team.

A number of elements to be reviewed are covered during the SGAR assessments and these are;

- The risk potential assessment has been reviewed and updated
- The products for each stage are approved and signed off
- Any variance from the planned products are understood and potentially approved
- Cost and time performance are within acceptable tolerances
- That project board meetings have been held and plans, risks and issues have been regularly reviewed
- Lessons learned have been captured for the stage
- Documents have been properly stored and administered according to document management procedures
- In addition to the above preparations and confirmations will be sought for the next stage including confirmation on which products will be delivered, the risks associated with the proposed stage, that there is a plan and cost estimate for delivering those products and finally the resources needed to deliver the plan have been identified along with a plan to secure the required resource

OGC Review Assurance

External to the PCF assurance processes aimed at providing further assurance is the role of the Office of Government Commerce (OGC). These reviews are peer reviews in which independent project managers from outside of the A12 project use their experience and expertise to examine the progress and likelihood of successful delivery of the project. A gateway review provides assurance and support to the Senior Responsible Owner that:

- Suitable skills and experience are deployed on the A12 scheme
- All stakeholders understand the project status and issues
- There is assurance that the project can progress to the next phase
- Time and cost targets have a realistic basis
- Appropriate lessons are learned and
- The A12 project team are gaining input from appropriate stakeholders

Given the size of the A12 project these reviews are a mandated assurance process. The SRO and project managers will engage early with the OGC Centre of Excellence to agree which gateways are required but in general large major projects such as the A12 will undertake the following reviews detailed below:

OGC Gateway Review Title	Major Project Phase/Stage
1 Business Justification	Entry to the options phase (undertake on behalf of DfT) (PCF option identification stage)
2 Delivery Strategy	Entry to the development phase (PCF preliminary design stage)
3a Investment Decision	Entry to the statutory procedures and powers stage (PCF Stage 4)
3b Investment Decision	End of construction preparation stage (PCF Stage 5)
4 Readiness for service	Prior to open for traffic or consent to operate
5a Operational review and benefits realisation	Following handover into operations and before the end of the defects period
5b Operational review and benefits realisation	A further operational benefits review may need to be undertaken. The timing is at the discretion of the SRO

Please provide details of your proposed internal monitoring approach for the scheme

Internal monitoring and assurance is undertaken through a variety of formal reviews points as part of the Project Control Framework (PCF) process during the project lifecycle these include the following:

- End of stage reviews and certifications to proceed to next stage (Stage Gateway Assessment Review (SGAR))
- Investment submissions to seek funding approval to move into next stage
- Health and Safety Audits for scheme health checks

In addition to the more formal reviews there are also independent reviews through Independent Project Authority and Office of Government Commerce the gateways of which have been highlighted in Section 7.6.1.

In terms of the physical reporting on a day to day basis this can take place at various levels and which act as points of escalation/intervention:

- Project Committee (Chaired by the Sponsor)
- Regional Programme Committee (Chaired by the Regional Delivery Director)
- Regional Investment Programme (RIP) Committee (Chaired by the RIP Director).

Given that the A12 realignment project is promoted by Essex County Council supported by North Essex Garden Communities and will be delivered by Highways England it is important that all three bodies have oversight of this HIF investment as part of the wider A12 widening project. It is also important to note that Essex County Council has promoted two other HIF investment projects as well as

supporting a third so internal County Council governance and resourcing is important. Essex County Council's Commissioning Managers will be responsible for monitoring and evaluating this scheme's desired outcomes through attendance at the Project Boards but also to provide oversight in design, construction and following its completion. In addition, the Commissioning Managers will provide oversight across all four HIF applications to ensure continuity, consistency and sharing of best practice.

ECC's Commissioning Managers has already set up a proportionate approach to monitoring the progress of the A12 re-alignment project via an already established project board, which includes monthly template reporting and escalation of issues if, and when required to the political leadership team and / or capital investment board. As the focus moves from business case development to further design and construction the nature of the metrics will change. While the infrastructure component of this HIF applications will be delivered by a different organisation, ECC will select a set of common reporting metrics (with the option for additional scheme specific metrics) for ease of dashboard reporting, with these evolving as the projects move from design and into delivery. The Project Board will manage issues and risks arising by exception, with escalation in line with ECC's corporate risk management strategy where required.

The organogram provided (above) details of the overall wider HIF Programme approach aimed at providing oversight of the various HIF applications Essex County Council has sponsored as well as supports.

Risk Management

Please outline key risks to delivery and mitigations including known delivery constraints and blockages

Number	1	**Likelihood**	High	**Impact**	High
Description	Environmental mitigation has not been identified at this stage				
Mitigation	Adequate programming of environmental surveys into schedule and allowance in budget for mitigation measures				

Number	2	**Likelihood**	High	**Impact**	High
Description	Additional consultation for re-aligned A12 could cause delay to the start of A12 phase 3				
Mitigation	Work collaboratively with Highways England to identify work streams that can be accelerated				

Number	3	**Likelihood**	High	**Impact**	Medium high
Description	Additional HIF infrastructure not fully detailed to level of other A12 infrastructure				
Mitigation	Identify team to undertake design. Design programme to incorporate necessary approvals and A12 overall scheme				

Number	4	**Likelihood**	Medium low	**Impact**	Medium low
Description	A120 Braintree to A12 might not be included in Highways England Road Investment Strategy (RIS 2) scheme.				
Mitigation	ECC to continue pursue central government to include A120 in RIS 2				

Number	5	**Likelihood**	Medium low	**Impact**	Medium high
Description	Colchester- Braintree Borders Garden Community fails to get support by the Local Plan Inspector and is removed from the local plans				
Mitigation	HIF bid tasks will contribute and compliment evidence gap identified Inspectors Letter				

Number	6	**Likelihood**	Medium high	**Impact**	High
Description	Ability of the construction sector to implement the housing scheme (skills & labour availability) resulting in programme delay and cost over-runs				
Mitigation	Government support to construction sector skills development. Local support for construction training activity via local higher/further education.				

Number	7	**Likelihood**	Medium high	**Impact**	High
Description	Unforeseen costs associated with implementation of the Garden Community bringing its viability into question				
Mitigation	Inclusion of risk/contingency allowance. Careful contract management to deliver value for money.				

Number	8	**Likelihood**	Medium low	**Impact**	High
Description	Local Plans and DPDs not agreed by Districts, fail at examination or there is significant slippage in the timescales that are beyond the tolerance of the programme.				
Mitigation	Regular engagement with Councils and review of Local Plan documents and evidence by programme team / consultants. North Essex Authorities with the production of the additional evidence required by the Planning Inspector and to ensure the programme remains on track. Scheme deisgn can occur outside of the plan making process to come forward in parallel.				

Number	9	**Likelihood**	Medium low	**Impact**	High
Description	Disruption to property market and values bringing its viability into question				
Mitigation	Ongoing review of market demand and property considerations. Scheme design to include multiple tenures and ability to flip between products to maintain delivery of homes under alternative tenures to meet market demand/capacity considerations.				

Number	10	**Likelihood**	Medium low	**Impact**	Medium high
Description	Finance cannot be secured to deliver the full (housing) scheme, resulting in housing components not coming forward to programme				
Mitigation	Approach designed so it is sufficiently attractive to the wide market (de-risking and clear Council backing). Ongoing lobbying of the Government for infrastructure funding / financial flexibility. Progress towards establishing a strong public sector delivery model to provide clarity, certainty and minimise risk. Land purchase will be asset backed and at market value. Clear priorities of work undertaken by the Commercial & Delivery Workstream.				

Please outline your approach to managing risk

Project Risk Management will be led by the Risk Manager. The Project Manager is responsible for Risk Management. The Risk Manager will prepare for and facilitate risk workshops with the Client and the project team to assess and review the operational risks, design risks, safety risks and cost risks. Project Risks are now managed in a live database (Xactium).

Infrastructure

Given that the project will be delivered by Highways England the Project Risk Management will be led by the Risk Manager within Highways England. The Highways England Project Manager is responsible for Risk Management. The Risk Manager will prepare for and facilitate risk workshops with the Client and the project team to assess and review the operational risks, design risks, safety risks and cost risks.

The project managers, project delivery teams and Project Board members are responsible for a proactive risk management culture and set of procedures, which ensures that risks are continuously identified, owners assigned, and mitigation measures put in place.

The project delivery team once appointed and stakeholders will be required to systematically review the risks identified during the co-development of the infrastructure scheme by identifying both specific risks and generic risks associated with the design, procurement and construction inherit in similar infrastructure schemes.

North Essex Garden Communities

To support the successful delivery of the wider North Essex Garden Communities (NEGC) Programme, the NEGC Programme Team maintains a high level Strategic Risk Register on behalf of and regularly reported to the NEGC Board.

The Strategic Risk Register focuses on the key risks the Board have identified as the most significant areas that need to be monitored and reported to them on a regular basis. These risks are set out in accordance with the Treasury Green Book approach to risk appraisal and are categorised as follows:

- Strategic;
- Economic;
- Commercial;
- Financial Case; and
- Management.

The Register uses a RAG (red, amber, green) rating system to highlight the total score of the recommended probability and impact of these strategic risks and also details the mitigation that has been put in place to manage these concerns. The programme's workstreams which include representatives from multiple key stakeholders and input form technical advisors also monitor and assess risk topics and ratings to ensure they reflect the current position.

These key risks are monitored and updated as the programme progresses and reflect the impact of the key workstreams and activities of NEGC. Any changes to the status of each of the risks are reported to the Board with appropriate responses and mitigation strategies.

Please attach a copy of your current risk register for the scheme

Filename	Description
7.7.3a_CBBGC_HIF Project Risk Register-Final.xlsx	7.7.3a: Project Risk Register
4.4.2a_A12 HIF Project Risk Register QCRA.pdf	4.4.2a: Project Risk Register QCRA

Additional information

If you have any further information to support the Management Case for your project, which has not already been captured in the above, please include this here

To add further support to our bid and the future management of the project we refer you to two documents contained within the Commercial Case: The Statement of Common Ground and associated Memorandum of Understanding.

No attachments

Project Sign Off

Please set out how you have considered your duties under the Equalities Act 2010 (Public Sector Equality Duty) and State Aid risks

Equalities Act 2010:

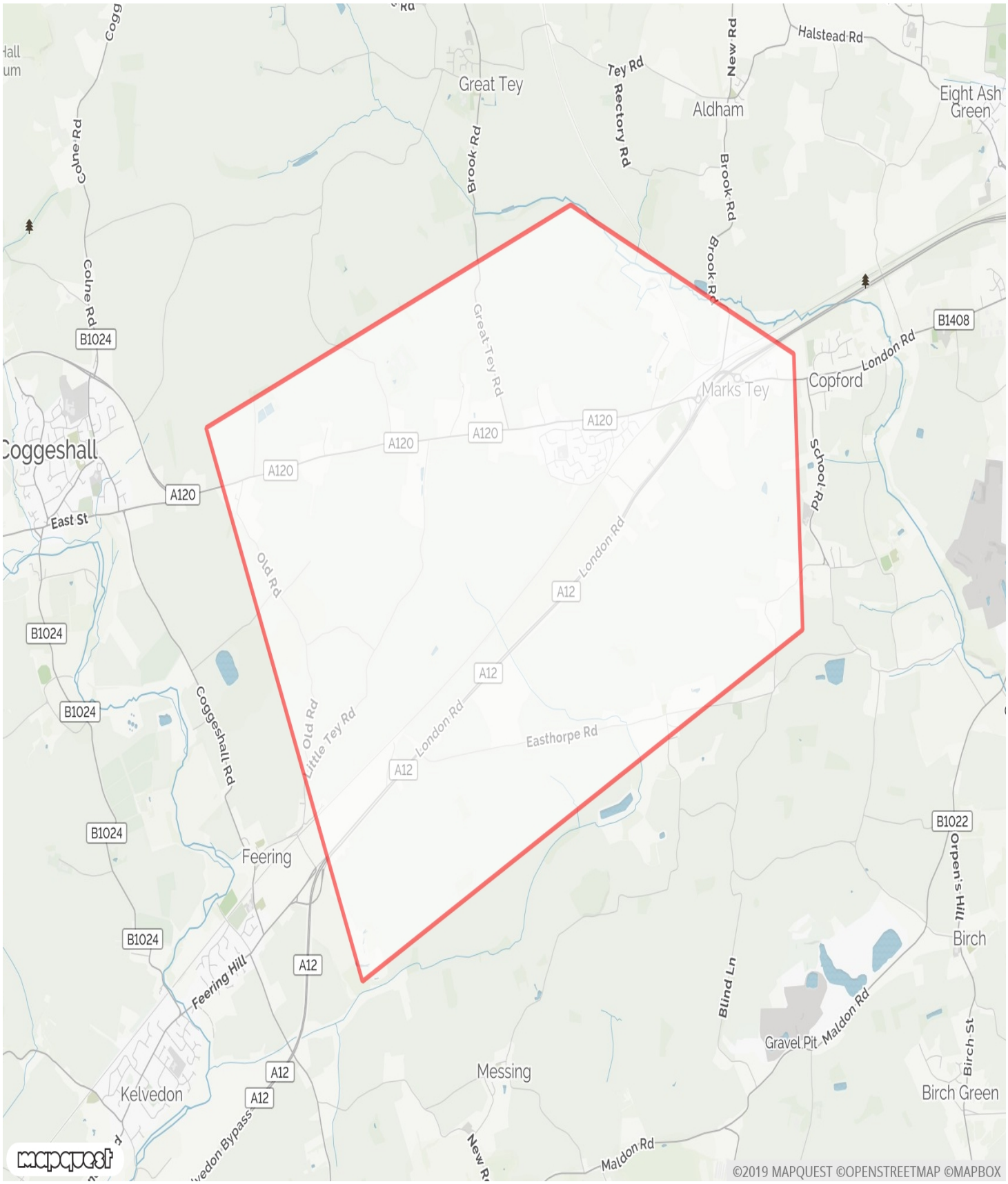
We have produced an Equalities Impact Assessment (EQiA) for this project and bid. We concluded that the changes would have a universal impact and would not disproportionately impact any equalities group.

State Aid:

The bid does not breech our State Aid regulations. ECC is in the process of obtaining external independent legal advice to confirm this position.

Please attach your Section 151 officer sign off for your proposal

No attachments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Colne Rd
B1024
B1408
London Rd
Copford
Marks Tey
Great Tey Rd
A120
Coggeshall
East St
School Rd
Old Rd
A12
Little Tey Rd
Easthorpe Rd
Coggeshall Rd
Feering
Feering Hill
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