

Viability toolkit for neighbourhood planning

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Introduction

Viability testing is an important part of the plan-making process. This toolkit will help neighbourhood groups preparing neighbourhood plans and Neighbourhood Development Orders (NDOs) who are engaging with viability issues. The toolkit uses non-technical language wherever possible and includes an extended glossary of definitions (see Appendix 1). Groups facing a range of complex viability issues may be eligible for further support from the Government funded technical support programme - visit mycommunity.org.uk.

Only a draft neighbourhood plan that meets each of the basic conditions¹ can progress to a referendum. Plans should have regard to national policies and advice; and be in general conformity with the strategic policies contained in the development plan of local planning authorities. The Government's National Planning Policy Framework (NPPF) and Planning Practice Guidance (PPG) require plan makers to consider viability and deliverability.

Neighbourhood plans also need to be in general conformity with the strategic policies in the corresponding Local Plan, such as affordable housing targets. Neighbourhood groups introducing new policy requirements (that carry costs to development) over and above Local Plan policy, allocating sites or bringing forward NDOs should ensure development remains deliverable during the plan period or the timeframe stipulated for the NDO.

The PPG is clear that viability must be considered when preparing neighbourhood plans:

If the policies and proposals are to be implemented as the community intended a neighbourhood plan needs to be deliverable. The National Planning Policy Framework requires that the sites and the scale of development identified in a plan should not be subject to such a scale of obligations and policy burdens that their ability to be developed viably is threatened.¹

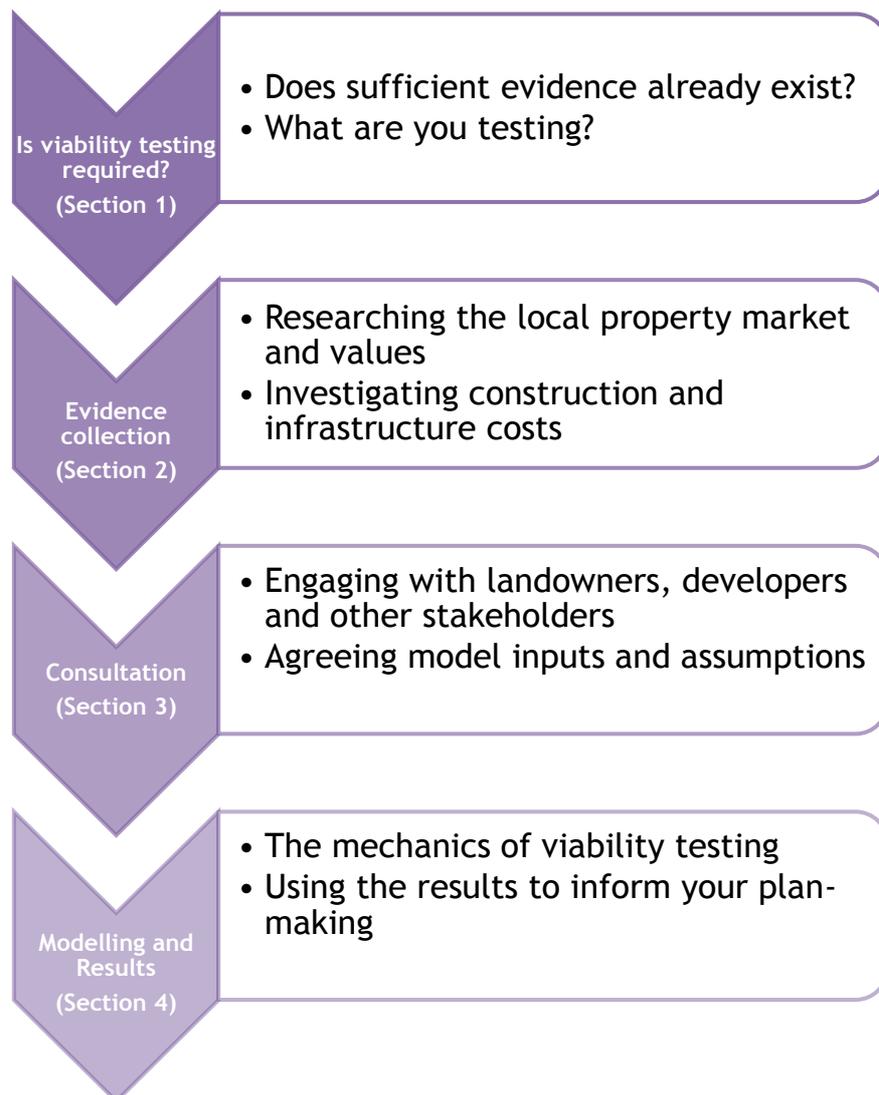
¹The basic conditions are set out in paragraph 8(2) of Schedule 4B to the Town and Country Planning Act 1990 as applied to neighbourhood plans by section 38A of the Planning and Compulsory Purchase Act 2004

How to use this document

Viability testing can be broken down into four key stages (see Figure 1). Section 1 of this report highlights instances when viability evidence may or may not be required and helps groups to establish if existing evidence is already sufficient to support their emerging proposals. Section 2 describes the data and sources used to test for viability. Section 3 outlines the importance of consulting with landowners, developers, the Local Authority and other key stakeholders. Section 4 sets out the mechanics of viability testing and how to use the results.

Figure 1

4 Key Stages in Viability Testing



1. Is viability testing required?

Does sufficient evidence already exist?

The NPPF (paragraph 158) emphasises that a proportionate evidence base should inform plans, based on *‘adequate, up-to-date and relevant evidence about the economic, social and environmental characteristics and prospects of the area’*, which takes account of *‘relevant market and economic signals’*. In addition, the PPG emphasises that viability evidence should be *‘proportionate to ensure plans are underpinned by a broad understanding of viability’*.

It is very likely that your Local Planning Authority will already hold some form of viability evidence. This is usually in the form of Local Plan viability assessment, Community Infrastructure Levy viability evidence, viability evidence attached to a strategic land availability assessment, affordable housing study, infrastructure delivery plan and/or planning obligations guidance. District-wide viability studies prepared by Local Planning Authorities often include; analysis of land values, alternative use values and what may constitute a competitive return locally. These reports will often provide an assessment of the viability of different ‘typologies’ of site within the Local Authority Area, e.g. brownfield town centre infill, or greenfield urban extension. The typology site results can be applied to similar sites in the neighbourhood area to give an indication of whether a site would be viable.

It is advisable to speak with your local planning authority before producing your own viability evidence to gauge what is already available and to understand how applicable the existing evidence is to your area/site(s). Equally, some local planning authorities may be willing to assist you on matters of viability under their advice and assist support role for neighbourhood planning. Your Local Authority planners will have a good working knowledge of what is generally deliverable in the area and the recurrent viability issues encountered locally. Tapping into this knowledge will be invaluable.

What are you testing?

It is a common to confuse site assessment with viability assessment. Site assessment is the process of using a wide range of evidence to identify potentially suitable sites for development. A separate toolkit covering site assessment is available [here](#).

Viability testing is different insofar as it is looking very specifically at the financial viability of development for a specific site or typologies of sites. The assessment is purely concerned with whether or not the proposals for a site or the policy requirements within an emerging neighbourhood plan would render development unviable. Viability assessment outputs can be used (if necessary) to amend proposals or policies to help facilitate development and to ensure the cumulative impact of proposals and policies does not threaten the delivery of the neighbourhood plan and Local Plan's vision, objectives and strategic policies.

The NPPF introduced the requirement to assess the viability and the impact on development of policies contained within them². The requirement to test in the NPPF is a 'broad brush' one saying 'plans should be deliverable'. It is not a requirement of the NPPF that every site should be able to bear all of the Local Plan and neighbourhood plan requirements. Some sites will simply not be viable even without any additional requirements imposed upon them due to the prevailing market conditions. The typical site should be able to bear whatever target or requirement is set and plan makers should be able to show, with a reasonable degree of confidence, that the plan is deliverable and facilitates development. Only sites with good prospects for development should be subject to viability testing (i.e. potentially deliverable or developable³ sites usually identified through an earlier site assessment process).

² NPPF paragraphs 47 and 173-177 include national policy direction on viability (Accessed at: <http://planningguidance.communities.gov.uk/blog/policy/achieving-sustainable-development/plan-making>)

³ The NPPF states that: To be considered deliverable, sites should be available now, offer a suitable location for development now, and be achievable with a realistic prospect that housing will be delivered on the site within five years and in particular, that development of the site is viable. Sites with planning permission should be considered deliverable until permission expires, unless there is clear evidence that schemes will not be implemented within five years, for example they will not be viable, there is no longer a demand for the type of units or sites have long term phasing plans (NPPF footnote 11). To be considered developable, sites should be in a suitable location for housing development and there should be a reasonable prospect that the site is available and could be viably developed at the point envisaged (NPPF footnote 12).

Limitations of viability testing in the context of the NPPF and PPG

For plan making, the assessment of viability is a largely high-level quantitative process based on financial appraisals at a snapshot in time. It is not the same level of detail used for viability appraisals accompanying a planning application. In addition, there are types of development where viability, measured at a snapshot in time, is not at the forefront of the developer's mind and they will proceed even if a 'loss' is shown in a conventional appraisal (i.e. development appears unviable). For example, an end user of an industrial or logistics building may build a new factory or depot that will improve its operational efficiency even if, as a property development, the resulting building may not be viable.

Whilst viability testing has limitations, it can help to de-risk development by providing an indication on whether a plan (its policies and/or site allocations) are deliverable. *Viability Testing in Local Plans - Advice for planning practitioners* prepared by the LHDG⁴ (sometimes referred to as the 'Harman Guidance') defines viability as follows:

An individual development can be said to be viable if, after taking account of all costs, including central and local government policy and regulatory costs and the cost and availability of development finance, the scheme provides a competitive return to the developer to ensure that development takes place and generates a land value sufficient to persuade the land owner to sell the land for the development proposed. If these conditions are not met, a scheme will not be delivered.

When preparing plans the Residual Valuation Method is the most commonly applied way to assess for viability - please see overleaf for an explanation of the methodology.

⁴ Viability Testing in Local Plans has been endorsed by the Local Government Association and forms the basis of advice given by the, CLG funded, Planning Advisory Service (PAS).

The Residual Valuation Method

Put simply viability testing is about adding up all the potential income from a scheme (total sales and/or capitalised rental income from housing and/or commercial developments) and then subtracting all the costs associated with the creation of the product. This calculation involves taking the Gross Development Value (GDV) and subtracting Gross Development Costs to arrive at a Residual Value. The residual valuation method is the typical valuation method widely used by developers and is the recommended for use when testing viability.

Residual Valuation Method

Gross Development Value

(The combined value of the complete development)

LESS

Cost of creating the asset, including a profit margin for the developer

(Construction + fees + finance charges etc.)

=

RESIDUAL VALUE

The Residual Value is compared to the Existing Use Value ('EUV') of the land to determine if the premium (uplift) above the EUV would induce the landowner to sell. This is known as the Threshold Land Value ('TLV') or Benchmark Land Value

The Residual Value is the top limit of what a developer could offer to pay a landowner for their site and still make a satisfactory profit margin. The availability and cost of land are matters at the core of viability for any property development. Section 4 addresses how to quantify what level of profit/competitive return is acceptable for landowners and developers.

2. Evidence Collection

To make the calculations as accurate as possible it is necessary to collect robust income and cost data. It is very much a case of ‘rubbish in, rubbish out’ if you get this stage wrong or your data is unreliable. This chapter introduces the key data and sources used for compiling your viability modelling. Many data sources are free but others you may have to pay for. The cost for acquiring some data may be prohibitive for the purposes of a neighbourhood plan assessment. It is good practice to speak with your local authority, local agents and developers to see if they can share any data with you. Developers and agents in particular may be forthcoming if they are promoting a site for inclusion in your plan or the Local Plan.

Although all development schemes have similarities, every scheme is unique, even schemes on neighbouring plots. For example, a three-storey town house is more costly to construct than a three-storey terrace house with a room in the loft (and their value would be different). Market conditions broadly reflect a combination of national economic circumstances and local supply and demand factors, however even within a town there will be particular localities, and ultimately site-specific factors, that generate different values and costs. Up to date evidence should be used to inform income and cost inputs and assumptions.

Viability models will require you to calculate income and costs on a pounds per square metre basis (£/m²). The property industry tends to use both imperial and metric data - often working out costings in metric (£/m²) and values/income in imperial (£/acre and £/sqft). This is confusing and so you should stick to metric measurements throughout your work.

Conversion rates		
1m	=	3.28ft (3' & 3.37")
1ft	=	0.30m
1m ²	=	10.76sqft
1sqft	=	0.093m ²

A broad rule of thumb to convert m² to sqft is to simply add a final zero.

Researching the local property market and values

Income data includes sales income or rental income for residential and commercial property. As local residents, neighbourhood groups will already have a good feel for residential values and rental levels in the neighbourhood. To test for viability effectively gathering recent values for new build property is necessary. Gathering information on asking prices for new build (usually found on estate agent websites or large house builder websites) and information for the second hand market (not new build) from sites like Rightmove and Zoopla helps to build up an accurate picture of values. Triangulating the data in this way is especially helpful if there have been few transactions recorded in your neighbourhood or local authority area in recent months/years.

It is advisable to search for transactions from the past 12 months, as viability assessments must be based on today's values and costs. However, where the sample size is small you may need to extend the timeframe to 18-24 months or widen the search area. Generally, the further you search back in time and the wider the geographic scope the less reliable your data will be. Price paid data for residential property is available for free on the Land Registry website. There is a video tutorial that takes you through how to use this resource: [here](#).

For Land Registry price paid data, you can search by street, Town or City, District, County or Postcode. In some neighbourhoods, there will have been few transactions and it will be necessary to expand your search area beyond your neighbourhood to get a good-sized sample. Depending on the size of the local authority and the neighbourhood area there may be large differences in values between high and low value areas. It is advisable to gather data from areas that share comparable characteristics to your neighbourhood and operate in the same housing market. In the first instance, you should refer to your Local Planning Authority's Strategic Housing Market Assessment and pre-existing viability evidence to gather information on the local housing market.

It is advisable to search by postcode area (e.g. "SE25") in the first instance. If a large number of records are found, it may only be necessary to widen the search area by a small margin to

get a sample in excess of 100 records. If the neighbourhood is in a rural location a larger area may be required and more detailed analysis carried out to verify that the properties sold are representative of the homes likely to come e.g. you would disregard high density flats in a nearby town centre if your area is a rural village that typically only builds houses.

Transactions are packaged into tables that can be downloaded in spreadsheet format. It is important to download the spreadsheet (CSV file) with headers so that you can sort the data. A typical data sheet with header will look like this:

Figure 2 Screenshot of raw data captured from Land Registry price paid data

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	unique_id	price_paid	deed_date	postcode	property_type	new_build	estate_type	saon	paon	street	locality	town	district	county
2	21E5FEB7-51	27720	15/04/2015	CR0 1EU	S	Y	F			38 HEATHFIELD ROAD		CROYDON	CROYDON	GREAT
3	288DCE29-A	288500	29/10/2015	CR0 1FJ	F	Y	L	FLAT 80		2 WANDLE ROAD		CROYDON	BROMLEY	GREAT

It is advisable to keep all of your data saved in one central spreadsheet database separating income and cost data on distinct worksheets. Summary tables can be used in final reports, below is an example taken from Stroud’s viability assessment⁵:

Table 1 Example summary table for Land Registry price paid data

Example of Land Registry Newbuild Sales 2013-15 £					
	Detached	Semi-detached	Terrace	Flat	All
Count	7	15	24	59	105
Max	365,000	249,950	275,000	148,000	365,000
Min	212,000	189,000	138,000	63,750	63,750
Mean	292,643	216,127	220,458	127,678	172,517
Median	312,500	219,950	220,000	135,000	143,995

Table 1 displays the count of all properties by type, the maximum and minimum prices achieved in the sample along with the median and mean values. To calculate the income/values on a pounds per square metre basis (£/m²) it will necessary to work out how

⁵Accessed at: <http://shapingtheheartstroud.org/evidence/>

large the units are. The [Government's Domestic Energy Performance Certificate Register](#) is a free resource that includes the unit size of new build properties. Dividing the price paid results by the actual total floor area provides the income/value on a £/m² basis for all properties, this will help to provide the mean values for all property types.

It is good practice to supplement price paid data with current for sale asking prices for new build property, marketed by the volume house builders or local developers. Often there may be no new build housing schemes for sale within an area and so it would be sensible to cast your research wider to comparable towns (as like with price paid data). Searching for schemes within a 5km radius is a good starting point and then incrementally widening this area (to say 15km) to get a good sample and variety of products. Asking prices for new build houses will vary very considerably across the wider housing market area and by property type but it is a useful exercise as researching for sale prices will give you an indication of today's values. However, this information is not as reliable as sold prices and developers will often include incentives and discounts at the point of enquiry. As such, it would be prudent to apply a 2-3% discount to all asking prices. This information is available on the volume house builder's websites and any specialist websites that deal in new build properties, such as:

- <http://www.smartnewhomes.com>
- <http://www.newhomesforsale.co.uk/>
- <http://www.barratthomes.co.uk>
- <http://www.bellway.co.uk>
- <http://www.berkeleygroup.co.uk/property-developers/berkeley>
- <http://www.bovishomes.co.uk>
- <https://www.cala.co.uk>
- <https://www.crestnicholson.com>
- <http://www.persimmonhomes.com>
- <https://www.redrow.co.uk>
- <https://www.taylorwimpey.co.uk>

As with the price paid database and EPC register method, you need to convert the asking prices to £/m². Many developers will include this information as total floor area or Gross Internal Area on advertised floorplans. However, others will not and you may need to use the

floorplan to gather approximations on size (this is a high-level exercise so you should not spend hours trying to calculate to the nearest centimetre). Below is an example of how asking price data can be presented:

Table 2 Example of how to present new build for sale price information

Firm	Scheme	Town / Post code	Distance from study area	Type of Unit	Beds	Flat m2	House m2	Price £/unit	Flat £/m2	House £/m2
Lovell Homes	The Paddocks and Old Common Mews	The Pickford Stroud GL6 9EQ	4.53km	Detached	4		93.91	439,995		4685.28
Lovell Homes	The Paddocks and Old Common Mews	The Garston Stroud GL6 9EQ	4.53km	Semi-Detached	2		46.93	237,995		5071.28
Taylor Wimpey	Kings Copse	Boulmer Avenue Kingsway - Quedgeley, Gloucester GL2 2FX	8.65km	End Terrace	3		82.78	210,000		2536.84
Taylor Wimpey	Kings Copse	Boulmer Avenue Kingsway - Quedgeley, Gloucester GL2 2FX	8.65km	Flat	2	51.46		115,000	2234.75	
Barratt	Whittington Park	Longford GL2 9EU	14.77km	End Terrace	3		75.47	210,500		2789.19
Barratt	Whittington Park	Longford GL2 9EU	14.77km	End Terrace	3		75.47	211,995		2809
Redrow	Sellars Bridge	Gloucester GL2 4QD	9.34km	Detached	4		167.88	460,995		2745.98
Persimmon	Kings Mead	Quedgeley GL2 2FJ	8.86km	Flat	1	39.74		91,995	2314.92	
Persimmon	Kings Mead	Quedgeley GL2 2FJ	8.86km	Flat	2	48.29		110,995	2298.51	
Crest Nicholson	Potters Pond	Wotton under Edge GL12 7HF	14.84km	Terraced	3		85.96	282,000		3280.6
Crest Nicholson	Potters Pond	Wotton under Edge GL12 7HF	14.84km	Terraced	3		97.24	280,000		2879.47
Bovis Homes	Quercus Grange	Tetbury GL8 8EZ	12.40km	Semi-Detached	4		90.12	299,995		3328.84
Bovis Homes	Quercus Grange	Tetbury GL8 8EZ	12.40km	Detached	5		138.94	469,995		3382.72
Bellway	Cotswold Chase	Gloucester, GL3 4LS	11.76km	Detached	3		92.2	229,995		2494.52
Bellway	Cotswold Chase	Gloucester, GL3 4LS	11.76km	Detached	4		108.57	269,995		2486.83
								MEAN	Flats 2,284	House 3,543

The second hand market (i.e. not new build) is the final source of information, especially useful where there is a paucity of price paid, and asking price data. Second hand market data

is available through a plethora of agency websites⁶ that offer their own individual analysis tools and some will include price paid analysis and property history information using the same Land Registry database. Below is an example of information extracted from Zoopla:

Table 3 Example of second hand market asking prices

Property type	1 bed	2 beds	3 beds	4 beds	5 beds
Houses	-	£198,663	£223,316	£326,210	£347,500
No.	-	3	15	9	4
Flats	£135,142	£146,100	-	-	-
No.	13	9	-	-	-
All	£130,123	£164,241	£220,296	£327,493	£383,333
No.	13	12	15	9	4

Source: Stroud data taken from Zoopla (August 2015)

It is necessary to form a view about the appropriate prices for the schemes or typologies to be appraised in your study. The additional analysis for marketed for sale prices and the second hand market will not reveal simple clear patterns. However, by triangulating price paid data, for sale marketing data and second hand market data you are applying a rigorous analysis of the local market at a snapshot in time in order to inform assumptions on income/values for use in viability testing in order to arrive at accurate Gross Development Values for specific schemes or typologies of sites.

Your judgements will by necessarily broad brush for the purposes of a high-level study to test the sites, as required by the NPPF, and to inform the emerging neighbourhood plan. The values between new developments and within new developments will vary considerably in reality based on location, situation, product type, design and finish, and the state of the market at the point of marketing the properties.

Income data for affordable housing

As well as values for market housing it is necessary to collect data (or make assumptions) about the value of affordable housing. Local Planning Authorities will normally have policies

⁶ Rightmove, Zoopla, On the Market, Prime Location etc.

for the provision of affordable housing. Viability assessments should first model for affordable housing provision on-site unless the Local Plan takes a different approach. Affordable housing is usually sold to a Registered Provider (RP). A common affordable housing policy will require a percentage of all units to be affordable e.g. 30%. This is a gross simplification of what may happen in reality as there are many ways in which affordable

Please note: the definition of affordable housing may change once the Housing and Planning Bill is enacted and this guidance shall be updated in due course but speak with your Local Planning Authority when undertaking viability work to keep up to date with the latest policy position and definitions.

housing is delivered, including the transfer of land to RPs, the retention of the units by the schemes overall developer or off-site payments. There are three main types of affordable housing: Social Rent, Affordable Rent and Intermediate Housing Products available for sale.

As well as an overall percentage of the units on site, Local Plan policy usually specifies a preferred tenure mix/type/size for affordable housing and this should be applied in viability testing at the neighbourhood level too. Unless your neighbourhood plan is suggesting an alternative approach, in which case you shall need robust evidence to justify deviation from the Local Plan. Some Local Plans do not specify a percentage target or tenures and may simply state that site-specific matters and case by case negotiation shall inform the final amount and tenure/type/size split of affordable housing based on an assessment of financial viability and local housing need at a point in time. In this situation, the latest Strategic Housing Market Assessment or Neighbourhood Housing Needs Assessment could be used to feed in realistic requirements for affordable housing (in consultation with Local Planning Authority).

In recent years, the Homes and Communities Agency and Local Planning Authorities have aspired to ensure that affordable housing is delivered via Section 106 planning obligations without grant and so an assumption that no grant is available should be your starting point. For simplicity you should assume a value (£/m²) for all affordable products as a broad

percentage reduction of the market values you have collected. The below assumptions should be discussed with your Local Authority to ascertain if these broad rules of thumb apply for your area.

Social Rent

The value of a social rented property is strongly influenced by the passing rent - although factors such as the condition and demand for the units also have a strong impact. Social Rents are set at a local level through a national formula that smooth the differences between individual properties and ensures properties of a similar type pay a similar rent. Social Rent could be assumed to have a value of 45% of Open Market Value (OMV) e.g. if a house is worth £100,000 on the open market, it would be valued at £45,000 if it was a Social Rented unit. This is a simplification of the reality but appropriate in the context of a high level testing.

Affordable Rent

Affordable Rent is assumed to be set at 80% of the full open market rent. It is assumed that, because a typical affordable rent unit will be new, it will command a premium rent that is a little higher than equivalent older private sector accommodation. On this basis it is assumed that affordable rented properties have a value equivalent to 50% to 55% of OMV housing.

Intermediate Products

Intermediate products for sale include shared ownership and shared equity products. It should be assumed that, to be affordable, a value of 65% of OMV should be used for these types of affordable units.

Please note: For mixed use schemes a blended 60% of OMV for all affordable elements could be assumed for simplicity. For wholly residential schemes it should be possible to assume more specific unit size assumptions and affordable rent / intermediate tenure splits.

In due course, the Government will clarify its policy on Starter Homes. These will have a value of up to 80% of OMV but capped at £450,000 in London and £250,000 outside London.

Residential unit size assumptions

Some of the models available for viability testing will allow you to input detailed sizes of units whereas as others will come pre-loaded. Overleaf are typical sizes based on house type and the number of bedrooms:

Table 4 Typical new build unit sizes

House Type	Bedrooms	GIA (m ²)
Flats	1	45.00
	2	62.00
Terraced houses	2	65.00
	3	75.00
Semi- detached	2	85.00
	3	95.00
Detached	3	110.00
	4	135.00
	5	150.00

An alternative source of information is the Government's nationally described space standard⁷ (see Table 6). This document provides sizes based upon the number of bedrooms, bed spaces and storey heights. If the Local Plan does not require these standards, the neighbourhood plan needs strong evidence to support their implementation - the PPG includes detailed guidance on this matter⁸.

⁷ Accessed at:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/421515/150324_-_Nationally_Described_Space_Standard_Final_Web_version.pdf

⁸ Accessed at: <http://planningguidance.communities.gov.uk/blog/guidance/housing-optional-technical-standards/internal-space-standards/>

Table 5 Minimum gross internal floor areas and storage (m²)

Number of bedrooms(b)	Number of bed spaces (persons)	1 storey dwellings	2 storey dwellings	3 storey dwellings	Built-in storage
1b	1p	39 (37) ²			1.0
	2p	50	58		1.5
2b	3p	61	70		2.0
	4p	70	79		
3b	4p	74	84	90	2.5
	5p	86	93	99	
	6p	95	102	108	
4b	5p	90	97	103	3.0
	6p	99	106	112	
	7p	108	115	121	
	8p	117	124	130	
5b	6p	103	110	116	3.5
	7p	112	119	125	
	8p	121	128	134	
6b	7p	116	123	129	4.0
	8p	125	132	138	

Income data for commercial property

For non-residential property, research will need to show what types of businesses are active in the local economy. Local Authorities commission specialist retail studies, employment land reviews and economic development research and strategies in support of their Local Plans. Local Enterprise Partnership publications are another good source for understanding the local and regional economy. Understanding what commercial property is likely to come forward in the neighbourhood over the plan period is possible by looking into the demand for commercial space locally. This will help to ensure the uses proposed in the plan, allocations and/or NDO are realistic and subject to viability testing and market evidence.

A market survey of commercial properties for sale and for rent should be undertaken. Local estate agents, surveyor's and large real estate firm's websites are a good place to start. Websites like Rightmove and Zoopla are increasing the amount of commercial property they market. The most popular subscription based tools are the Estates Gazette Interactive and CoStar⁹. However, if you do not have access to these tools the Estates Gazette have a free website called [Propertylink](https://www.propertylink.com). Another useful resource is [Allsop's](https://www.allsopt.co.uk) who are the largest UK auctioneers for commercial property. Allsop's provide guide prices, price paid and yield

⁹ <http://www.egi.co.uk/property/home.aspx>
<https://www.costar.co.uk/products/costar-suite/costar-property>

information for second hand commercial property. Whilst it is not always grade-A new build commercial space it serves as a good proxy for what is happening in particular areas.

It is quite likely that in rural areas there will be low numbers of new build commercial property on the market and so it will be necessary to widen the search area and include second hand commercial properties. However, as with residential properties the focus should be on areas with comparable characteristics to the neighbourhood. There is, in nearly all instances, commercial space that will be available at rents and values that are substantially lower than other property on the market. However, you are attempting to model for the high-level viability of new build commercial properties and so should disregard second hand space that is unlikely to be built in today's market or where there is no demand.

For most areas, it is likely that research will encompass office, industrial and retail property. In order to provide income on a pounds per square metre basis (£/m² basis) it will be necessary to conduct some calculations that will provide values/prices for properties that may only be advertised for rent. You can use rental information and known yields to capitalise rents and calculate a value.

The “yield” is the rent as a proportion of the purchase price. In determining development value, there is an inverse relationship i.e. as the yield goes up, the value goes down. The example below illustrates how a yield is used as the multiplier to calculate a value for a commercial property where the value/asking price is not known or advertised:

Yield Example

The formula for calculating value is: $(100 \div \% \text{ yield}) \times \text{rent} = \text{Value}$

In this example a commercial unit is let at £12,500 per annum and a property of this type in this location could expect to achieve a yield of 5%

The calculation is performed as follows:

$$(100 \div 5) \times \text{£}12,500 \text{ p.a.} = \text{£}250,000$$

If we assume the unit is 250m² its value on a pounds per square metre basis = £1000/m²

Source: Regenerate Ltd

A 'yield' is a way of classifying how risky a commercial property investment may be. It is a form of benchmark to help classify particular types of commercial property in particular locations e.g. the London office market information for yields is of great interest to commercial developers in London depending on the type of office and location (City vs. Canary Wharf etc.) The concept of the 'yield' is crucial to understanding the dynamics of investment in commercial property. For example, it may be reasonable to expect a supermarket occupied by a major chain to be relatively low risk, whereas a speculative office development occupied by a start-up in an undesirable area would not offer the same assurances that the tenant will remain solvent or that the owner will be able to re-let the property quickly.

These risks need to be considered alongside possible future rewards, which vary depending on the risks involved. A higher yield is normally offered to lure investors into what is perceived as a more risky investment (some investments may appear risky but changes in the economy could make them more secure over time). The market often regards government bonds (e.g. UK 'gilts') as a benchmark for risk. These are low risk investments so it may be reasonable to expect a relatively low return. If on the other hand there was a property that carried extreme risk an investor may seek a high 'yield' in the form of high returns to compensate for the probability of failure.

Where a commercial developer has pre-let their building and identified a potential buyer for the freehold e.g. a pension fund. The investor will have an idea what initial income return or 'yield' they want from particular property investments. This will be higher than they might get from a government bond because the risks are higher. The value of the building depends not just on the rent but on the yield that the investor requires, which provides information on an investor's view of the long term prospects of the rental income from the investment increasing.

A requirement for a high initial rental return on the capital invested is the result of a gloomy view of future prospects. Conversely an investor will accept a lower initial rental yield from his investment if he expects the rent or capital value of the property to grow in the future, perhaps because the building is located in an improving area or because there is only a minimal chance of problems such as the tenant failing to pay the rent or leaving. In some appraisals, there might be a reference to the 'Years Purchase' or Y.P. This is quite simply the inverse of the yield and therefore part of the calculation of value; and so multiplying the rent by the Y.P gives the value of the building. For viability testing, yields are used to work out how valuable new build commercial property may be once it is complete in order to feed in realistic assumptions about the Gross Development Value for a scheme and to ensure your assumptions reflect the commercial property market at the time of the modelling.

To perform the calculation you need to know the rent per annum, the size of the unit being let and what the yield is for a property of this type in the area in question. Large real estate firms and the RICS provide research on commercial lettings, commercial capital values and prime yields (normally quarterly or monthly). A good starting point is the research and publication sections of websites of the established real estate firms¹⁰. The publications will normally break down information on yields by the regions and sectors of the commercial property market. The NPPF only requires proportionate available evidence; therefore, for

¹⁰ BGVA, BNP Paribas, CBRE, Cluttons, Colliers, Cushman & Wakefield, DTZ, JLL, Knight Frank, Lambert Smith Hampton, Savills etc.

yields you should be able to demonstrate that your assumptions are broadly correct at the time of the assessment. Table 7 provides an example of this data:

Table 6 Savills (UK Commercial Market in minutes - Prime Yields, August 2015)

Savills (UK Commercial Market in minutes - Prime Yields, August 2015)			
Class	June '15	July '15	August '15
Provincial Offices	5.25%	5.00%	5.00%
High Street Retail	4.50%	4.25%	4.25%
Shopping Centres	4.50%	4.25%	4.25%
Retail Warehouse (open A1)	4.25%	4.50%	4.50%
Retail Warehouse (Restricted)	5.25%	5.50%	5.50%
Foodstores	4.50%	5.25%	5.15%
Industrial Distribution	5.00%	4.75%	4.75%
Industrial Multi-Lets	5.00%	5.00%	5.00%
Leisure Parks	5.75%	5.25%	5.25%
Regional Hotels	6.50%	5.50%	5.50%

The yield information, shown above, can be used in combination with advertised rental prices (or target rents identified by the developer) and the size of the commercial units to calculate values on a £/m² basis. The yield assumptions, and evidence used to arrive at the inputs, must be robust as the yield is the ‘multiplier’ in the calculation to estimate the value of commercial properties. Small changes in assumptions can result in big changes so it is imperative to gather good quality data and keep a track of your sources.

As with residential products, it is beneficial to research the second hand market for commercial space. However, a degree of caution is required owing to the fact that not all second hand commercial property is of the configuration, type and condition of new space that may come forward in the future. To reality check your assumptions you should speak with your Local Planning Authority officers who will hold lots of knowledge from active planning applications/appeals that may be subject to viability assessment. Similarly, the Council itself may be renting and selling commercial property in the local market. Speaking with local estate agents and developers will help to build up a picture of the market.

Once you have completed your market survey the results can be displayed as follows:

Table 7 Example summary table for Market Survey Analysis

Use	Average Rent £/m ²	Avg' Capitalised Rent £/m ² (using the Net Internal Area to calculate this figure)	Council's district- wide study Values (where available used as a reality check)
Industrial	£63	£890	£800
Office	£115	£1,607	£1,700
Small Retail	£126	£1,141	£2,000

Table 9 utilises pre-existing research as a benchmark. A judgement is required to arrive at a set of assumptions for each type of commercial property. The assumptions should correlate with the research findings and consultation undertaken (see Section 3). Below is an example:

Table 8 Non-Residential Assumptions

Capitalised typical rents £/m ²			
	Rent £/m ²	Yield	Worth £/m ²
Industrial	180	7.00%	2571
Office	130	7.00%	1857
Small Retail	200	11.00%	1818
Large Retail - Food	180	6.00%	3000
Large Retail - Non-Food	130	5.5%	2363

Inevitably, the data collected will be imperfect. Yields will vary from property to property and will be affected by site-specific factors such as location; terms of the lease; and strength of covenant with the tenant (e.g. do they pay their rent on time or are they likely to go out of business resulting in a letting void). However, for the purposes of neighbourhood plan viability testing only high-level assurance that development is viable is required. Recreating a developers approach or business model should be avoided. Instead, the requirements of the

NPPF/PPG are paramount. Figure 3 provides an example of how non-residential values can be presented including yields and calculations for capitalised rent i.e. values (£/m²):

Figure 3 Non-residential market research summary examples

Property Address	Use class(es)	Sale or Let	Size	Rent	Rent m2	Sale Price / Value	Capitalised Rent £/m2	Assumed Yield
Stroud - Unit 1 Brunel Mall, London Road	Retail-Non Food	L	73.21	8000	109	£72,727	993	11.00%
Unit 12. Salmon Springs, Painswick Road, Stroud GL6 6NU	Office	L	42.92	3000	70	£42,857	999	7.00%
St Lukes Medical Centre, 53 Cainscross Road, Stroud GL5 4EX	Office	L	343.83	30000	87	£428,571	1246	7.00%
Unit 21 Daniels Industrial Estate, Stroud GL5 3TJ	Office	L	186.55	15900	85	£227,143	1218	7.00%
New Mills Libbys Drive, Stroud GL5	Office	L	136.85	15000	110	£214,286	1566	7.00%
Slad Road, Stroud GL5	Office	L	135	16750	124	£239,286	1772	7.00%
Stroud Valleys GL5	Office	L	25	4755	190	£67,929	2717	7.00%
10 John Street, STROUD, GL5 2HA	Small Retail	S	287	38500	134	£350,000	1220	11.00%
4 George Street, STROUD GL5 3DX	Small Retail	L	238	25500	107	£231,818	974	11.00%
Rowcroft, Stroud	Office	S	277	33600	121	£350,000	1264	9.60%
Merrywalks, Stroud, Gloucestershire	Restaurant	L	240	45000	188	£409,091	1705	11.00%
Middle Spillmans, Rodborough, Stroud, GL5	Office	L	42	4800	114	£68,571	1633	7.00%
Gloucester Street, Stroud, GL5	Restaurant	S	195	17000	87	£154,545	793	11.00%
Unit C Brunel Court, Stroudwater Business Park, Stonehouse	Industrial/Office	S and L	635.21	40000	63	£475,000	748	7.00%
Stonehouse - Units A to C Stonedale Road	Industrial/Office	L	1666.6	90000	54	£1,285,714	771	7.00%
Unit 14 Springfield Business Centre, Stonehouse	Office	L	89.52	10000	112	£142,857	1596	7.00%
Unit 19 Oldends Lane Industrial Estate, Stonehouse	Industrial/Office	L	222.56	13750	62	£196,429	883	7.00%
Unit 37 Nailsworth Mills Estate, Avening Road, Stroud GL6 0BS	Industrial	L	1237.75	51500	42	£735,714	594	7.00%
The Chapel, Brimscombe Port Business Park, Stroud GL5 2QQ	Office	L	223.8	20000	89	£285,714	1277	7.00%
38 Elmgrove Road East, Hardwicke	Office/Retail-Non Food	L	171.77	22000	128	£200,000	1164	11.00%
Unit 7 The Glenmore Centre. Waterwells Business Park, Gloucester	Office/Industrial	L	166.64	10000	60	£142,857	857	7.00%
6 Carter Court, Waterwells Business Park, Gloucester,	Office	L	312.34	50235	161	£717,643	2298	7.00%

Investigating construction and infrastructure costs

Recent local development patterns can be analysed to arrive at and test a realistic appropriate built form e.g. current planning permissions or newly completed developments. These in turn can inform assumptions about the appropriate build cost figures and infrastructure cost assumptions. For construction costs (not including landscaping and infrastructure i.e. just the foundations up to the roof) the best source of information is the [Building Cost Information Service](#) (BCIS). Quantity Surveyors submit this data from tender document submissions for completed developments. It is a subscription based service that provides £/m² for different types of property (flats, houses, offices, supermarkets, hotels etc.) using data weighted by locality. Many Local Planning Authorities may already subscribe to the BCIS therefore it is worth checking with your officers to see if they can provide information for the property types you require data for. Many applications will have up to date viability appraisals with cost data and district-wide studies will include cost data too. If this is up to date this can be a useful starting point if you do not have a subscription. Developers may be willing to share construction cost information but this will need to be verified. Median BCIS figures provide a useful starting point and will generally prevent too much skewing of the data, this approach should be agreed via consultation with stakeholders (see Section 3).

Figure 4 BCIS extract

TypeOfWork	BuildingFunction	PrimarySubClass	MEDIAN
New build	Housing, mixed developments		1,036
New build	Estate housing	Generally	1,009
New build	Estate housing	Single storey	1,100
New build	Estate housing	2-storey	992
New build	Estate housing	3-storey	973
New build	Estate housing	4-storey or above	1,330
New build	Estate housing detached		1,146
New build	Estate housing semi detached	Generally	1,009
New build	Estate housing semi detached	Single storey	1,169
New build	Estate housing semi detached	2-storey	993
New build	Estate housing semi detached	3-storey	947
New build	Estate housing terraced	Generally	1,014
New build	Estate housing terraced	Single storey	1,034
New build	Estate housing terraced	2-storey	1,014
New build	Estate housing terraced	3-storey	970
New build	Flats (apartments)	Generally	1,190
New build	Flats (apartments)	1-2 storey	1,133
New build	Flats (apartments)	3-5 storey	1,186
New build	Flats (apartments)	6+ storey	1,512

Another key cost on development is strategic infrastructure costs associated with a site. Normally brownfield sites will have services that can be tapped into at their boundary, whereas greenfield sites will need lots of upfront infrastructure costs. Publications such as [SPON](#)'s provide estimates for different types of strategic infrastructure . These publications are quite expensive and so another good source of costs will be the Local Planning Authority, they will have undertaken research for their Infrastructure Delivery Plan or for the purposes of testing the viability of sites in their Local Plan. As Local Planning Authority officers will have a good feeling for the level on infrastructure costs that may be required for a typical site. [Building magazine](#) provides alternative information in the form of cost models for construction and infrastructure projects. This is also subscription based data source but less costly than BCIS and SPON's.

The appraisals should additionally consider the policy costs of extant Local Plan policies as well as new emerging neighbourhood plan or NDO policies/proposals.

Appendix 2 provides a run through of the other detailed costs that factor into viability appraisals.

3. Consultation

Engaging with landowners, developers and other stakeholders

The PPG stresses the importance of working from evidence and in collaboration with the development industry. The process of viability testing will require early conversations with your Local Planning Authority, landowners, developers and other relevant stakeholders:

...assessing viability requires judgements which are informed by the relevant available facts...direct engagement with the development sector may be helpful in accessing evidence...a collaborative approach involving the local planning authority, business community, developers, landowners and other interested parties will improve understanding of deliverability and viability. Transparency of evidence is encouraged wherever possible. Where communities are preparing a neighbourhood plan (or Neighbourhood Development Order), local planning authorities are encouraged to share evidence to ensure that local viability assumptions are clearly understood¹

Landowners and site promoters should be prepared to provide sufficient and good quality information at an early stage, rather than waiting until the development management stage. This will allow an informed judgement by the planning authority regarding the inclusion or otherwise of sites based on their potential viability.

Agreeing model inputs and assumptions

The Harman guidance¹¹ advocates consultation events to attempt to gain some consensus and to audit that discussions and requests for evidence that have taken place. It is good practice to convene an event and to hold bilateral meetings with the key landowners and developers to ensure their views and knowledge feed into matters such as: data and information; testing

¹¹ Accessed at: <http://www.nhbc.co.uk/NewsandComment/Documents/filedownload,47339,en.pdf> (see pages 19 to 21)

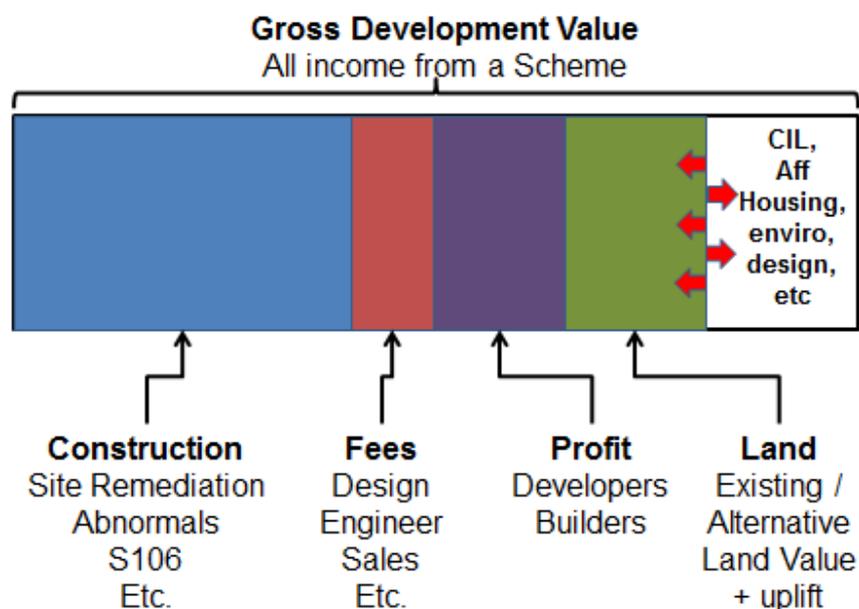
assumptions; technical modelling; providing site information for sites/typologies; or simply offering a critical friend role during the process.

4. Modelling and Results

The mechanics of viability testing

In Figure 5, the bar illustrates all the income from a scheme (the GDV). This is set by the market (rather than by the developer or local authority) so is, largely, fixed. The developer has relatively little control over the costs of development (construction, fees etc.) and whilst there is scope to build to different standards and with different levels of efficiency, the costs are largely out of the developer’s direct control - they are what they are depending on the development proposed (costs of labour and materials). The developers profit is included as a cost as developers need to be rewarded for taking on the risk of development.

Figure 5 The residual valuation method



Source: HDH Planning and Development

The essential balance in viability testing is whether the land value is sufficient to induce a landowner to release their land for development. Therefore the more policy requirements

and planning obligations the plan asks for the less the developer can afford to pay for the land. The landowner will only agree to sell their land to the developer if they receive a competitive return.

The meaning of ‘competitive return’

Viability Thresholds, the competitive return for the landowner and developers, are controversial matters and it is clear that different landowners and developers will have different views depending on their personal and corporate priorities.

As discussed previously (page 10), the Residual Valuation Method is the recommended approach for testing viability in plan making. This approach compares the Residual Value generated by the viability appraisals, with the Existing Use Value (EUV) or an Alternative Use Value (AUV) plus an appropriate uplift/premium to incentivise a landowner to sell. The amount of the uplift over and above the EUV/AUV is central to the assessment of viability. It must be set at a level to provide ‘competitive returns’¹² to the landowner. To inform the judgement as to whether the uplift is set at the appropriate level, reference should be made to the market value of the land both with and without the benefit of planning. The Residual Valuation Method (and the concept of Threshold Land Value) are accepted by the Planning Inspectorate¹³.

The Threshold Land Value is the point at which a ‘reasonable’ landowner will be induced to sell their land. This concept is difficult since a landowner is unlikely to be entirely frank about the price that would be acceptable to them. This is one of the areas where an informed assumption has to be made. If a landowner owns a field in agricultural use they will expect a large premium above the EUV/AUV to release it for residential development as agricultural land is typically worth tens of thousands of pounds per hectare whereas as residential land is worth hundreds of thousands of pounds per hectare. For brownfield land, the uplift or

¹² As required by 173 of the NPPF

¹³ Paragraphs 7 to 9 of REPORT ON THE EXAMINATION OF THE DRAFT MAYORAL COMMUNITY INFRASTRUCTURE LEVY CHARGING SCHEDULE by Keith Holland BA (Hons) DipTP MRTPI ARICS an Examiner appointed by the Mayor Date: 27th January 2012

premium (between EUV/AUV and TLV) is less pronounced. In simple terms landowners (or freeholders) will normally release brownfield sites for 20% above their EUV or AUV e.g. if an office building is currently valued at £1m and a developer offers the owner £1.2m a reasonable owner will normally be sufficiently incentivised to sell the property.

The PPG makes it clear that when considering land value it should be in the context of current and emerging policies and based on today's costs and values disregarding any hope value¹⁴. In other words, land value should be reduced to reflect extant and emerging policy costs. Historical transactions that took place under a different policy framework or less favourable market conditions (such as a recessionary period) will be less useful as comparable market data for informing your assumptions for the TLV.

The value of land relates closely to the use to which it can be put and will range considerably from site to site; however, high level studies will typically look at three main uses, being: agricultural, residential and industrial/commercial. The [Department for Communities and Local Government](#) (DCLG) publish useful land value benchmarks for every Local Authority for the purposes of policy appraisal and this is a good starting place in advance of consultation. A key assumption in the DCLG land values is that affordable housing is not factored in (see pages 14-15 of the DCLG report). The TLV (premium and uplift above the EUV/AUV) should also be informed by looking at pre-existing Local Authority research, live application viability appraisals or data for land prices within the area.

For developers it is what level of profit would be acceptable, typically expressed as a percentage of the GDV (e.g. 20% of GDV), but reflecting the risks involved. Therefore, some developers will require more or less than 20% of GDV, which is only a very broad rule of thumb, though it is rare to see a return of less than 15% of GDV. Property development is an

¹⁴ Any element of open market value of a property in excess of the current use value, reflecting the prospect of some more valuable future use or development e.g. a Green Belt site adjoining a settlement in an area that requires high housing growth could be said to carry more hope value than a site in open countryside within a District with strong historic housing delivery. It takes account of the uncertain nature or extent of such prospects, including the time which would elapse before one could expect planning permission to be obtained or any relevant constraints overcome, so as to enable the more valuable use to be implemented.

inherently risky business and the development industry is cyclical in nature with peaks and troughs. Profit is the developers reward for taking on financial risk (see Appendix 2 for more information on this matter).

Land values

To assess viability, the value of the land for the particular scheme needs to be compared with the EUV/AUV. If the Residual Value does not exceed the EUV/AUV, then the development is not viable. If it exceeds the EUV/AUV but does not exceed the TLV (EUV/AUV plus a set premium/uplift) then it is still not viable. Only a Residual Value in excess of the TLV would represent a viable scheme.

In practice, a wide range of considerations could influence the precise EUV/AUV that should apply in each case, and at the end of extensive analysis the outcome might still be contentious. One type of approach is outlined below:

- *For sites previously in agricultural use, then agricultural land represents the existing use value*
- *For paddock and garden land on the edge of or in a smaller settlement you should adopt a 'paddock' value*
- *Where the development is on brownfield land you assume an industrial value*
- *Where the site is currently in residential use you assume a residential value.*

The Valuation Office Agency (VOA) up until 2011 produced an annual report on land values for different land uses broken down by region. It noted that land values vary dramatically depending upon the development characteristics (size and nature of the site, density permitted etc.) and any affordable or other development contribution. The DCLG land values report, albeit historical snapshot in time, can help to act as a baseline for particular areas where little data exists and consultation will be necessary to determine the appropriate premium or uplift required by landowners.

Things to consider when attempting determining land values:

- **Residential land** - be aware that some land values are based on a gross basis (value of whole site) and net basis (value of the net developable area i.e. revenue generating land). The value on a net basis will exclude areas of open space and the like required in a Local Plan. It therefore represents the value of the net area. However, landowners must be paid for the whole site
- **Industrial Land** - Industrial land values will vary considerably based on location and the strength of the economy in a particular locality. It is advised that you speak with local agents and the Local Planning Authority to understand typical industrial land values and what premium will be required by owners. Normally a 20% increase over the EUV is assumed to induce owners to sell
- **Agricultural values** - fields can be valued at anything between £15,000-£25,000/ha depending upon the specific use. A benchmark of £25,000/ha can be assumed. However, sites on the edge of a towns or villages may be used for an agricultural or grazing use but have a value over and above that of agricultural land due to their amenity use. They are attractive to neighbouring households for pony paddocks or simply to own to provide some protection and privacy. You could assume a higher value of £50,000/ha for village and town edge paddocks.

It can be challenging collating land value information. Most recent land sales are recorded on the Land Registry where a site plan and the price paid is often available at a modest costs (less than £10 a site). This can be useful information but must only be used in the context of the site, its characteristics and the amount of CIL, developer contributions and affordable housing provided (the policy and planning obligations framework in place at the time).

For greenfield sites it is incredibly difficult to get agreement from the development industry on what the premium (EUV plus an uplift) should be. Table 12 shows just how variable practice is across the country. It is typical for the premium to be in the hundreds of thousands for greenfield sites (i.e. agricultural land/paddocks). Whatever you agree on it will be a simplification of the market; however, in a high-level study of this type general

assumptions need to be made. Landowners selling a greenfield site, in the event of the grant of planning consent, usually receive over ten times the value compared with before consent was granted.

Table 9 TLVs from around the UK

Local Authority	Threshold Land Value for Greenfield Sites
Babergh	£370,000/ha
Cannock Chase	£100,000-£400,000/ha
Christchurch & East Dorset	£308,000/ha (un-serviced)
	£1,235,000/ha (serviced)
East Hampshire	£450,000/ha
Erewash	£300,000/ha
Fenland	£1-2m/ha (serviced)
GNDP	£370,000-£430,000/ha
Reigate & Banstead	£500,000/ha
Stafford	£250,000/ha
Staffordshire Moorlands	£1.26-£1.41m/ha (serviced)
Warrington	£100,000-£300,000/ha

Source: AECOM research (July 2014)

Care has to be taken when trying to establish what the premium should be and the advice of agents, developers and the Council should be sought. Once you settle upon what the Viability Thresholds/Threshold Land Values should be, you can present this in report as follows:

Table 10 Example of Threshold Land Value summary box

Existing Use Value Land Prices £/ha August 2015	
Residential	£800,000
Industrial	£400,000
Agricultural/Paddock*	£15,000-£25,000
	<i>*Plus premium of £350,000 for Greenfield</i>

Using the results to inform your plan-making

Once all income and cost data is compiled and key assumptions, such as the developers profit and Threshold Land Value are broadly agreed, viability modelling can then take place. The models available for running the testing can vary (see Appendix 3 for details of two models including instructions) and are set up to provide a Residual Land Value. The sites or typology of sites you test will be based on actual sites coming forward or on a typology of site likely to come forward.

Typology of sites

The PPG confirms that not all sites need to be tested:

Assessing the viability of plans does not require individual testing of every site or assurance that individual sites are viable; site typologies may be used to determine viability at policy level. Assessment of samples of sites may be helpful to support evidence and more detailed assessment may be necessary for particular areas or key sites on which the delivery of the plan relies.

The sites modelled should be based on discussions with the steering group, local stakeholders (including landowners and developers) and the Local Planning Authority. Where a group is seeking to test the viability of a whole plan (i.e. the cumulative cost of neighbourhood planning policies) a selection of notional site typologies can be selected for large areas or for plans that do not include allocations. This process ensures that the appraisals are representative of the development that may come forward in the neighbourhood during the plan period. For allocations and NDOs the actual scheme/proposed policy and/or permitted development set out in the NDO should be tested, but using a broad high-level approach as endorsed by the PPG for the purposes of plan making evidence. In some instances it will be necessary to assess different development scenarios on the same site.

The Harman guidance¹⁵ provides good additional advice on how to select your typology of sites; this content is not repeated here but can be found in Appendix A of the Harman Guidance (*Characteristics of different types of residential sites*).

Presenting the appraisal results

Detailed appraisal results for all the sites tested should be provided in an appendix (see Figure 8 on page 39 for an example model sheet). The results can then be summarised in the main body using a simple table that sets out the using a red amber green system:

- **Green = Viable** - where the Residual Value per hectare exceeds the indicative Viability Threshold Value per hectare (being the Existing Use Value plus the appropriate uplift to provide a competitive return for the landowner).
- **Amber = Marginal** - where the Residual Value per hectare exceeds the Existing Use Value or Alternative Use Value, but not Viability Threshold Value per hectare. These sites should not be considered as viable when measured against the test set out - however depending on the nature of the site and the owner may come forward with tweaks to the development scheme, less policy requirements or with the help of subsidy and grant.
- **Red = Non-viable** - where the Residual Value does not exceed the EUV or AUV.

The results should be set out and presented for each site, displayed on pounds per hectare basis (£/ha) to allow comparison between sites. The report should briefly summarise the key assumptions that have fed into the testing. For example:

- Affordable Housing assumptions based on Local Plan
- Any design¹⁶ or environmental standards above Building Regulations¹⁷
- CIL and s106 £2,500 per unit (Market and Affordable) and £40/m²
- Developers' Return e.g. 20% on GDV

¹⁵ Accessed at: <http://www.nhbc.co.uk/NewsandComment/Documents/filedownload,47339,en.pdf>

¹⁶ For example: <http://www.lifetimehomes.org.uk/pages/costs.html> and http://www.lifetimehomes.org.uk/data/files/Reports/dclg_sustainablehomes07.pdf

¹⁷ Some evidence is available for well-known policy requirements. Some requirements will necessitate speaking to developers and building contractors (where costs are not currently considered in the BCIS)

- Net developable area vs. gross site area

Overleaf is an extract from a viability assessment conducted by AECOM. The results table should ideally display the site name/reference, site area, the EUV/AUV, the Threshold Land Value/Viability Threshold on a per hectare and actual (site) basis.

Figure 6 Results table example

Site Name	Area (ha)	Per Hectare			Actual		
		AUV/ha	TLV/ha	RLV/ gross ha	AUV	TLV	RLV
Cheapside Waterfront	0.32	400,000	480,000	92,450	128,000	153,600	29,584
Market Tavern - option 1	0.2	400,000	480,000	-3,350,090	80,000	96,000	-670,018
Market Tavern - option 2	0.2	400,000	480,000	848,455	80,000	96,000	169,691
Merrywalks Arches - option 1	0.23	400,000	480,000	-2,575,117	92,000	110,400	-592,277
Merrywalks Arches - option 2	0.23	400,000	480,000	-4,621,678	92,000	110,400	-1,062,986
Merrywalks Arches - option 3	0.23	400,000	480,000	-774,539	92,000	110,400	-178,144
Merrywalks surgery, MacDonalds and surface car parks	0.48	400,000	480,000	-2,371,852	192,000	230,400	-1,138,489
Locking Hill surgery	0.1	400,000	480,000	1,395,870	40,000	48,000	139,587
Police station and court - option 1	0.44	400,000	480,000	390,670	176,000	211,200	171,895
Police station and court - option 2	0.44	400,000	480,000	-4,129,293	176,000	211,200	-1,816,889
Brick Row /Church St.	0.07	800,000	960,000	0	56,000	67,200	
Cheapside car park and landscape yard - option 1	0.75	400,000	480,000	-229,764	300,000	360,000	-172,323
Cheapside car park and landscape yard - option 2	0.75	400,000	480,000	-1,415,732	300,000	360,000	-1,061,799
Upper Wallbridge	0.12	400,000	480,000	-1,248,225	48,000	57,600	-149,787
Lower Wallbridge	0.15	400,000	480,000	-706,960	60,000	72,000	-106,044
Travis Perkins	0.99	400,000	480,000	1,547,941	396,000	475,200	1,532,462
Health Centre Car Park	0.35	400,000	480,000	-7,202,997	140,000	168,000	-2,521,049
St. Roses School	2.26	400,000	480,000	1,363,342	904,000	1,084,800	3,081,154
Catholic Primary School	1.24	400,000	480,000	1,110,318	496,000	595,200	1,376,794

From the above example, you can see that for 13 of the modelled sites the Residual Value does not exceed the Threshold Land Value. This indicates that the sites are likely to be unviable set against the proposals and policies in the plan.

The unviable sites in this case were mainly mixed-use schemes that in a number of cases included large areas of car parking which is costly to construct and reduces the net developable area for commercial and residential uses. Most employment development in this area was marginal in viability terms at the time of the assessment, but whilst the mixed-use schemes were showing as unviable, most commercial development in UK towns would be shown as unviable using a high-level residual valuation method such as the one deployed for this study. Most commercial development requires an element of subsidy or pre-lets before it can get off the ground and as discussed, some commercial development is developed for purely operational and/or business requirements.

All results in the example factored in 30% affordable housing whereas the Local Plan policy was actually more flexible and would allow for slightly lower levels where sustainable development could be brought forward to help regenerate the town. These factors (affordable housing, commercial space and car parks) could all be amended in the final plan to help improve viability for this neighbourhood.

Based on the example it is likely that some level of intervention would be required to ensure that sites would come forward over the plan period. Site allocations are a very effective way of helping to de-risk sites for the development industry and act as a prospectus to investors (as are Neighbourhood Development Orders). As such whilst some sites may be showing as unviable at a snapshot in time, but small amendments to the proposals could help to improve viability in the medium to long-term e.g. more flexible policy requirements/scheme.

Viability assessments should be capable of showing whether or not development in an area would be subject to such a scale of obligations and/or policy burdens that their ability to be developed is threatened. Furthermore, the study should show that the cumulative impact of the policies will not put implementation of the Local Plan at serious risk, and will in fact help to facilitate development. Plan-wide viability testing is not an exact science. The process is based on high level modelling and assumptions for income and development costs. In order for the proposed development to be described as viable, it is necessary for this Residual Value

to exceed the Existing Use Value by a sufficient level to induce the landowner to sell. Therefore your conclusions should focus on those key tests in the NPPF:

- Would a willing developer and landowner receive a competitive return?
- Is delivery of the Local Plan threatened due to the cumulative impact of neighbourhood plan policies/proposals?
- Will the neighbourhood plan, policies and/or NDO help to facilitate development throughout the economic cycle?

Figure 7 Extract of appraisal results taken from HDH model (this example shows an unviable scheme as the Residual Land Value is less than the Viability Threshold)

SITE NAME CHEAPSIDE WATERFRONT						
INCOME	Av Size m2	%	Number	Price £/m2	GDV £	GIA m2
Market Housing	62.0	70%	26	2,669	4,287,889	1,607
Shared Ownership	67.0	10%	4	1,735	430,014	248
Affordable Rent	67.0	20%	7	1,468	727,716	496
Social Rent	67.0	0%	0	1,201	0	0
Grant and Subsidy	Shared Ownership			0	0	
	Affordable Rent			0	0	
	Social Rent			0	0	
SITE AREA - Net	0.28 ha		132	/ha	5,445,619	2,350
SITE AREA - Gross	0.32 ha		116	/ha		

DEVELOPMENT COSTS			
LAND	/unit or m2	Total	
Land	800	29,584	
Stamp Duty		0	
Easements etc.		0	
Legals Acquisition	1.50%	444	444

PLANNING			
Planning Fee		14,245	
Architects	6.00%	211,997	
QS / PM	0.50%	17,666	
Planning Consultants	1.00%	35,333	
Other Professional	2.50%	88,332	367,573

CONSTRUCTION			
Build Cost - BCIS Based	1,428	3,356,862	
s106 / CIL		92,500	
Contingency	2.50%	83,922	
Abnormals		0	3,533,283

FINANCE			
Fees		10,000	
Interest	7.00%		
Legal and Valuation		7,500	17,500

SALES			
Agents	3.0%	163,369	
Legals	0.5%	27,228	
Misc.		5,000	195,597
Developers Profit			
% of costs (before interest)	0.00%		0
% of GDV	20.00%		1,089,124

Planning fee calc		Build Cost /m2	
Planning app fee	dwgs rate	BCIS	
No dwgs	37	1,271	
No dwgs under 50	37	19	
No dwgs over 50	0	11	
Total		127	10%
Total		1,428	

Stamp duty calc - Residual		
Land payment		
125,000	0%	0%
250,000	1%	0%
500,000	3%	0%
1,000,000	4%	0%
above	5%	0%
Total		0

Post CIL s106		£/ Unit (all)	
CIL		£/m2	
	2,500		
	0		
Total			92,500

RESIDUAL CASH FLOW FOR INTEREST																								
	Year 1				Year 2				Year 3				Year 4				Year 5				Year 6			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
INCOME																								
UNITS Started			4	8	8	8	8	1																37
Market Housing					0	0	463,556	927,111	927,111	927,111	927,111	115,889	0	0	0	0	0	0	0	0	0	0	0	0
Shared Ownership					0	0	46,488	92,976	92,976	92,976	92,976	11,622	0	0	0	0	0	0	0	0	0	0	0	0
Affordable Rent					0	0	78,672	157,344	157,344	157,344	157,344	19,668	0	0	0	0	0	0	0	0	0	0	0	0
Social Rent					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grant and Subsidy					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
INCOME	0	0	0	0	0	0	588,716	1,177,431	1,177,431	1,177,431	1,177,431	147,179	0	0	0	0	0	0	0	0	0	0	0	5,445,619
EXPENDITURE																								
Stamp Duty	0																							0
Easements etc.	0																							0
Legals Acquisition	444																							444
Planning Fee	14,245																							14,245
Architects	105,998			105,998																				211,997
QS	8,833			8,833																				17,666
Planning Consultants	17,666			17,666																				35,333
Other Professional	44,166			44,166																				88,332
Build Cost - BCIS Base		0	120,968	362,904	604,840	725,808	725,808	514,114	272,178	30,242	0	0	0	0	0	0	0	0	0	0	0	0	0	3,356,862
s106/CIL		0	3,333	10,000	16,667	20,000	20,000	14,167	7,500	833	0	0	0	0	0	0	0	0	0	0	0	0	0	92,500
Contingency		0	3,024	9,073	15,121	18,145	18,145	12,853	6,804	756	0	0	0	0	0	0	0	0	0	0	0	0	0	83,922
Abnormals		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Finance Fees	10,000																							10,000
Legal and Valuation	7,500																							7,500
Agents	0	0	0	0	0	0	17,661	35,323	35,323	35,323	35,323	4,415	0	0	0	0	0	0	0	0	0	0	0	163,369
Legals	0	0	0	0	0	0	2,944	5,887	5,887	5,887	5,887	736	0	0	0	0	0	0	0	0	0	0	0	27,228
Misc.																								5,000
COSTS BEFORE LAND INT AND PROFIT	208,853	0	308,990	381,977	636,628	763,953	784,558	582,344	327,692	73,041	41,210	5,151	0	0	0	0	0	0	0	0	0	0	0	5,000
For Residual Valuation																								
Land			29,584																					
Interest				4,173	4,246	9,727	16,582	28,013	41,873	46,033	36,424	22,191	3,253	0	0	0	0	0	0	0	0	0	0	212,515
Profit on Costs																								0
Profit on GDV																								1,089,124
Cash Flow	-238,437	-4,173	-313,235	-391,704	-653,210	-791,966	-237,715	549,055	813,314	1,082,198	1,132,968	142,028	0	0	0	0	0	0	0	0	0	0	0	-1,089,124
Opening Balance	0																							0
Closing Balance	-238,437	-242,609	-555,845	-947,548	-1,600,758	-2,392,725	-2,630,440	-2,081,385	-1,268,071	-185,872	947,096	1,089,124	1,089,124	1,089,124	1,089,124	1,089,124	1,089,124	1,089,124	1,089,124	1,089,124	1,089,124	1,089,124	1,089,124	0

Appendix 1: Glossary

Acquisition/Disposal Costs Cost associated with the acquisition or disposal of property usually including legal, agent and stamp duty land tax (SDLT) costs.

Alternative use value (AUV) Where an alternative use can be readily identified as generating a higher value for a site, the value for that alternative use would take the existing use value (determined by the market) and apply an assumption that has regard to current development plan policies and all other material planning considerations and disregards that which is contrary to the development plan.

Benchmark A comparator for the outputs or inputs into the appraisal, i.e. site value or developer's return, etc.

Building Cost Information Service (BCIS) A subscriber service set up in 1962 under the aegis of RICS to facilitate the exchange of detailed building construction costs. The service is available from an independent body to those of any discipline who are willing and able to contribute and receive data on a reciprocal basis.

Building costs indices A series of indices published by BCIS relating to the cost of building work. They are based on cost models of 'average building', which measure the changes in costs of labour, materials and plant which collectively cover the basic cost to a contractor.

Capital value The value of a building or land as distinct from its rental value.

Cash flow The movement of money by way of income, expenditure and capital receipts and payments during the course of the development. The impact of cash flow assumptions on viability assessments is an important consideration. While most viability appraisals include an interest rate on capital employed, such costs are frequently applied solely to building costs pending sale. Cash flow considerations should also take into account the costs of capital employed in relation to infrastructure costs, Section 106 and CIL requirements and land purchase costs, and should incorporate realistic assumptions on build and sales rates based upon local market conditions.

Clawback See overage.

Comparable evidence A property used in the valuation process as evidence to support the valuation of another property. It may be necessary to analyse and adjust in order to put it in a suitable form to be used as evidence for comparison purposes.

Competitive returns A term used in paragraph 173 of the NPPF and applied to 'a willing land owner and willing developer to enable development to be deliverable' to ensure that development takes place and generates a land value sufficient to persuade the land owner to sell the land for the development proposed. If these conditions are not met, a scheme will not be delivered. One that would lead to a market transaction, discounting abnormal purchases or cases where landowners are selling under distressed circumstances. Consideration should be made of costs that a relocating landowner may often incur (such as capital gains tax, stamp duty, relocation costs and professional fees), since there will be no incentive to sell unless those costs are met.

Covenant strength How strong the company renting a property (such as an office) is, or its guarantor for the rent where appropriate. This will affect how secure the income stream for the property is; a weak covenant strength might be reflected in a higher yield to account for the risk of the tenant ceasing to pay rent (e.g. where it has gone bankrupt).

Current use value Market value for the continuing existing use of the site or property assuming all hope value is excluded, including value arising from any planning permission or alternative use. This also differs from the existing use value. It is hypothetical in a market context as property generally does not transact on a CUV basis.

Current use value (plus a premium) Used by some practitioners for establishing site value. The basis is as with CUV but then adds a premium (usually 10% to 40%) as an incentive for the landowner to sell.

Deferred payments See overage.

Depreciation The rate of decline in rental/capital value of an asset over time relative to the asset valued as new with a contemporary specification. See also obsolescence.

Discounted cash flow (DCF) A development appraisal method where the costs and values are discounted. The output from the appraisal is often the internal rate of return (IRR) which can be the annual rate of return where the IRR is calculated on an annual basis, or converted to an annual basis. The IRR is then compared to a developer's required rate of return to assess whether the development is viable. Alternatively, the net present value (NPV) for the land can be calculated, which is effectively the residual land worth.

Development appraisal A financial appraisal of a development to calculate either:

- the residual site value (deducting all development costs, including an allowance for the developer's profit/return from the scheme's total capital value); or
- the residual development profit/return (deducting all development costs, including the site value/cost from the scheme's total capital value).

Developer's profit The amount by which, on completion or partial completion of a development, the estimated value or the price realised on sale of a developer's interest exceeds (or is less than) the total outlay, including such figure for the land as is considered appropriate in the circumstances (including accrued interest).

Developer's return for risk and profit This return is commonly expressed as profit on cost; profit on value; development yield; and internal rate of return (see individual definitions). There are other, less used, proxies which may be referred to in certain circumstances. Each is appropriate as a method of interpreting viability.

Development risk The risk associated with the implementation and completion of a development including post-construction letting and sales.

Development yield Rental income divided by actual cost incurred in realising the development.

Discount rate The rate, or rates, of interest selected when calculating the present value of some future cost or benefit.

Estimated rental value (ERV) An estimate of the likely rental income to be generated from the scheme when fully let.

Existing use value The estimated amount for which an asset or liability should exchange on the valuation date between a willing buyer and a willing seller in an arm's-length transaction after properly marketing and where the parties had each acted knowledgeably, prudently and without compulsion, assuming that the buyer is granted vacant possession of all parts of the property

required by the business and disregarding potential alternative uses and any other characteristics of the property that would cause market value to differ from that needed to replace the remaining service potential at least cost. It is an accounting definition of value for business use and as such, hypothetical in a market context, as property generally does not transact on an EUV basis.

Existing use value (plus a premium) See Threshold Land Value.

Gearing Total borrowings (including bank overdrafts, less short-term deposits, corporate bonds and cash), as a percentage of equity shareholders' funds.

Gross development value (GDV) The aggregate market value of the proposed development, assessed on the special assumption that the development is complete as at the date of valuation in the market conditions prevailing at that date.

Gross development cost (GDC) The cost of undertaking a development, which normally includes the following:

- land acquisition costs
- site-specific related costs
- build costs
- fees and expenses
- interest or financing costs; and
- holding costs during the development period.

Gross external area (GEA) The aggregate superficial area of a building, taking each floor into account. As per the RICS Code of Measuring Practice this includes: external walls and projections, columns, piers, chimney breasts, stairwells and lift wells, tank and plant rooms, fuel stores whether or not above main roof level (except for Scotland, where for rating purposes these are excluded), and open-side covered areas and enclosed car parking areas, but excludes: open balconies; open fire escapes, open covered ways or minor canopies; open vehicle parking areas, terraces, etc.; domestic outside WCs and coalhouses. In calculating GEA, party walls are measured to their centre line, while areas with a headroom of less than 1.5m are excluded and quoted separately.

Gross internal area (GIA) Measurement of a building on the same basis as gross external area, but excluding external wall thicknesses.

Hardening / softening of yields Rising yields (e.g. in a bad market) and falling yields (e.g. in a good market)

Holding cost The cost involved in owning a site or property, which may include such items as interest on finance used to acquire the asset, maintenance costs, empty rates, etc.

Hope value Any element of open market value of a property in excess of the current use value, reflecting the prospect of some more valuable future use or development e.g. a Green Belt site adjoining a settlement in an area that requires high housing growth could be said to carry more hope value than a site in open countryside within a District with strong historic housing delivery. It takes account of the uncertain nature or extent of such prospects, including the time which would elapse before one could expect planning permission to be obtained or any relevant constraints overcome, so as to enable the more valuable use to be implemented.

Inflation As measured by the consumer or retail prices index or property related index, including the BCIS index.

Interest rate The rate of finance applied in a development appraisal. As most appraisals assume 100 per cent financing, it is usual for the interest rate to reflect the total cost of finance and funding of a project, i.e. the combination of both equity and debt in applying a single rate.

Internal rate of return (IRR) The rate of interest (expressed as a percentage) at which all future cash flows (positive and negative) must be discounted in order that the net present value of those cash flows, including the initial investment, should be equal to zero. It is found by trial and error by applying present values at different rates of interest in turn to the net cash flow. It is sometimes called the discounted cash flow rate of return. In development financial viability appraisals the IRR is commonly, although not always, calculated on a without-finance basis as a total project IRR.

Letting void The time taken to let a property to a new tenant. In the case of development, the void reflects the time taken to let the property following the completion of the development.

Market risk The uncertainty resulting from the movement of the property market, irrespective of the property being developed.

Market risk adjusted return The discount rate as varied so as to reflect the perceived risk of the development in the market.

Market value (MV) The estimated amount for which an asset should exchange on the date of valuation between a willing buyer and a willing seller in an arm's length transaction after proper marketing wherein the parties had each acted knowledgeably, prudently and without compulsion.

Market value growth The forecast growth of the capital value of the scheme.

Margin on cost See Profit on cost.

Net developable area versus gross site area

Many viability studies that model housing schemes assume a housing and plotting density per unit area. Such an analysis is a legitimate starting point and, provided the assumptions in relation to sales revenue and build cost are correct, produces a fully serviced land value per net developable area. However, the assumption is then made that the net developable area (i.e. income generating land) equates to the area of land that is to be acquired following the grant of planning permission. In all but the smallest redevelopment schemes, the net developable area is significantly smaller than the gross area that is required to support the development, given the need to provide open space, play areas, community facility sites, public realm, land for sustainable urban drainage schemes etc. The net area can account for less than 50%, and sometimes as little as 30% on larger sites, of the site to be acquired (i.e. the size of the site with planning permission). Failure to take account of this difference can result in flawed assumptions and inaccurate viability studies.

Net/gross ratio Refers to the percentage of usable space or land. A typical net/gross ratio on an office is 85%, whereas on a large greenfield site it is around 60% as not all land can be developed (i.e. some is used as open space, for distributor roads, community uses, infrastructure etc.)

Net internal area (NIA) The usable space within a building measured to the internal finish of structural, external or party walls, but excluding toilets, lift and plant rooms, stairs and lift wells, common entrance halls, lobbies and corridors, internal structural walls and columns and car parking areas.

Net present value (NPV) The sum of the discounted values of a prospective cash flow, where each receipt/ payment is discounted to its present value at a discount rate equal to a target rate of return or cost of capital. In the case of an investment, the formal definition of NPV is net of the initial investment, but the term is more commonly used colloquially to describe the NPV of the future cash flows (net income) and terminal value, which figure is compared with the purchase price in order to reach an invest-or-not decision. In the case of a development the term is more commonly used colloquially to describe the NPV of the future cash flows (costs less income, i.e. net income) and terminal (i.e. sale) value, which figure is compared with the purchase price of the site in order to reach an invest-or-not decision.

Net present value method A method used in discounted cash flow analysis to find the sum of money representing the difference between the present value of all inflows and all outflows of cash associated with the project by discounting each at the criterion rate, e.g. the cost of capital.

Net receipts The value that is estimated that will be realised from the development are the gross receipts, with the net receipts deducting appropriate purchasers costs from this.

Opportunity cost The return or benefit of the next best choice foregone by pursuing an alternative action.

Overage (clawback) A practice referred to as overage, clawback or deferred payments, and employed as a post development appraisal of the scheme in question. The practice is not considered appropriate as it cannot take account of risk, uncertainty and funding at the point of implementation. If re-appraisals are to take place, the guidance recommends this is undertaken prior to implementation (see Reappraisal).

Planning obligation Provided for under section 106 of the Town and Country Planning Act 1990, usually in connection with the grant of planning permission for a private development project. A benefit to the community, either generally or in a particular locality, to offset the impact of development, e.g. the provision of open space, a transport improvement or affordable housing. The term is usually applied when a developer agrees to incur some expenditure, surrender some right or grant some concession which could not be embodied in a valid planning condition.

Pre-lets and pre-sales Where a developer of a scheme, usually prior to implementation, has agreed lettings with occupiers or sales of part of the whole of the development.

Profit on cost The profit of the scheme expressed as a percentage of cost. This has a direct relationship to profit on value.

Profit on value The profit of the scheme expressed as a percentage of the scheme's value. This has a direct relationship to profit on cost.

Property specific risk The uncertainty attached to the intrinsic development of a site or property in addition to the general market risk.

Rateable value The figure upon which the uniform business rate is charged.

Rental value The income that can be derived under a lease or tenancy for use of land or a building.

Red Book The RICS Valuation - Professional Standards 2012 (Formerly RICS Valuation Standards).

Re-appraisals Appraisals undertaken prior to implementation of a development in order to assess viability before actual development.

Residual appraisals See development appraisals.

Residual Site Value or residual land value The amount remaining once the GDC of a scheme is deducted from its GDV and an appropriate return has been deducted.

Residual valuation A valuation/appraisal of land using a development appraisal.

Return (on capital) The ratio of annual net income to capital derived from analysis of a transaction and expressed as a percentage.

Review mechanisms See Re-appraisals.

Sales rates The rate at which residential units are sold (either by month, quarter or year).

Sensitivity analysis A series of calculations resulting from the residual appraisal involving one or more variables, i.e. rent, sales values, build costs, which are varied in turn to show the differing results.

Sensitivity simulation A simulation analysis considers the probability of outcomes given certain variances applied to key inputs within the financial appraisal through a stochastic process. It can quantify the robustness of a development in terms of various outputs including risk and return.

Serviced land Land where the necessary infrastructure is in place. No off-site works are required and the developer simply has to connect the development with existing infrastructure

Site Value (for financial viability assessments for scheme specific planning applications) Market value subject to the following assumption: that the value has regard to development plan policies and all other material planning considerations and disregards that which is contrary to the development plan.

Site Value (for area wide financial viability assessments) Site Value (as defined above) may need to be further adjusted to reflect the emerging policy/ CIL charging level. The level of the adjustment assumes that site delivery would not be prejudiced. Where an adjustment is made, the practitioner should set out their professional opinion underlying the assumptions adopted. These include, as a minimum, comments on the state of the market and delivery targets as at the date of assessment.

Speculative developments Developments which are commenced prior to any agreed sales or lettings.

Strategic infrastructure and utility costs Many models use construction cost information provided by BCIS or other sources. While this is regarded as a legitimate starting point, care is needed in understanding what is both included and excluded from such cost indices. Cost indices rarely provide data on the costs associated with providing serviced housing parcels, i.e. Strategic infrastructure costs.

Synergistic value The prospect of synergistic value arising from merger with another property or interests within the same property at a future date.

Target profit The level of return considered to be the minimum acceptable.

Tender price indices A series of indices, published by BCIS, relating to the level of prices likely to be quoted at a given time by contractors tendering for building work, i.e. it reflects the impact of market conditions on the tenderer's decision whether to bid at a high, low or average level relative to building costs.

Threshold land value A term developed by the Homes and Communities Agency (HCA) being essentially a land value at or above that which it is assumed a landowner would be prepared to sell. Used by some practitioners for establishing site value. The basis is as with EUV but then adds a premium (usually 10% to 40%) as an incentive for the landowner to sell.

'Toolkit' appraisal A generic term often used when undertaking financial viability testing in planning. Sometimes applied to financial models that have been developed to try and standardise the exercise when presenting to local authorities, e.g. the HCA Economic Assessment Toolkit (EAT).

Viability assessments/financial viability A report including a financial appraisal to establish the profit or loss arising from a proposed development. It will usually provide an analysis of both the figures inputted and output results, together with other matters of relevance. An assessment will normally provide a judgment as to the profitability (or loss) of a development.

Years Purchase (YP) The amount by which the net income is multiplied to arrive at a capital value i.e. the amount that is yielded by the annual income of property and expressing the value of a property in the number of years required for its income to yield its purchase price.

Yield As applied to different commercial elements of a scheme, i.e. office, retail, etc. Yield is usually calculated as a year's rental income as a percentage of the value of the property. The "yield" is the rent as a proportion of the purchase price. In determining development value, there is an inverse relationship i.e. as the yield goes up, the value goes down. To calculate development value multiply the rent by 1 divided by the yield e.g. £100,000 x 1/10% (i.e. 0.1) = £1 million gross value.

Sources: RICS, Financial viability in planning (2012), LHDG, Viability testing Local Plans, (2012), PAS Viability handbook and exercises (2011)

Appendix 2 Costs in viability testing

Site costs

In addition to the BCIS £/m² build cost figures, allowance needs to be made for a range of site costs (landscaping, secondary roads, drainage and services within the site, parking, footpaths and other external costs). Many of these items will depend on individual site circumstances and can only properly be estimated following a detailed assessment of each site. This is not practical within this broad brush study and the approach propounded in the PPG and the Viability Testing Local Plans.

This is normally lower for higher density than for lower density schemes since there is a smaller area of external works, and services can be used more efficiently. Large greenfield sites would also be more likely to require substantial expenditure on bringing mains services to the site. In the light of these considerations generally high level studies use a scale of allowances for the residential sites, ranging from 10% of build costs for the smaller sites, to 20% for the larger schemes. On the high density flatted schemes (where there are less site works) a lower assumption can be used, perhaps down to 5%.

Developer's profit and competitive return (as a cost)

An allowance needs to be made for developers' profit / competitive return to reflect the risk of undertaking development. The purpose of including a developers' profit figure is not to mirror a particular business model, but to reflect the risk a developer is taking in buying a piece of land, and then expending the costs of construction before selling the property.

At the Shinfield appeal¹⁸ (January 2013) the inspector considered this matter specifically saying:

The appellants supported their calculations by providing letters and emails from six national housebuilders who set out their net profit margin targets for residential developments. The figures ranged from a minimum of 17% to 28%, with the usual target being in the range 20-25%. Those that differentiated between market and affordable housing in their correspondence did not set different profit margins. Due to the level and nature of the supporting evidence, I give great weight [to] it. I conclude that the national housebuilders' figures are to be preferred and that a figure of 20% of GDV, which is at the lower end of the range, is reasonable.

Broadly, there are four different approaches to the developer's profit that could be taken:

- To set a different rate of return on each site to reflect the risk associated with the development of that site. This would result in a lower rate on the smaller and simpler sites - such as the greenfield sites, and a higher rate on the brownfield sites.

¹⁸ APP/X0360/A/12/2179141 (Land at The Manor, Shinfield, Reading RG2 9BX)

- To set the rate relative to the gross development value (GDV).
- To set the rate relative to costs - and thus reflect risks of development.
- To set a rate for the different types of unit produced - say 20% of GDV for market housing and 6% of GDV for affordable housing, as suggested by the HCA.

The argument is sometimes made that financial institutions require a 20% return on GDV and if that is not shown they will not provide development funding. In the pre-Credit Crunch era there were some lenders who did take a relatively simplistic view to risk analysis but that is no longer the case. Most financial institutions now base their decisions behind providing development finance on sophisticated financial modelling that it is not possible to replicate in viability study of this type.

For a high-level study, it is necessary and proportionate to take a relatively simplistic approach, so, rather than apply a differential return (either site by site or split between market and affordable housing) it is appropriate to make some broad assumptions. Consultation with developers and the Local Authority may be required to understand typical returns in your area. It is useful to consider the assumptions used in other studies in other parts of England. AECOM reviewed the developer return assumptions used by Local Planning Authorities in England for plans found sound during the first half of 2014 (Table 11 below).

Table 11 Developers competitive return research

Developer's Return adopted in district-wide studies	
Babergh	17%
Cannock Chase	20% on GDV
Christchurch & East Dorset	20% on GDC
East Hampshire	20% market/6% Affordable
Erewash	17%
Fenland	15-20%
GNDP	20% market/17.5% large sites/6% Affordable
Reigate & Banstead	17.5% market/6% Affordable
Stafford	20% (comprising 5% for internal overheads).
Staffordshire Moorlands	17.5% market/6% Affordable
Warrington	17.5%

Source: AECOM (July 2014)

The assumptions for developers profit should reflect local evidence and views of the development industry through the consultation process (see Section 3). It is common for developer's profit to be set at 20% of the GDV to reflect the risk of undertaking the development and this could provide a useful starting point for discussions.

Abnormal development costs

In some cases where the site involves redevelopment of land that was previously developed, there is the potential for abnormal costs to be incurred. Abnormal development costs might include demolition of substantial existing structures; flood prevention measures at waterside locations; remediation of any land contamination; remodelling of land levels; and so on.

In the case of brownfield sites an additional allowance of 5% to 10% of the BCIS costs may be made depending of the extent of the works required.

It is important to note that NPPF says (with our emphasis) at Paragraph 174:

...to ensure viability, the costs of any requirements likely to be applied to development, such as requirements for affordable housing, standards, infrastructure contributions or other requirements should, when taking account of the normal cost of development and mitigation, provide competitive returns to a willing land owner and willing developer to enable the development to be deliverable...

Abnormal costs will be reflected in land value. Those sites that are less expensive to develop will command a premium price over and above those that have exceptional or abnormal costs. It is not the purpose of a study of this type to standardise land prices across an area.

Many years ago [English Partnerships](#) (now subsumed into the Homes and Communities Agency) produced evidence for land remediation costs. This report could be helpful for initiating discussions or checking estimates that are provided to you by developers:

The treatment of abnormals was considered at Gedling Council's Examination in Public. There is an argument, as set out in Gedling¹⁹, that it may not be appropriate for abnormals to be built into appraisals in a high level study of this type. A council should not plan for the worst case scenario - rather for the norm. For example, if two similar sites were offered to the market and one was previous in industrial use with significant contamination and one was 'clean' then the landowner of the contaminated site would have to take a lower land receipt for the same form of development due to the condition of the land.

Those sites that are less expensive to develop will command a premium price over and above those that have exceptional or abnormal costs. It is not the purpose of a study of this type to standardise land prices across an area.

¹⁹ Report To Gedling Borough Council, The Planning Inspectorate Ref PINS/N3020/429/4, MAY 2015

Professional Fees

For residential development typical professional fees amount to approximately 10% of total build costs. This is made up as follows:

Architects	6%
Quantity Surveyors	0.5%
Planning Consultants	1%
Others	2.5%

For non-residential development fees are typically around 8-10%.

Contingencies

For previously undeveloped and otherwise straightforward sites you would normally allow a contingency of 2.5% with a higher figure of 5% on more risky types of development, previously developed land and on central urban locations (brownfield sites).

S106 Contributions and Community Infrastructure Levy

For many years, planning authorities have sought payments from developers to mitigate the impact of the development through improvements to the local infrastructure or site mitigation works. The Local Planning Authority should be consulted to provide you with unit or £/m² planning obligation costs for inputting into your modelling.

VAT

For simplicity it can be assumed throughout, that either VAT does not arise, or that it can be recovered in full.

Interest rate

Appraisals could assume 7% per annum for debit balances. This may seem high given the very low base rate figure at the time of writing (0.5% February 2016), but reflects banks' view of risk for housing developers in the present situation. The models recommended in this toolkit utilise cash flows to calculate interest.

For the non-residential appraisals and in line with the 'high level' nature of these studies the developer's rule of thumb is used to calculate the interest - being the amount due over one year on half the total cost. This is a simplification however, due to the high level and broad-brush nature of such analysis, it is appropriate in most situations.

Voids

On a scheme comprising mainly of individual houses one would normally assume only a nominal void period as the housing would not be progressed if there was no demand. In the case of apartments in blocks this flexibility is reduced. Whilst these may provide scope for early marketing, the ability to tailor construction pace to market demand is more limited.

For the purpose of a high-level study a three month void period could be assumed for all residential and non-residential developments.

Phasing and timetable

A pre-construction period of six months could be assumed for all sites. With each dwelling assumed to be built over a nine month period. The phasing programme for an individual site will reflect market take-up and would, in practice, be carefully estimated taking into account the site characteristics and, in particular, the size and the expected level of market demand. It is worth canvassing local developers to refine the assumptions on build out rates.

The rate of delivery will be an important factor when the Council is managing the delivery of infrastructure. The number of development outlets that a development site may have, and the number of units that an outlet may deliver over the course of a year are important inputs. A maximum delivery rate of 35 market units per year is fairly typical across England but it may be higher in some areas. Smaller sites may experience much slower rates to reflect the nature of the developer that is likely to be bringing smaller sites forward. Similarly flatted schemes may come forward more quickly with a 'lumpy' trajectory as blocks are completed.

Site holding costs and receipts

Each site could be assumed to proceed immediately and so, other than interest on the site cost during construction, there is not generally an allowance for holding costs in this type of assessment, or indeed income, arising from ownership of the site.

Acquisition costs

A simplistic approach would be to assume an allowance 1.5% for acquisition agents' and legal fees. Stamp duty should be calculated at the prevailing rates.

Disposal costs

For the market and the affordable housing, sales and promotion and legal fees are assumed to amount to some 3% of receipts (GDV). For disposals of affordable housing these figures can be reduced significantly depending on the category so in fact the marketing and disposal of the affordable element is probably less expensive. A rule of thumb for marketing is 3.5%.

Your neighbourhood plan or NDO costs

Depending on the content of your neighbourhood plan, the detail of your policies attached to site allocations or the uses and requirements permitted in your NDO there may be additional costs that need to be accounted for over and above those costs within the Local Plan. Building Regulations are the baseline cost for construction as all properties must meet these standards, anything additional you or your District have introduced should be included in the appraisals to assess the impacts on development.

Quantifying what these costs may be will not be easy. However, if you are introducing more stringent policies such as an increased open space requirement then this can be easily measured as it will eat into the net developable area. Environmental and design based policies may also carry additional costs, the precise amount should be discussed with your Local Planning Authority and developers to try and quantify any cost over and above standard build costs. A sensible approach would be to list your draft policies in a table and go through them methodically with a development professional to establish if your policies are cost neutral or not. In many cases good design can help to make developments more profitable, however, this is one area where it is likely that you'll need specialist input - perhaps from a local architect or surveyor.

Appendix 3 DIY viability models

For simple residential schemes the [Planning Advisory Service](#) offer a basic whole plan viability model available on the website which can be used for neighbourhood plans²⁰:

The model was specifically designed and developed by HDH Planning and Development for whole plan testing. A more detailed version of the HDH Planning and Development model has been deployed for numerous district-wide whole plan and CIL viability studies on behalf of Local Planning Authorities. However, for the purposes of simple residential schemes with a built out period of less than 5 years this model is an easy to use tool. Instructions for how to use the model are provided on the [PAS website](#).

The purpose of viability testing is not to exactly mirror any particular business model used by development companies, organisations and people involved in property development. The purpose is to capture the generality and to provide high-level indication to assist plan makers in assessing the deliverability of their plans. As such these appraisals are not as detailed as those that you might find in use at the development management stage. For site specific testing or NDO testing the Homes and Communities Agency's (HCA) development appraisal tool may be better suited for complex scenarios. In some cases you may need to seek professional inputs from consultants or officers from your Local Planning Authority.

The [HCA's development appraisal tool](#) is a site-specific development viability tool that is freely available.

The development appraisal tool is designed to inform the development management process by appraising the viability of specific sites. The development appraisal tool is intended for use on small and medium to medium/large size schemes with a development period of up to 15 years. The tool can be used to:

- analyse whether the level of required planning obligations is viable
- help to consider the balance between affordable housing and other planning obligations
- assess the case for financial support from the Homes and Communities Agency
- assess the potential land value where an organisation is considering a disposal
- Model 5 phases for all tenures and infrastructure, to enable modelling of longer term schemes

The toolkit comes with a user manual (available at:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/373365/DAT_user_guide_v4.pdf) that gives background information and guidance for those using the HCA development appraisal tool.

²⁰ Additional training materials and resources are available on the [PAS website](#) reading.

Whereas this guide is aimed at individuals engaging with viability issues for the first time, the HCA guide provides more detail on some of the topics contained herein. If you are considering using the HCA tool there are a series of self-training practice exercises available on the Government's website:

<https://www.gov.uk/government/publications/development-appraisal-tool-self-training-exercise>

The key to using any viability model effectively is frequent use and practice. The PAS and HCA exercises will help you to become more familiar with the two models described above and will help you to decide which tool is most suited to the job.

This toolkit has been prepared by AECOM and HDH Planning and Development Ltd on behalf of Locality. The content contained herein draws upon the National Planning Policy Framework ('NPPF'), the Planning Practice Guidance ('PPG') and guidance prepared by the Royal Institution of Chartered Surveyors ('RICS'), the Local Housing Delivery Group ('LHDG'), Royal Town Planning Institute ('RTPI'), the Planning Advisory Service ('PAS') and Regenerate Ltd. The advice has been adapted to appeal to neighbourhood planners.

HDH Planning and Development Ltd is a specialist planning consultancy providing evidence to support planning and housing authorities. The firm was founded in the summer of 2011 by Simon Drummond-Hay who is a Chartered Surveyor and associate of the Chartered Institute of Housing. The firm's main areas of expertise are: district-wide and site specific viability analysis; Community Infrastructure Levy testing; Local and Strategic Housing Market Assessments and Housing Needs Assessments; and Viability and Planning Assessments and Inquiries.

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