

**Cambridge** Centre  
for Housing &  
Planning Research

# Road and Sewer Bonds in England and Wales

Report to the NHBC

Dr Gemma Burgess and Michael  
Jones

May 2015



UNIVERSITY OF  
CAMBRIDGE

# Contents

1. Introduction .....	2
2. Methodology .....	3
3. Bonds: the current system and its operation.....	4
4. Overrun bonds .....	9
5. Highway bonds - authority interview findings.....	14
6. Sewer bonds interview findings .....	22
7. House builder interview findings.....	25
8. Infrastructure provision in other countries.....	35
9. Discussion and conclusions .....	40
10. Contacts.....	42
11. Appendix.....	43

Burgess, G. and Jones, M. (2014) Road and Sewer Bonds in England and Wales – report to the NHBC. Cambridge Centre for Housing and Planning Research.

# 1. Introduction

## 1.1 NHBC bonds

The NHBC Foundation, commissioned this research to investigate the circumstances and consequences of performance bonds required by highways authorities and water supply companies for housing developments. NHBC estimates that it is the provider of 80% of the outstanding bonds in the sector.

NHBC has provided infrastructure bonds since 1989 (and 3 bonds are still outstanding from the following year). These are provided for a nominal fee, and NHBC's total current exposure is some £1.26bn.

Since the beginning of this service, NHBC has paid a total of £11.7m on claims. £7m of this has been incurred since 2009, all of which has related to builder insolvency since the downturn. NHBC has a continuing liability on 'orphan' bonds, resulting from builder insolvency, amounting to £37.1m, or nearly 4% of its total exposure<sup>1</sup>.

This project reflects concerns across the house-building industry about the current process of highways and water bonds; whether these impose a financial burden on developers; whether this forms a barrier to development in some cases; and whether the use of bonds is appropriate for assets that are provided free of charge.

These concerns had led in 2013 to the convening of a 'Bonds Group' by the Home Builders Federation (HBF). The group consisted of HBF members, NHBC, DCLG and DEFRA. The group looked at all aspects of bonding provision. The current situation was reviewed and the group was to look into areas with regards to the legal basis for bonding; evidence of bonds called in to date - and the reasons; ways of sharing the risk; and the most appropriate way forward considering whether bonds in a modern day context are appropriate<sup>2</sup>.

## 1.2 Aims of the research

The aim of this research was to review:

- The history and evolution of bond requirements and the relevant legislation.
- The current processes surrounding the provision and administration of bonds.
- The cost implications, including the opportunity cost of capital, to house-building firms.
- The time and administration implications of bonds.

---

<sup>1</sup> Figures from *Road and Sewer Bond Review 2014*, D. Bewick

<sup>2</sup> [http://www.hbf.co.uk/index.php?id=2785&no\\_cache=1&tx\\_sqnnewsletterbuilder\\_pi1\[showUid\]=299&cHash=cf097f3f0634ba9308f257bff2b7d8cb](http://www.hbf.co.uk/index.php?id=2785&no_cache=1&tx_sqnnewsletterbuilder_pi1[showUid]=299&cHash=cf097f3f0634ba9308f257bff2b7d8cb)

## **2. Methodology**

### **2.1 Literature review**

A review of existing literature and evidence was conducted. This included academic and industry literature and information about the current legal position.

### **2.2 Statistical analysis of NHBC data**

The analysis of NHBC records included:

- The number of bonds outstanding, analysed by size of company, value of bond and regional location.
- The trends in bond issuance, release and default over time.
- The length of time that bonds have been outstanding (it was understood that some bonds have been outstanding for 18 years), together with the reason for bonds remaining outstanding for exceptional periods (based on interviews relating to a small sample of cases).
- The number of calls that have been made on bonds, including their value, the trend over time, and the reason for the call.

### **2.3 Survey and interviews with highway authorities**

A review was conducted of the documentation available on the websites for a sample of highway authorities in England and Wales. There are 145 highway authorities, plus the Highways Agency for motorways and trunk roads, and Transport for London for major roads within London. A sample of 15 was reviewed and authority officers were interviewed by telephone.

### **2.4 Survey and interviews with water companies**

A review of similar documentation of a sample of the 34 private water companies supplying England and Wales was conducted. The sample included those areas with a split provision between supply and sewerage, and included smaller water companies. The sample provided an appropriate overview of the policies, procedures and charges prevalent in the industry.

### **2.5 Interviews with house builders**

Interviews were conducted with house builders either by telephone or face to face. The sample was selected from the analysis of NHBC data to include a mix of large, medium and small builders.

### **3. Bonds: the current system and its operation**

#### **3.1 Highway and sewer bonds**

Road and sewer bonds are a guarantee on behalf of a property developer (including house builders) that they will complete the roads and sewers to the required standard and within a defined time-frame to enable them to be adopted by the appropriate authority under the relevant Acts of Parliament. The bond sum usually represents the authority's assessment of the cost of constructing the roads and sewers. The period of the bond covers the construction period and the maintenance period until such time as the roads and sewers have been adopted by the relevant authority.

#### **3.2 The basic bond agreements**

##### **3.21 Highways - Section 38 (s38) Agreements**

These are Highways Bonds required by local authorities, made under Section 38 of the Highways Act 1980. A Section 38 agreement is intended to ensure the completion and adoption of a new road on a new development. It is a voluntary agreement made between a developer and the local authority. This agreement requires a bond, which is sufficient to ensure the local authority can construct/repair the road if the developer does not. The developer and the organisation providing surety for the bond sign the Agreement, which is then completed by the local authority. The agreement is in place to cover the developer's failure either by sub-standard works or liquidation of the contracting company prior to completion of the works or adopting the road.

Section 38 agreements are alternative to the deposit of 'advance payments' with the Highway Authority prior to the beginning of construction work, to cover the cost of bringing the roads within the development up to adoption standards.

An example from Leicestershire County Council explains the usual process<sup>3</sup>. After receipt of Building Regulation approval the developer should receive a notice under Section 220 of the Highways Act 1980 assessing charges in respect of roads and footways which the Highway Authority considers should become adopted public highways on completion. The assessment is made by the Highway Authority and will either be in the form of charges for individual plots, or a block assessment covering the whole development. The developer should pay the sums assessed, or alternatively enter into a Section 38 Agreement before any work commences on the construction of any building on the development.

It is normal practice for developers to bring roads within the development up to base-course level, often at some considerable time prior to the final surfacing being carried out. In such cases, the bond covering the full estimated construction cost of the roads will be greatly in excess of the amount which would then be required to bring the road up to adoption standards. In such cases, the Highway Authority will, at its discretion, allow a reduction in the bond to a suitable figure which will, in its estimation, cover the cost of the outstanding work.

---

<sup>3</sup> [http://www.leics.gov.uk/highway\\_requirements\\_part\\_6.pdf](http://www.leics.gov.uk/highway_requirements_part_6.pdf)

Upon completion of the road to the full satisfaction of the Highway Authority, and normally following a joint inspection of the works, a 'Provisional Certificate of Completion' will be issued and the outstanding bond will be reduced to an amount sufficient to cover any defects which may arise.

Upon expiry of the 12-month maintenance period, the developer will be given a list of any defects which have arisen during that time. After these have been rectified to the satisfaction of the Highway Authority a 'Final Certificate of Completion' will be issued and the Bond will be terminated. All the areas which form part of the Agreement will then be adopted highway and maintainable at public expense.

### **3.22 Highways - Section 278 (s278) Agreements**

These are also Highways Bonds taken out with the local authority by the developer but they are for alterations to existing road junctions. They work in the same way as s38 agreements.

### **3.23 Sewers - Section 104 (s104) Agreements**

Under Section 106 of the Water Industry Act 1991, the owner of a domestic property is entitled to have foul and surface water from their property connected to the public sewerage system. Under Section 107 of the Water Industry Act 1991, the sewerage undertaker has the right to make the connection themselves and charge the applicant.

Specific sections within the Highways Act 1980 and Water Industry Act 1991 allow a drainage system to be adopted by a sewerage undertaker (who then is responsible for future maintenance of the system). The usual course of adoption of drainage for a new development is through either Section 38 agreement (Highways Act 1980) or Section 104 agreement (Water Industry Act 1991) dependent upon who will adopt the drainage system. Adoption of a drainage system through a Section 38 Agreement is for a drainage system which drains an adopted highway only.

Under Section 104 of the Water Industry Act 1991, a developer may enter a voluntary agreement with a sewerage undertaker for the adoption of sewers serving a development. A specific condition of a Section 104 agreement is that the new sewer development meets Mandatory Build Standards (MBS), which set out the required standards in the design and construction of new sewers and lateral drains. Section 42 of the Flood and Water Management Act 2010 Regulations requires that new sewers and lateral drains which connect to a public sewer must be adopted by the UK's sewerage companies.

Sewers and lateral drains in England and Wales connected to the public sewer at the 1<sup>st</sup> July 2011 transferred into Water Company ownership on the 1<sup>st</sup> October 2011. This included sewers and lateral drains that were subject to an existing Section 104 Adoption Agreement (s104) and those that were not. It is intended that, under the Flood & Water Management Act 2010, the implementation of Section 42 in England will ensure that further new private sewers are not created in future and that all new sewers and lateral drains will need to be offered for adoption. This means that the right to connect to a public sewer under Section 106 of the Water Industry Act 1991 will no longer remain without a Section 104 adoption agreement being in place. Section 42 commenced in Dwr Cymru's operating area (predominantly Wales) from 1 October 2012 and therefore sewers and lateral drains in this area must be included in a Section 104 Adoption Agreement before a connection to the

public sewerage network can be approved, Welsh Water/Dwr Cymru increased its bonding requirements from 10% to 33% of the cost of the works. There is concern that bonds on a nationwide basis would not be available at 33% of the value of the works undertaken, and even more so at the higher rates of up to 100% that have been suggested.

### **3.2.4 Flood and Water Management Act (FWMA)**

The Flood & Water Management Act (2010) set out a new regime for local authority adoption of Sustainable Urban Drainage Systems (SuDS) for maintenance purposes.

The government consulted in 2014 on an approach to deliver effective sustainable drainage systems, and on 18 December 2014 a written statement to Parliament announced the government's response. This proposes<sup>4</sup> that local planning authorities should be able to make sustainable drainage systems a material consideration in planning for major developments (of 10 or more homes), and to use the existing planning condition and enforcement regime to ensure that long-term maintenance arrangements are put in place.

However, the government's response notes that:

"Where the cost of ongoing maintenance would impair the deliverability of development, the planning authority might consider that a condition requiring the implementation of a sustainable drainage system would not be appropriate."

The government's response also notes that:

- Developers will have responsibility for ensuring such arrangements are secured as a requirement of their planning conditions.
- Commuted sums paid by developers for maintenance of sustainable drainage must not be the default option.
- Where local authorities opt to take on the long-term responsibility, the government would expect them to use their existing powers to charge for maintenance at cost recovery level only.
- Where water companies take on responsibility for maintenance, the sustainable drainage system could be included either within their ordinary charging scheme or outside this scheme if the water company offers its services as a Service Management Company.

These proposals suggest that the adoption of SUDS, whether by local authorities or water companies, is not proposed, but rather that each individual system would be paid for by a separate maintenance charge (in the case of freehold properties) or a service charge (in the case of leasehold properties).

### **3.3 The NHBC scheme**

NHBC offers a discretionary facility for registered builders who are well known to NHBC and have a good historical claims record and Housing Associations, to act as surety in providing bonds in favour of local authorities in relation to commitments to constructing roads, sewers

---

<sup>4</sup> Consultation on delivering Sustainable Drainage Systems: A summary of responses to the consultation and the government response, DEFRA & DCLG, 2014

and open space areas<sup>5</sup>. An NHBC bond is a conditional undertaking to pay a sum of money with a view to assisting the local authority to complete the work concerned. For multi-phased developments, each phase must be covered by a separate bond and the application must relate to a development on which all homes will be registered with NHBC for warranty cover under one of NHBC's Buildmark or Buildmark Choice schemes. The value of each individual bond applied for should not usually exceed £500,000. NHBC estimates that it is the provider of 80% of the outstanding bonds in the sector.

The table below (Figure 1) shows the number and value of bonds outstanding with currently active house building firms at mid 2014.

At mid-2014, there were 10,276 outstanding bonds provided by NHBC to currently active house builders, with an original value of £1.972bn, and a current value of £1.260bn.

A further 932 bonds, with a value of £38.443m were outstanding with insolvent house builders.

Assuming that the average highways bond is 100% of the total construction cost as estimated by the highways authority, and that the average sewer bond is 10% of the cost of the total construction cost as estimated by the water company, then the underlying cost of sewers covered might be some £0.9bn (10 x the £90m original value of sewer bonds), compared to the cost of highway works of £1.9bn.

The table also shows that house builders are much more active in reducing the value of highway bonds, with their current value standing at 63% of the original value, compared to sewer bonds, whose current value is 92% of the original.

This supports the conclusion that a major driver for house builders to manage bond exposure and to reduce the outstanding value of bonds is the limit that NHBC sets on the overall level of bonds available to each company. Reducing the value of a highways bond at 100% of its value has ten times the effect of reducing the value of a sewer bond at 10% of its value.

The analysis suggests that virtually half of all bonds have not only overrun their anticipated release by more than a year, but will also be incurring overrun fees.

---

<sup>5</sup><http://www.nhbc.co.uk/Builders/ProductsandServices/Roadsewerbonds/documents/filedownload,41860,en.pdf>



Figure 1: Number and value of outstanding bonds with current house builders

<b>Number and value of outstanding bonds with current house builders</b>				
	Number of bonds	Original value of bonds in £1000s	Current value of bonds in £1000s	Current value as % of original
s38 (construction of new roads)	5888	£1,559,859	£942,115	60%
s278 (works in existing highway)	1155	£204,556	£142,066	69%
s220 (APC bond for roads)	207	£76,415	£63,632	83%
s111 (existing highway over navigable waters)	34	£3,968	£2,157	54%
s106 (planning obligations)	148	£37,187	£27,663	74%
<b>Subtotal (highways)</b>	<b>7432</b>	<b>£1,881,985</b>	<b>£1,177,633</b>	<b>63%</b>
s104 (new sewers)	2799	£87,384	£80,211	92%
s98 (sewer diversion)	23	£1,700	£1,700	100%
s42 (sewer requisition)	9	£567	£567	100%
s52 (sewer bond)	13	£371	£371	100%
<b>Subtotal (sewers)</b>	<b>2844</b>	<b>£90,022</b>	<b>£82,849</b>	<b>92%</b>
<b>Total</b>	<b>10276</b>	<b>£1,972,007</b>	<b>£1,260,482</b>	<b>64%</b>

## 4. Overrun bonds

### 4.1 Distribution of overrun fees

NHBC bonds are initially provided free of charge to house builders, other than a small administration fee (currently £75). However, NHBC will charge an overrun fee to house builders if the bond remains outstanding either 6 or 12 months after the Expected Release Date (depending on the size of the builder) or after the expiry of five years from the Return Date of the bond.

Overrun fees are charged quarterly, in advance, on a sliding scale increasing from 0.5% during the first year to a maximum of 3% by the fifth year and any year thereafter. In practice, the payment of overrun fees by the industry is commonplace.

The distribution of bonds which have overrun is not evenly spread between house builders, and is significantly more concentrated than actual house building output by the industry.

Among house builders in England, 37% of all bonds which are liable for overrun fees are held by only three firms, which together produce 30% of all new homes.

Not only are there significant numbers of bonds on which house builders are paying overrun fees, but there are significant numbers of bonds that have been outstanding for many years. Analysis of the age of outstanding bonds shows that a significant proportion of bonds (one in six of all bonds, or 15%) are over ten years old (2004 and prior years).

Figure 2 below shows the overall pattern of the number of bonds that remain outstanding (in most cases following significant reductions in the remaining value of the bond, following the completion of phases of the project).

The median value of all bonds from 2004 and earlier is £14,617, reflecting the extent to which bonds have been written down as the work on site has reached advancing stages of completion (the median value of bonds issued in the first half of 2014 was £80,000).

The table below (Figure 3) shows the number of bonds that remain outstanding from each year since 1990, and the value of the remaining outstanding amount of each year's bonds.

The table shows that:

- There are 79 bonds that have been outstanding for more than 20 years (since 1994), at a total value of just over £1m.
- There are 516 bonds that have been outstanding for more than 15 years (since 1999), at a total value of just under £10m.
- There are 1,707 bonds that have been outstanding for more than 10 years (since 2004), at a total value of £57m.

- 4,080 bonds, with a total value of £243m have now been outstanding for more than five years.

While these sums may be significant in their own right, they may appear small in relation to the annual turnover of the house builders.

Figure 2: Outstanding bonds since 1990

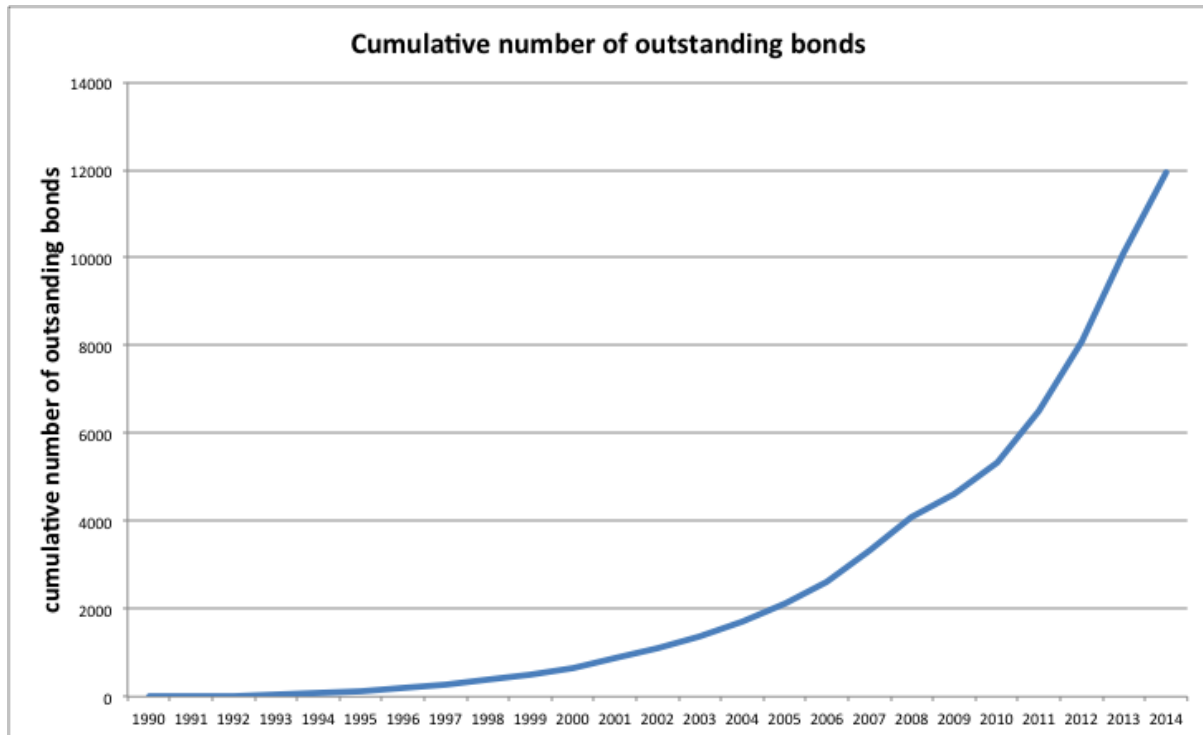


Figure 3: Outstanding bonds and value

Year	Amount outstanding	Cumulative amount outstanding	Number of bonds outstanding from each year	Cumulative number of outstanding bonds
1990	£18,700	£18,700	3	3
1991	£292,984	£311,684	8	11
1992	£105,904	£417,588	15	26
1993	£291,296	£708,884	20	46
1994	£368,314	£1,077,198	33	79
1995	£777,836	£1,855,034	44	123
1996	£937,872	£2,792,905	58	181
1997	£1,226,951	£4,019,857	94	275
1998	£2,936,234	£6,956,091	120	395
1999	£2,914,498	£9,870,589	121	516
2000	£4,713,791	£14,584,379	149	665
2001	£8,013,877	£22,598,257	205	870
2002	£6,808,677	£29,406,934	226	1096
2003	£10,192,569	£39,599,503	264	1360
2004	£17,240,158	£56,839,661	347	1707
2005	£20,015,066	£76,854,727	399	2106
2006	£39,165,464	£116,020,191	521	2627
2007	£62,969,508	£178,989,699	715	3342
2008	£64,407,767	£243,397,466	738	4080
2009	£53,688,758	£297,086,224	538	4618
2010	£93,173,419	£390,259,643	734	5352
2011	£131,187,817	£521,447,460	1143	6495
2012	£192,862,463	£714,309,923	1593	8088
2013	£266,203,994	£980,513,918	2004	10092
2014	£351,226,432	£1,331,740,350	2143	12235

Note: 2014 projected from 989 bonds @ mid June, value £162m.

## **4.2 Reasons for bonds remaining outstanding**

Interviews with both house builders and the adopting bodies (highways authorities and water companies) have identified a number of reasons why bonds might remain outstanding, often for very long periods. These are discussed in more detail in the following sections of the report and include:

1. The outstanding value of the bond may be less than the cost of resolving any outstanding issues. In the case of highways bonds, which are usually either 100% of the cost of the works or up to 115% (to allow for the additional cost of administration), a reduction in the value of the bond to 10% of its original value would barely cover the costs of the local authority pursuing the matter, or of arranging for another contractor to complete any outstanding work, leaving the actual cost of the outstanding work uncovered. There is therefore little incentive for highway authorities to pursue outstanding bonds and even less incentive to call in the remaining bond amount.
2. From the point of view of the house builder, the overrun fee paid each year is only a maximum of 3% of the outstanding value of the bond: a typical long outstanding bond might have had an initial value of £120,000 when taken out in 1995, but if this has subsequently been reduced to its current outstanding value of £15,500, then the overrun fee is only £465 per annum, which is likely to be far less than the cost of resolving any outstanding issues. It is possible that house builders consider this cost per annum as insubstantial without considering the cumulative cost over time.
3. The longer the outstanding works remain unfinished, and the road or sewer remains unadopted, the more likely it is that additional maintenance works will be required to bring the work up to the adoptable standard, thereby creating even less incentive for the house builder to return to complete outstanding work.
4. The practice of reducing the value of the bond as work proceeds also reduces the motivation for house builders to monitor the situation closely, since the cumulative value of old, written down, bonds is unlikely to be producing pressure on the company's financial limit with bond providers.
5. In some cases, if bonds have remained outstanding for long periods, changes in personnel (both among house builders and highways or water bodies) may result in a loss of knowledge about why bonds remain outstanding, or the paperwork may have been lost.
6. In some cases, adoption of one house builder's roads or sewers may be delayed because they are 'upstream' of another builder's site which has not yet been adopted: highways authorities and water companies will not adopt the upstream work until the downstream works have themselves been adopted.
7. The incentives, or pressures, on house builders to resolve the minor issues that often delay adoption are insufficient to warrant the time and attention that is required for their resolution.

8. In many cases, the issues preventing adoption are complex. This is often the case with issues over land ownership, where parts of the area for adoption may not be wholly owned, or may have been incorrectly sold to another party, or where land ownerships on a site may have become dispersed as the result of company reorganisations, mergers or takeovers, or where a deed of grant may be required (for example, where balancing ponds discharge onto third party land).

### **4.3 Summary**

Whilst NHBC bonds are initially provided free of charge, the payment of overrun fees by the industry is commonplace. However, the distribution of bonds which have overrun is concentrated among a few firms, and significantly more concentrated than actual house building output by the industry. There are significant numbers of bonds on which house builders are paying overrun fees, but there are significant numbers of bonds that have been outstanding for many years. Analysis of the age of outstanding bonds shows that a significant proportion of bonds (one in six of all bonds, or 15%) are over ten years old. Bonds over run for numerous reasons, which are discussed further in the sections below, but the main reason is lack of incentive for house builders to return to old sites to complete remedial works and lack of incentive for local authorities to call in bonds to undertake the works themselves.

## 5. Highway bonds - authority interview findings

The interviews with highways authorities show that the system of requiring bonds for highways agreements varies by authority but only in the details and not in the basic principles.

### 5.1 Variation in bond requirements

There is variation in bond requirements, see Figure 5 below. Authorities calculate the cost of the works according to a set of standard formula, normally as a per metre charge, often varying by road type. For the bond some require an additional 10-15% on top of the cost of the works to cover administration and to cover their costs if they have to call on the bond and use their own contractors to complete the work:

“We calculate the cost of constructing the road and then 110% of this is the value of the bond required. The extra 10% is in case the developer goes bust and we have to find someone else to do the work”. (Authority 1)

“A few have recently questioned why the bond is higher than the cost of construction. But if we have to call on it there is admin and we calculate the cost based on what it would cost if we have to use our own contractors to do the work”. (Authority 4)

There is also a small variation in the fee charged by authorities. Fees are charged as a percentage of the bond, varying between 6% and 10%. Some ask for a minimum deposit depending on the cost of the works. Most authorities said that they are aware of what other authorities charge and benchmark against them:

“The fees for approval and supervision are about 10%. We take a cash deposit of £2,000 in case work needs doing whilst under construction e.g. gullies need emptying or roads sweeping, but they are pretty good at tidying up after themselves round here”. (Authority 5)

Authorities are aware of the differences between them and some so benchmark their costs and fees against others:

“We have a way of working out the cost of the works for the bond value. We have a service provider who undertakes works for the county council for maintenance. Our contracting arm provides a rate for a typical street. We benchmark this against other authorities”. (Authority 6)

House builders were critical of the estimated costs of the works used by authorities to set bond values, but authorities said that they had to use costs that were based on what they would be charged, rather than the lower rates developers were likely to secure:

“Variations between authorities tend to be in terms of emergency on-costs. When the developer plans a site they get a tender for construction that is competitive at the time and is very site specific to that scheme. Contractors want work so they bid low.

But we are locked into an eight year contract with associated rates, and we can't also necessary use the cheapest". (Authority 6)

House builders were critical of the speed at which authorities put s38 agreements in place, but authorities said that delays can sometimes be caused by house builders:

"On the time taken to sort out s38 agreements, we are efficient. But sometimes we don't get the plans and details when we need them from the developers.....some developers see it in their interests to delay signing the s38 because it can mean that if they get on with the works before signing, by the time they do so their bonds are small. It is a case of both sides causing delays and issues". (Authority 6)

## **5.2 Length of agreements**

The length of the agreement and bond required varies between authorities. Some leave agreements open ended so that the length of agreement depends on the development, but others fix the length of the bond, for example, at two or three years including the 12-months maintenance period:

"In theory an agreement lasts three years which covers two years of building and a one-year maintenance period. At the beginning of the 12-month maintenance period the bond is halved....However, most run over the three years. This is not because it is held up by inspections as we inspect all the time. It is the rate of building. We could flex our muscles and hurry them by threatening to call in the bond, but we allow them latitude as we want to keep good relations with developers". (Authority 2)

Where agreements are for a fixed period, some authorities charge additional fees based on a percentage of the cost of the works once the agreement has over run but others do not charge additional fees:

"We have a two-year clause but we have some that go on for five or six years but we have to still inspect them so we charge. But once past the two years we don't charge the 8.5% but reduce it on a sliding scale". (Authority 3)

## **5.3 Building at risk**

Some roads are built without agreements in place because the developer cannot get a bond or because the work is done faster than the agreement takes to put in place:

"Some developers come and say they want to take out an agreement and start negotiations but then do not carry on, usually because they cannot get a bond". (Authority 2)

Agreements can take time to put in place during which construction may begin:

"We bond for the full reconstruction cost of the road. It can take a while to get them in place and sometimes the developer will argue that they have already built part of the road and should have a lower bond but we stick to the full amount as we don't want to set a precedent". (Authority 3)



Most authorities will adopt a road on completion without an agreement but will charge inspection fees and prefer that agreements are in place. Although some developers do struggle to secure bonds, there is only rare use of upfront cash deposits:

“It can be difficult getting bonds in the first place as banks are cautious. They encourage them to close outstanding bonds before issuing any more. This helps us to a certain degree”. (Authority 2)

Authorities said that starting construction at risk can create problems with build standards and reduces trust:

“It also depends on knowledge about the site. If developers start at risk rather than wait for a s38 agreement it can come back to bite them.....It creates a lack of trust when you turn up on a site and see problems, you ask why the gully is full, and then see that it doesn't actually go anywhere”. (Authority 6)

#### **5.4 Reducing bonds**

Most authorities will reduce the bond as the road reaches certain stages of completion. The onus is on the developer to inform the authority when these stages have been reached. Reductions in the bonds vary and some authorities reduce bonds at different stages of road completion and on others on adoption, but some will only reduce the bond when the new highway enters its maintenance period. On reaching the maintenance period reductions in the bond vary between 90% and 20%:

“It is discretionary to reduce it at the maintenance period but developers tell us that some local authorities will reduce it once the base layer is down but all authorities are different. We only reduce it when it is finished and has reached the maintenance period. We have recently revised it from 45% to 40% of the bond on maintenance so now developers can get 60% of the bond back”. (Authority 3)

Reducing the bond to a relatively small percentage can be a problem for the authority as there is then little incentive for the developer to return and complete the remedial works in good time. This can create a sense of frustration for local authorities and a negative perception of house builders in terms of road completion, as illustrated by this comment:

“We reduce it to 10% when the 12-month maintenance period commences. This is a hassle for us as at this stage they tend to walk away as the bond is low. They have sold the homes so they just walk away. It is a bit of an issue for us getting them to finish roads off and completing the minor remedial works which might only be replacing a kerb, fixing or painting a street light. For some the only way to get them to finish is to threaten to call on the bond. This does happen. If it has been outstanding for three years and they have done nothing to finish it then we threaten to call in the bond. This is when we have written to them, asked them, been promised that it will be done but a year later nothing has happened (Authority 4)

#### **5.5 Finalising works for adoption**

Most authorities find that the majority of new roads require some remedial works when they are inspected at the end of the maintenance period. These are usually relatively minor

issues such as kerb repairs. However, most authorities have to spend time chasing developers to try and get them to come back and complete the works so that the road can be adopted as most had moved on to work on new developments:

“99% require remedial works. It is very common to chase developers. For some the maintenance period has been 10 years. All this time has elapsed and they have never come back”. (Authority 1)

Authorities felt that developers had little interest in undertaking the minor repairs necessary to enable adoption as it was more profitable to carry on working on the new site where houses were being developed for sale:

“We find that when building work is in a slump, developers suddenly think about their bond fees and chase to get the work done and get the bond released. But when there is an upswing in the market as there is here with a lot of building work going on they forget about the bonds and just say “let’s build houses”. As long as they can still get bonds they don’t care. It is only when there is a slump that they want the bond. When it is buoyant they just want to build houses and sell them for as much as possible. They don’t care about the fees. When the market is booming it is just important to sell and move on. It is never major works but they just want to build houses”. (Authority 1)

“We have some developers who complete the houses and the roads but don’t do the remedial works. They leave the site to go and build somewhere else and things drag. We chase them for the remedial works. But they are more interested in building houses elsewhere as this is where the money is. We can threaten to call in the bond. Then they tend to come back and do a little bit so we pull back. This might go on for a very long time..... Builders are so keen to move on to other sites as that is where the money is that they do not worry about the one they are leaving. They don’t worry about the additional fees as for them it is a small amount.” (Authority 2)

“There is usually something to do as remedial works. It always takes a while. We are constantly chasing to get them finished. It wouldn’t take much for them to get a small crew in and get the works done as it is not significant and is usually small snags. This baffles us. We assume it is because they have moved onto another site and their resources have gone there. It is common. There is normally not a lot of works but it drags on”. (Authority 3)

However, some house builders are not always aware that roads are not yet adopted. In cases where the original builder has been taken over, there may not be a good knowledge of the bonds and the remedial works that are required in relation to individual developments:

“We found some developers that did not know they had roads with outstanding bonds. In one case there had been many developer takeovers, the schemes were on our books but not the developer’s. They had £0.75 to £1 million in outstanding bonds they didn’t know about. They didn’t realise they were paying thousands in overrun fees on these old schemes. And all the outstanding works were easy to sort out and

cost about £100k across all the schemes. We got credit for pointing it out to them". (Authority 6)

Other reasons why roads remain unadopted include staff turnover which means both the authority and developer can lose track of sites, and different approaches to repairs:

"Staff turnover can be a problem. We have had schemes on our books for 10 to 15 years. But the corporate memory disappears from both sides. It is a challenge for both sides to keep track of corporate memory. And there are different opinions. For example, whether to replace or repair a cracked kerb. It can be more hassle to insist a kerb is ripped up and replaced than to adopt a road where the kerb has been repaired and will probably not be a problem. We take a pragmatic view but some authorities are very pedantic. Some are very relaxed. We are somewhere in between". (Authority 6)

Authorities said that developers rarely complain about the size of the bond and the large house builders in particular are experienced at arranging agreements and bonds and are familiar with the system.

It is not a problem for mortgage lenders that roads are not adopted as long as an agreement is in place so that responsibility for the road does not fall on the homeowner:

"Having the agreement is a comfort to homeowners". (Authority 2)

## **5.6 Calling in bonds**

All authorities said that calling in a bond would only be a very last resort:

"We have only ever called one in years ago and it was such a long drawn out process that we don't do it. They tend to just stay unadopted and on our books. We get a few people a year contacting us to ask if the road is adopted. But nothing happens. Some are 30 years old and have never been adopted". (Authority 1)

Some threaten to call in the bond where remedial works have been outstanding for some time and developers have not made efforts to finish the minor works need to bring the road to adoptable standard. Of the few who have called in a bond, it was either in the case of developer insolvency or where the developer was winding up a business.

In some cases the value of the outstanding bond would not cover the necessary works so authorities are reluctant to call in the bond and therefore take on responsibility for repairing and adopting the road:

"We have a number of developments where the developer has gone bust but we have not called in the bond. It is an option to call in a bond, not an obligation to do so. They are so old that there is only 10% of the value left as the bond and it is insufficient to cover the cost of the works. If we call in the bond we take on responsibility for the road but the bond does not cover all the costs of the repairs". (Authority 6)

Calling in bonds was seen as complex and time consuming:

“Calling in bonds is a pain and is challenging on the timescale because it damages relationships with the community. They want things fixed straight away and it can’t be done. We need to find the money to do the work and then claim it back. But there is a long bureaucratic process to go through to get the cash. It is a long process and poses cash flow problems”. (Authority 6)

The adoption of roads is a local political issue. Many people do not realise their road is not adopted which causes problems for local authorities:

“My post bag is full of letters from residents, councillors and MPs asking ‘why is my road not adopted?’ But there is no s38 agreement, the developer went bust years ago and they dissolved the management company themselves....They pay into it for a few years and nothing goes wrong so they stop paying, then their road gets holes in and they want the local authority to fix it.....But they don’t realise that when we are dealing with urban extensions of 5,000 new homes, adopting their cul de sac with four houses we wouldn’t normally take on something like that is not priority. And it can depend whether a councillor or MP lives in the cul de sac. We have financial responsibilities that they don’t realise”. (Authority 6)

The table below shows some of the variations in example bond requirements.

Figure 5: Variation in bond requirements

Authority	Bond	Authority fee	Length	Reduced
Cambridgeshire County Council	Cost of construction based on linear per metre charge	8.5% of the bond <sup>6</sup>	3 years which covers 2 years of building and 1-year maintenance period	50% at the beginning of the 12-month maintenance period
Newcastle City Council	The value of the adoptable works	7.5% of the estimated adoptable highway works costs <sup>7</sup>	Depends on development	Part 1 and 2 certificates and on adoption
Derbyshire County Council	Cost of construction based on linear per metre charge which varies by road types	8.5% of total estimated cost of work <sup>8</sup> plus legal fees: straightforward about £500, complicated go onto an hourly rate for legal.	Two years which includes the maintenance period	Discretionary to reduce it at the maintenance period, 60% reduction on maintenance
Milton Keynes	Cost of works	10% of the bond	Depends on	25% reduction on

<sup>6</sup> [http://www.cambridgeshire.gov.uk/info/20081/roads\\_and\\_pathways/115/highways\\_development](http://www.cambridgeshire.gov.uk/info/20081/roads_and_pathways/115/highways_development)

<sup>7</sup> <https://www.newcastle.gov.uk/wwwfileroot/legacy/regen/plantrans/S38AgreementsMarch2011.pdf>

<sup>8</sup> [http://www.derbyshire.gov.uk/transport\\_roads/roads\\_traffic/development\\_control/agreements/fees/default.asp](http://www.derbyshire.gov.uk/transport_roads/roads_traffic/development_control/agreements/fees/default.asp)

Council			development	maintenance
Plymouth City Council	Cost of works plus 10-15%	5-10% of the estimated cost of the works <sup>9</sup> , deposit of £2,000 to £6,000 required	Not specified	Not specified
Kirklees Council	Cost of works	9% of the bond <sup>10</sup>	12 months plus 12 months maintenance	Reduce by 75% when issue provisional adoption certificate
Croydon	Bond amount will be the council's estimate of Second Stage Street Works.	Vetting fee of 2% plus inspection fee of 7% of council's estimated cost of the road and drainage works <sup>11</sup>	Not specified	Not specified
Birmingham	Bond is 110% of cost of construction	Fees are 3.5% of the cost of the road construction for approving the drawings and 6.5% for site inspection.	Depends on development but thinking about fixing	Part 1 certificate when the road is at base course level reduce to 50% Part 2 reduce to 20% and after the 12-month maintenance period reduce to zero on adoption.
Lincolnshire County Council	Cost of works plus 30%	6% of the bond	Depends on development	Reduce the bond at binder course which is our key stage 5 to 50%. Reduce it to 10% when the 12-month maintenance period commences.

## 5.7 Summary of the interviews with highways authorities

The research shows that the policies and processes for the adoption of highways can be complex, sometimes ambiguous and that there is variation between authorities in bonding arrangements with no clear rationale for the differences. Authorities are aware that on most developments construction will begin at risk before an agreement is in place. Many will adopt

<sup>9</sup> [http://www.plymouth.gov.uk/highway\\_agreements\\_fees.pdf](http://www.plymouth.gov.uk/highway_agreements_fees.pdf)

<sup>10</sup> <https://www.kirklees.gov.uk/business/planning/advicenotes/AdoptionofnewHighway.pdf>

<sup>11</sup> <http://www.croydon.gov.uk/contents/departments/transportandstreets/pdf/nsprocedure>

highways once completed with no agreement through Section 37, but some are not happy to do so.

Some authorities face time and resource pressures in dealing with applications and in chasing developers to complete the necessary remedial works to enable adoption. It can be difficult to get developers to return to finished developments to complete remedial works once they have moved on to new sites where houses are currently being sold.

However, many authorities undertake some form of benchmarking with other authorities in their region to compare fees and bond arrangements. Many reported good working relationships with active house builders in their areas.

Authorities may sometimes threaten to call in bonds but actually doing so is rare. There is often not enough value left in the bond to cover the outstanding works. It is also regarded as time consuming, costly and difficult to call in bonds.

Many people do not realise their road has not actually been adopted by the local authority and complain to the local authority about repair work. In some cases authorities said that over time residents may have abolished the management company charged with overseeing the unadopted road but then residents do not take care of the upkeep and turn to the local authority when works are necessary. Unadopted roads and outstanding repairs are a local political issue.

## **6. Sewer bonds interview findings**

### **6.1 Complexity**

House builders are used to engaging with water/sewer companies, but the project encountered difficulty in identifying or contacting the appropriate person to speak with in the different water companies. Information is available on company websites but tends to be very long and complex. Water, waste water and SuDS tend to be dealt with by different departments. Some local authorities said that understanding the complexity of the water/sewer company requirements was difficult:

“In terms of water and sewers, sometimes it is in an industry’s interest to maintain an air of mystery. Then they can just say we have always done it that way. Water is impenetrable to us. In theory it works in a similar manner to roads”. (Authority 6)

### **6.2 On site adoption is straightforward**

However, the process for the adoption of sewers is relatively straightforward and is not generally regarded as problematic by water/sewer companies or house builders. Once a developer has submitted a Section 104 application to the water/sewer company, various checks are conducted and a detail of the fees is sent to the developer. All parties sign a s104 agreement and the developer is required to put in place a bond for 10% of the estimated cost of the works. No works can take place until these arrangements have been made. Most developers do not make applications until the site has planning permission and works are ready to commence. However, one major water/sewer company said that as the market has picked up house builders are making applications even before they have secured planning permission on a site:

“Usually developers do not apply until they have planning permission but we do get applications before they have got permission. Especially at the moment it is going mad, they are so keen to get on and build. But of course it is a risk for them if they don’t get planning permission. They are all in a rush at the moment”. (Water company 1)

Once construction is underway the water/sewer company will visit the site at regular intervals to ensure the relevant standards are being met. Once a certain stage is reached, bonds can be reduced. For example, one company will release the bond once occupancy of the development has reached 50%, unless there is a pumping station, in which case 10% of the bond is retained:

“Once more than 50% of the houses are occupied so the sewer is receiving more than 50% of the flow they ask for a provisional inspection. We inspect and check that the standards are adoptable. If so, we issue a provisional certificate and release the whole bond, unless there is a pumping station in which case we retain 10% of the bond”. (Water company 2)

As for highways, sewers have a 12-month maintenance period after which they are inspected for adoption. Adoption is usually straightforward but can be slower on large and/or complex sites.

“Some do drag on with large developments. You can’t have the upstream works adopted until the downstream works are adopted which can slow it down”. (Water company 2)

Surface water sewers where they drain into a water course rather than a public sewer are dealt with slightly differently. The capital costs of offsite sewers and water mains are bonded at 100%.

The legislation has developed in a piecemeal manner over a long period of time, and practice for water supply and sewer infrastructure construction and management has also developed independently of the other over time. This has resulted in a system where bonds are put in place for sewer infrastructure but not water supply infrastructure, and where asset payments are made by water/sewer companies to house builders for water supply infrastructure but not for sewers. Developers tend to use self lay organisations and multi-utility agencies who factor the asset payments received into their fees to developers.

### **6.3 SuDS**

Whilst the provision and adoption of water and sewer infrastructure is not regarded as problematic, SuDS are more complex, with a greater degree of variation between areas and companies and a lot of uncertainty, although some clarification has been given by the government’s announcement in December 2014 (see section 3.2.4 above), although guidance on the detail remains outstanding at the time of writing (March 2015).

Some water/sewer companies will adopt SuDS, but others will not:

“We are happy to accept sites with SuDS, but we are not currently adopting them. They are being adopted by the local authority or in some cases by a private management company. But we don’t really accept management companies as the risk is too high. We will only consider them if it is clear the local authority won’t adopt them and there is a commuted sum<sup>12</sup>. But SuDS is still up in the air”. (Water company 1, interviewed in November 2014)

House builders felt that water/sewer companies should adopt SuDS. Some local authorities are prepared to do so but it is a burden and they lack expertise in this area, although some authorities are leading the sector in SuDS adoption and provision. House builders hope that increased competition in the water/sewer sector will encourage companies to be more willing to adopt SuDS as they may face competition from other water/sewer companies moving out of their usual area of operation. Bonding arrangements for SuDs have not yet been agreed:

“They wanted 100% bonding at the outset but we said that is not available. Bonding issues have not yet been resolved. There will probably be bonding, but not at 100%”. (Housebuilder 5)

---

<sup>12</sup> A commuted sum is a one-off payment for future maintenance and replacement costs.



#### **6.4 Summary of sewer bonds interviews**

The process for the adoption of sewers is relatively straightforward and was not generally regarded as problematic by water/sewer companies or house builders, although it is clear that this is a complex area that has developed over decades in a piecemeal fashion. SuDS adoption is yet to be clarified.

## 7. House builder interview findings

### 7.1 Self lay construction

Most builders use the 'self lay' option for constructing roads and sewers, rather than have them built by the highways authority or the water company. This is mainly because it is cheaper, but also because it is easier to manage and to control the pace of development:

"We self lay for cost reasons and convenience". (House builder 3)

Local authorities estimate the cost of the works to set bond requirements, but house builders said that these are much higher than their own estimated and actual costs of the works. One house builder estimated that on average they can build roads for 70% of the costs estimated by the local authority.

### 7.2 Private roads

In some cases (particularly apartment developments) private, unadopted, estate roads may be constructed, which do then not require a bond. Many house builders have experience of providing unadopted roads. This can be because the development has certain features that the local authority would not want to take responsibility for, such as electric gates:

"We often do it if there are issues with highways about particular features we want to put in like electric gates or pillars at the entrance. Highways won't take these on."  
(House builder 4)

Keeping roads private can also be cheaper as it does not require an agreement and bond to be negotiated, but also because it avoids being charged commuted sums by the authority which can be costly:

"We do have some private roads. These are mainly in the south of England as we tend to find highways charge the highest commuted sums here. We set up a management company for an annual fee but we often find you get better maintenance through them than you get from highways. It is normally about £130 a year....But the homeowners like to think the roads, etc are maintained by highways. If there is a management company they get no offset through their council tax." (House builder 5)

There are costs incurred in having roads adopted, for example, in paying fees to the authority, in commuted sums for certain road and street works features, and in remedial works after maintenance periods to bring the road to adoptable standard. The cost of having roads adopted has led some house builders to consider increasing the proportion of roads that remain as private roads on new developments:

"We also have issues with commuted sums, for example, we have one at the moment for more than £100,000 for a highways retaining wall. If we kept roads private we would not have this problem. We are looking at increasing the number of roads we keep private. It is a problem because of the huge bond values". (House builder 4)

Most house builders will still build to adopted standards even if roads are not adopted. However, it does allow flexibility to build in a way that local authorities would not allow for adoption, such as narrower widths and shared access arrangements:

“Nine out of ten of the roads we do are unadopted. It makes it cheaper to build, to develop and it stays within your control. We only do small residential schemes and adopted roads need street lights, the road and pathway has to be a certain width. It saves time and money if we keep them private and it saves space as we can have shared access and narrower widths. We rarely have roads adopted”. (House builder 2)

Sometimes management is not transferred to a management company but remains the responsibility of the owners:

“Some developments have certain areas of highways that the local authority will not adopt such as little court yards. Normally these are carved up and put into the ownership of each individual plot and each owner gets right of access, but responsibility is with the owners, rather than a management company”. (House builder 3)

There is a balance for house builders to consider. It may be cheaper to keep roads private and allows for unusual features, but this has to be weighed against homeowners' preference that the local authority adopts roads:

“It is cheaper if we don't get them adopted as we don't have to pay all the fees but if they are adopted it is a selling point as customers don't have responsibility so it is a balance”. (House builder 1)

### **7.3 Management of unadopted infrastructure**

The research found that house builders do not find it difficult to set up a management company or arrange a maintenance contract where roads etc. remain private.

Some developments have a degree of prestige from certain features such as gated roads which are not adopted and house builders said that residents are happy to pay towards their upkeep:

“It is much quicker to do this as we just put the road in to the same specification but without having to pay the inspection fee and without the delays. We set up a residents' management company and they pay a few quid a year but they tend not to mind as we make a show of it and people like things like electric gates”. (House builder 4)

However, whilst it is not regarded as difficult to set up a management company for private infrastructure, local authorities said that they encounter problems as schemes age and management arrangements lapse and residents look to the local authority for repairs for which they are not technically responsible. House builders are aware that this could be an issue in the future:

“There have been no problems yet but there potentially could be if one person does not want to contribute to the maintenance costs. Perhaps this could be an issue in the future, at the moment the developments are new so there are no problems and we are often on site still but in ten or twenty years it could be a potential issue. But it is clearly set out in the plot transfer and the obligations sit with the property when it is sold on and should also be clear”. (House builder 3)

#### **7.4 Varying requirements between authorities**

The interviews with house builders identified numerous problems in having to take out bonds for roads and sewers, many of which relate to engaging with local authorities.

Different highway authorities and water companies have different requirements for bonds. House builders felt that whilst all are different, some are more reasonable than others, but they were used to varying requirements between authorities and did not find this unexpected or particularly problematic:

“They are all different but you just get used to different areas. We are bound by the rules. Some bond 50%, others 100%, they release at different stages. It is just a process we have to manage”. (House builder 1)

#### **7.5 Slow response from authorities on putting agreements in place**

A common criticism of authorities is that they are slow to respond to requests for s38 agreements to be put in place. This has to be done before a bond can be arranged and technically before the builder starts construction:

“There are no problems in arranging the bonds. That is easy and quick, you just send a form off to the NHBC. The problem is getting to the point where you have an agreement in place to be able to take out the bond. We have sites that are nearly finished where we have not had things back from the council but we don’t chase them as we don’t want the bond liability. We have a few we will probably do through s37. They are just too slow”. (House builder 4)

As a result of delays, most house builders start construction on site at risk without agreements and bonds in place. They argued that they cannot afford to wait for authorities to organise s38 agreements as the delays would be too costly:

“You can’t always get approval before commencing work but sites are worth a lot of money and sometimes you just have to start without approval”. (House builder 1)

“Highways are just very slow at everything from getting approval to inspecting. Nine times out of ten we start on site without s38 or technical approval in place. So we start at risk because we can’t wait for the length of time it takes them. If I said to my directors I was waiting for the approval and s38 before we started, they would laugh....they just have no manpower. Approvals take three to six months. We have to start or nothing would happen.” (House builder 4)

In some cases this means that roads are finished before agreements are in place and house builders seek adoption through Section 37 after completion:

“On many occasions there is no need for the agreement as the road is finished. We have to start at risk. We can seek adoption under s37 but we cannot wait to start until the agreement is in place....Under s37 the onus is on you. You can invite them to inspect or pay an inspection engineer a fee. They can only refuse to adopt if it is of insufficient utility to the public. But if they have intimated they would accept a s38 then they can't go back and refuse to adopt”. (House builder 5)

Most housebuilders felt that the slow response was largely as a result of insufficient staffing and resources at road and water/sewer authorities:

“The issue is that local authorities need more staff and resources. You can't blame them”. (House builder 2)

“I have had conversations with the authority where he has said 'I only work 3 days a week and you are about number 42 in my in tray' - they can't cope”. (House builder 5)

This causes frustration for house builders:

“It is generally he who shouts the loudest who gets heard and gets the best service. You have to constantly rattle their cage. But you can't chase them all the time and it is frustrating as we pay them to do this”. (House builder 4)

Some SMEs rarely use bonds and where surety is required by an authority would put the cash upfront to avoid the delays and costs of an agreement and bond:

“We only use the NHBC. But often we just put cash up front to save the hassle. It saves time and paperwork. The local authority can take months to do the paperwork”. (House builder 2)

In some cases house builders felt that authorities can be deliberately slow in adopting roads as they do not want to increase their maintenance burden:

“They don't want to take responsibility for new roads because they then have to maintain them”. (House builder 1)

## **7.6 High estimated costs inflate bond requirements**

House builders were very critical of the costs of construction used by authorities to calculate the value of the bond required and argued that they are almost always inflated:

“The key issue with bonding is the prices as in the s38 and s104 agreements authorities grossly inflate the cost of the works. We say to authorities that the more they do this the more they tie up money companies then don't have access to and it

reduces the funds available to invest in land and development. It is a front line cost. They also insist that they are in place longer than is needed". (House builder 5)

"Costs should be based on developer costs not the authorities' inflated costs. The difference is huge. We estimated that the difference between house builder costs and authority costs used to set bond requirements takes about £400 million out of the bonding market". (House builder 5)

House builders are pricing work for new construction and are likely to have secured the most competitive tender, but authorities are more likely to use the prices submitted by their term maintenance contractors for repairs which will be higher.

Where the costs on which the authorities base their bond requirements are too high, the house builder may divide a scheme to ensure the bond is within their limits:

"Most local authorities decide the cost of the construction and want a bond for that amount. But this can be over £1 million and not even on a big site, so we have to split it into two so that the bond is not too large. And this is only on a road 135 metres long. The local authority costs they base bond requirements on are unreasonable. The bonds are too large so we have to split them up". (House builder 4)

Many authorities also require commuted sums related to highway construction and many house builders argued that these are prohibitively expensive:

"Particular problems can be the terms and conditions they try to get into the s38s. Payment for commuted sums can be eye-watering amounts e.g. for the future maintenance of highways and for out of spec items where they are charging the equivalent of £1,500 per dwelling as a commuted sum". (House builder 5)

It is common for authorities to put time limits on s38 agreements, for example, two years. When this time period is overrun, some authorities require an increase in the bond and/or fees, which house builders felt was unfair and did not take into account the realities of how long it can take to build a site out:

"Local authorities set limits on the agreements. Two years is common. Then they say if it is not ready for maintenance or adoption they require the bond to be increased by 10%. Or if you extend the agreement they add 10% for inflation. But on a large site they forget the vagaries of the market place. During the recession the time to finish developments has increased to 5, 6 or 7 years. Then the agreements and bonds are overrunning". (House builder 5)

The majority of house builders said that reducing bonds at intervals was not a difficult process, but that this can vary between authorities and, whilst bond levels can be reduced in some cases, they were still felt to be high relative to the amount of construction left to complete:

"The stages of bond reduction also vary and can be a problem. They don't track construction on site and you can find a disproportionate level of bond in place relative

to the work needed to complete the works. Some will negotiate. Some authorities have two stages, on maintenance and on adoption. Some say they will reduce on reasonable requests". (House builder 5)

House builder 7 produced documentation showing analysis of nine sites with the estimated cost of works outstanding compared to the reduced values of bonds and the cost of the works outstanding was covered eight times by the remaining bond values.

All house builders described delays and problems in having roads adopted at the end of maintenance periods which leads to overrun fees on bonds, as discussed below.

### **7.7 Obtaining bonds**

Most house builders had not experienced any particular problems in obtaining bonds. As mentioned above the high costs and large bonds required by authorities on large developments can mean that some agreements and bonds have to be split in two to manage the bonds so as to stay within their bond limits. For some large house builders there is ongoing awareness about reaching bond limits and a focus on getting old schemes finished and the bonds released:

"We have been close to the NHBC limit. We have a plan in place to manage it and get the older sites off the books and release the bonds. But as we have got busier this has got more difficult as we still have old jobs on the books that we can't get off and the bonds are still live, often as they are still in their maintenance period". (House builder 4)

### **7.8 Bond providers**

Most of the housebuilders use or have used NHBC and found the process of taking out bonds straightforward. Some have used other providers.

The cost of SMEs obtaining bonds from providers other than NHBC was described as prohibitively high:

"At the moment this is about SuDS and MBS (mandatory build standards) and the potential requirement for 100% bonds, but we do not have access to this level of bonding. I looked at what it would cost a SME and it is about £450 per dwelling to access bonds in the corporate market. The NHBC has limited availability". (House builder 5)

### **7.9 Why bonds overrun**

Other than the upfront administration cost, bonds provided by NHBC are free unless they overrun. Many bonds do overrun and therefore incur charges.

House builders said that the majority of developments will take longer than the agreement negotiated with the authority. Some try to avoid incurring overrun fees by over estimating the length of the proposed development:

"When you fill the NHBC form in there is a box that asks the proposed length of build and duration. The fees are based on this box on the form. I tend to put a couple of

years on it. So if I think the build will take two years I say four to try and avoid overrun fees. The problem is that once you send the form in, and it is pretty basic, it is based on that. It is easy to send it. But if you are honest about time then there are likely to be overrun fees". (House builder 4)

In some cases bonds overrun because house builders forget that they are still outstanding. This can occur where monitoring systems are not in place and when sites change hands over time and outstanding issues are forgotten about:

"I don't know what is on site, I just check what is outstanding, whether we are coming up to a reduction in a bond at a certain stage, contact the site, badger the contact to get the development certificate and get them to send it to me so I can send it to the NHBC. This is a new process in the last year or so prompted by the bond limit getting tight and having no process in place to manage it. We didn't know until then how many outstanding bonds we had. If they finish on site and there are no obvious issues then they move on to the next site. But then no one checks to see when the 12 months maintenance period is up. All the onus is on the developer to get the certificate. It is up to us to chase, to contact the local authority and get the inspection, but we didn't have a process for doing it so sometimes no one did". (House builder 3)

Most house builders said that a key problem was local authorities not inspecting roads quickly enough at the end of the maintenance period, and not re-inspecting them quickly enough once remedial work had been carried out. They said it was common for there to be delays in authorities inspecting infrastructure, by which time further repairs were needed, and that this process of repair and re-inspection can go on for a long time:

"Getting bonds released is a pig. By the time the local authority gets out to check the work, they find something else wrong so it just goes on and on. Trying to get bonds reduced at phases is not usually a problem. It is getting the bond released at the end that is the problem". (House builder 2)

"But it is still difficult to get them cleared at the end. For example, they want you to come and mend a chipped kerb at the end of the maintenance period, so you fix it but by the time they come back to re-inspect it they find something else wrong and it can go on for ages". (House builder 1)

"Another problem is where we have done remedial works and the local authority comes out to check it, but they don't look at the list of what we were doing and they come away with a new list. And so it goes on.... Sometimes we try and get round it. If there are street lights we say we know that sometimes bulbs go out, so if there are a couple out here is £500 to do it, then can that be the end? That sometimes works but others will say 'over my dead body am I doing that for you'." (House builder 5)

However, some house builders acknowledged that it was their own internal systems for carrying out necessary repair work for adoption that was slowing the process down and incurring overrun fees. For example, there were sometimes such delays in securing funds for remedial works that by the time finances were in place, additional repairs were necessary:



“The biggest problem is that we do the remedial inspection with highways and get the work priced. But it needs the directors to sign it off and this is slow and can take months. Then in this time more problems occur like the bin lorry smashing a kerb and we have to go back and get sign off for the remedial funds again. This is an internal problem. It takes too long internally to get sign off to spend the money on remedial works. So we end up going to and fro to get the remedial works done for adoption and rarely get it done in one go”. (House builder 4)

In some cases house builders acknowledged that they do not go back to a site to do the necessary repairs to enable adoption once they are building houses on a new site:

“Delays can be caused by our availability as well as the local authority and [X] Water. When we finish on site we move on to the next one and it is an issue getting back to the historical site to make sure it is inspected and the bond released”. (House builder 3)

Large schemes are often a cause of bonds over running and incurring fees as secondary roads cannot be adopted before spine roads:

“You also can’t get estate roads adopted if they go onto an unadopted main road. This is a problem on big schemes of 2,000 units plus where the main spine road has to be adopted before the secondary roads can be”. (House builder 1)

“Big sites can cause delays if you are the poor soul at the top end you have to wait a long time until the others are adopted”. (House builder 5)

Some authorities will adopt roads if the sewers are not adopted, but others will refuse, which causes delays:

“In general, local authorities are reasonable about reducing bond amounts and are willing to adopt roads without the sewers being adopted. [Anonymised local authorities] will all adopt roads with unadopted sewers, but others are not so willing”. (House builder 6)

Land ownership issues can delay adoption and cause bonds to overrun:

“Lots do overrun. On s104 for sewers it might be that you have a pumping station on site but there are land ownership issues as there is a sliver of land with third party ownership. There can be genuine issues like this that prevent adoption. For highways third party land ownership can restrict access”. (House builder 5)

The legal and land ownership issues are the most difficult problems, getting repairs done is an organisational issue, but legal problems can take a very long time to resolve.

### **7.10 Monitoring bonds**

The systems in place to monitor and manage bonds vary between house builders. In some cases monitoring is relatively recent and was put in place after bond limits were almost reached, leading to closer attention being paid to older schemes with outstanding bonds:

“The problem came when we got close to our bond limit and needed the bond capacity so I was tasked with looking at the historical ones.....It is a case of managing the process and historically we have not had anyone managing it so no one kept an eye on them. We have lots of historical sites which are finished but the final admin just never got done”. (House builder 3)

The NHBC reports are useful in identifying outstanding bonds:

“The monthly report has been useful in identifying the historical ones. I have to point out the implications if we leave them, like reaching the bond limit. There are not many sites where any actual works are needed. They just need an inspection and getting signed off which needs chasing. But no one was monitoring these things so it did not get done”. (House builder 3)

Monitoring focuses particularly on old schemes and on trigger points for reduction in bonds when construction reaches a certain stage:

“We have limits with the bondsman and we try to get them knocked off as quickly as possible. It takes up bond capacity and it is good practice”. (House builder 1)

“We have an adoption bible. The sheet relates to the NHBC bond sheet and is colour coded and includes the bond value and overrun fees. It gives us an idea of where we are at and the cost. We look on the basis of the overrun fees and target them accordingly”. (House builder 4)

### **7.11 Potential liabilities from failure to achieve adoption**

If roads, in particular, remain unadopted and in the hands of the builder, then there may be potential liabilities for house building companies in the event of any accident or injury occurring to a member of the public. One major house builder commented that:

“We are increasingly aware that there is a potential liability for us if an accident were to occur to a member of the public on an unadopted road”

### **7.12 Bonds in financial accounts**

Overrun fees can cumulatively have a significant financial impact in companies’ financial accounts:

“It is a job cost. What we pay for the actual bond is what is in the accounts. Overrun fees become job costs and increase the cost of the scheme”. (House builder 1)

“We chase on old sites. These can be fees of £1,000 a quarter for every site so it is a large amount. The finance guys notice and chase. It is a large amount against a site that is finished and closed”. (House builder 4)

### **7.12 Improving the system**

House builders had some suggestions about what would improve the current system. Greater consistency between authorities would help, as would basing the estimated cost of

construction and therefore bond on the developers' costs rather than the authorities charging schedule. Ensuring that the relevant authorities are involved in pre application discussions was considered useful:

"Highways and water authorities should be part of the pre-application process. The current situation is that you can go through the pre-application, it gets approved, you do the detailed designs for the site, it gets approved and highways, etc do not object. But the moment the designs are submitted for s38 technical approval then highways come back and say we don't like it. Technically you should re-enter the planning process if this happens. It delays the process". (House builder 5)

There were mixed views on whether a standard s38 agreement would be useful. Some felt it would speed the process up, others that it was impractical:

"A national standard would not be practical as all local authorities and sites are different". (House builder 3)

"A standard s38 would help, if it was brokered with highways and sewer authorities and we had a model agreement". (House builder 5)

One suggestion was to change the system from bonds being required on a scheme-by-scheme basis to a system of an over-arching bond for each house builder, or a local or national pot that builders contribute to:

"You could have one bond specific to the house builder e.g. £15 million for everything the house builder does. Then site-specific bonds could refer to the main bond agreement. But it would be £15 million not £150 million. One over-arching bond rather than individual bonds. Or perhaps an insurance company where we all paid into bonding provision for the services needed by the authorities". (House builder 5)

It was generally felt that whilst a system of insurance was needed to protect authorities and homeowners, bonds were rarely called in and so the risk was quite low, meaning that authorities could lower the bond requirements without being exposed to undue risk.

### **7.13 Summary of house-builder interviews**

Most developers self lay infrastructure as it is cheaper and easier to manage and control. They prefer to seek adoption as it is regarded as the preference of homeowners, but house builders do not find it onerous to set up management companies for unadopted roads. House builders are used to dealing with the different requirements between local authorities. Their biggest criticisms were that authorities are over-stretched and do not get agreements in place quickly enough so that developers build at risk, and that bond requirements were based on estimated costs of the works that were inflated far higher than the actual costs. Most bonds do overrun. In some cases this is because authorities are slow to inspect works and further repairs become necessary, but house builders did say that the incentive to return to a finished site to undertake remedial works can be low when they are focused on building out new sites for sale. Bonds also overrun when monitoring has not been in place and monitoring bonds is a new process for some house builders.

## 8. Infrastructure provision in other countries

As part of the literature review, the project reviewed the process for the provision of highway, sewer and water supply infrastructure in a range of other countries, both within the UK and beyond.

### 8.1 Scotland

#### 8.1.1 Highways

In Scotland, the bonding and adoption arrangements for highways are comparable to England and details can be found in sections 16, 18 and 21 of the Roads (Scotland) Act 1984<sup>13</sup>. Section 16 allows a home builder which has constructed a private road to apply to the local roads authority for the road to be added to the authority's list of public roads.

Provision of roads for new developments is controlled and consented by the local roads authority through the Roads Construction Consent (RCC) process, governed by Section 21 of the Roads (Scotland) Act 1984<sup>14</sup>. Under the terms of the RCC, having first secured technical approval of the designs from the local authority, the developer is obliged to construct roads over which there is a public right of passage to an agreed standard. Expenses will be payable by the developer to the roads authority to cover its reasonable costs in inspecting the construction of the works and associated testing. The Act sets out the obligations of the developer to construct the roads and maintain them for a set period, normally of 12 months. Following the satisfactory discharge of these obligations, the new roads can be offered to the roads authority for adoption. If the road is adopted, it will in the future be maintainable by the roads authority.

Section 17 of the 1984 Act makes the provision for a special regime for security to be provided in relation to the construction of private road works related to housing. This applies in the event that development includes the erection a new building or altering an existing building to provide private dwelling houses and those dwelling houses will abut a private road which has not been constructed or is not of an adoptable standard. In those circumstances there requires to be provided either a bond or funds deposited to cover the construction costs. Amendments have introduced the ability to reduce the scale of a bond, once specific sections of the works have been completed. So before any construction begins, the developer will normally be required either to secure the payment of the estimated cost of the road works under the requirements of the Roads (Scotland) Act 1984 or to make an agreement with the road authority under terms of the Act and provide a Bond of Surety.

#### 8.1.2 Water and sewers

Under the Water (Scotland) Act 1980 and the Sewerage (Scotland) Act 1968 Scottish Water are obliged to take their water mains and sewers to a point that allows connection to their networks, if practicable, at reasonable cost<sup>15</sup>. The Provision of Water and Sewerage

---

<sup>13</sup> [http://www.oft.gov.uk/shared\\_oftrreports/comp\\_policy/oft1020i.pdf](http://www.oft.gov.uk/shared_oftrreports/comp_policy/oft1020i.pdf)

<sup>14</sup> <http://www.scotland.gov.uk/Publications/2010/03/22120652/9>

<sup>15</sup> <http://www.scottishwater.co.uk/assets/business/files/connections%20documents/guideobtainingwaterandwastewaterservices.pdf>

Services (Reasonable Cost) (Scotland) Regulations 2006 determines what that reasonable cost contribution should be.

In accordance with the Water Industry (Scotland) Act 2002, Scottish Water is required to meet the costs of providing strategic capacity required for new developments (Part 4 infrastructure) and customers are required to meet the costs of providing additional local capacity (Part 2 and 3 infrastructure), subject to a reasonable cost contribution from Scottish Water. Part 1 is the connection from individual premises to a water main or sewer, is the responsibility of the developer and no financial contribution is required. Part 2 is the water mains and sewers that connect developments e.g. a street of houses to trunk mains and trunk sewers and some sustainable urban drainage systems (SuDS). Part 3 is the local bulk infrastructure, such as trunk mains and trunk sewers, water service reservoirs, waste water pumping systems and some SuDS. These are also the responsibility of the developer but a financial contribution is required.

Extensions or upgrades to the Part 2 or Part 3 elements of the existing water and wastewater networks will be funded by the customers, subject to a contribution from Scottish Water, to take account of the future income that will be received from the new connection. A contribution is available for all new connections whether a new development or a first time connection to an existing property. However, it is not available for the adoption of existing private assets or for the upgrading of existing private infrastructure to adoptable standards.

Scottish Water publishes a Scheme of Charges agreed with the Water Industry Commission (WIC) covering charges associated with site servicing. A separate charge is levied for each of the services (water and waste water). For payment of fees regarding sewer connections, Scottish Water expects full payment with the application form at time of submission. For water connections, an advance request for payment of fees is issued at the time the application for connection is approved.

To fund the costs incurred in complying with the Regulations, an allowance has been included by the Water Industry Commission when determining Scottish Water's scheme of charges for general customers.

## **8.2 Northern Ireland**

### **8.2.1 Highways**

Northern Ireland also requires a bond to be taken out by a developer when roads are constructed for new housing. The Private Streets (Northern Ireland) Order 1980 was brought in to protect homeowners by placing a duty on developers to consult with Roads Service on the design of the street and ensure it meets their standards<sup>16</sup>. Developers must also take out a surety bond before they begin construction to ensure Roads Service can complete the works should they be unable to.

---

<sup>16</sup> <http://www.niassembly.gov.uk/Documents/RaISe/Publications/2011/Regional-Development/15511.pdf>

### 8.2.2 Water and sewers

Northern Ireland Water is the sole provider of water and sewerage services. There is a set of standard infrastructure charges for connection to the water and sewer infrastructure when developers arrange for the water and sewer pipes to be laid, or they can pay Northern Ireland Water (NIW) to supply the infrastructure<sup>17</sup>. An application can be made for an Article 161 agreement for the adoption of a development drainage system at a future date provided the sewers are constructed to a satisfactory standard. Bonding arrangements are required to the value of 40% of the estimated cost of gravity sewer based on NIW's schedule of rates (with a minimum of £2,000) and 50% of estimated cost of pumping stations and pumping mains (with a minimum of £5,000). Bonding arrangements are required to the value of 40% of the total estimated cost of installation of the self-lay water main based on a schedule of rates prepared by NIW to cover the discharge of any obligation on the part of the applicant (minimum of £500). For diversion of a water main a 100% security bond may be required to cover the cost of the works in the event the applicant defaults.

### 8.3 Netherlands

The Netherlands has a three-tiered planning system with a strong emphasis on local decision-making, formal proceedings and informal consultation between levels<sup>18</sup>. Dutch provinces and municipalities all have the same statutory powers, including those to purchase undeveloped land, install the necessary services and parcel it up for sale to private developers at a price that covers the costs. However, in recent years there has been a move away from public sector-led development to more market-oriented approaches.

In the past, there were strong links between planning and housing policies, with a single ministry responsible for both housing policy and spatial planning (Priemus, 1998). The supply of residential land was controlled by municipal governments, focusing on providing accommodation to meet housing needs (Vermeulen and Rouwendal, 2007). This was achieved through the 'active land policy' (Buitelaar, 2010) in which the bulk of the land designated for urbanisation was bought and sold by municipal land companies (van der Valk, 2002). This meant that local authorities owned virtually all the land for development, and they bought land, subdivided it, provided the infrastructure and the utilities, and sold off the subdivided plots to those who built the dwellings, such as property developers, housing associations or owner-occupiers.

Local authorities could use the municipal pre-emption right (compulsory purchase) to facilitate land assembly by designating an area within which a landowner who wanted to sell their property was obliged to offer it first to the municipality (Buitelaar, 2010). Initially this only applied to urban renewal areas but when land assembly for urban extension areas was inhibited by private land acquisition and speculation in the 1990s which led to rising land prices, the law was changed and its application was extended to greenfield locations.

Although in the past, the active practice by municipalities has been to acquire land, service it, parcel it up and sell it on to developers and housing associations at prices that cover costs

---

<sup>17</sup> <http://www.niwater.com/sitefiles/resources/developers%20services/dsmisccharges/niwater2014-15schemeofcharges.pdf>

<sup>18</sup> Monk S, Tang C, Burgess G, Whitehead C (2013) International Review of Land Supply and Planning Systems. Joseph Rowntree Foundation.

of the infrastructure and services, more recently this approach has been somewhat undermined by developers purchasing land from farmers before it has been zoned or allocated in local plans. As a result, the Dutch have explored other ways to cover the costs of service provision, including S106 in the UK, and the New Act has introduced similar powers with what are termed land servicing agreements. They operate very similarly to s106 but are restricted to infrastructure and service provision rather than affordable housing.

Until the 1990s this meant that local government was the main actor to construct roads, sewerage systems and other infrastructure. Since the 1990s changing economic and social circumstances in the Netherlands brought about a shift towards greater involvement of private market parties on the land market, which resulted in an increasing number of developers building roads, etc. However, research showed that most building land was still supplied publicly. Due to the global financial crisis private involvement has decreased again. Sewerage is often part of land development agreement costs, but the costs of utilities are not part of regular land development costs. The utilities providers have connection charges and network fees. Bank guarantees are often used in the transfers of public works.

#### **8.4 USA**

Transportation infrastructure in the USA is paid for largely through user-related taxes and fees that are dedicated to construction and maintenance<sup>19</sup>. The major source of funding for federal highway and transit investment is the Highway Trust Fund (HTF). Taxes paid by highway users are credited to the HTF and are used solely to pay for highway and mass transit improvements.

Performance bonds guarantee that contractors complete projects according to contractual terms<sup>20</sup>. If a contractor fails to do so, the project developer can make a claim on the bond to access funds that can be used to pay a second contractor to finish the job. The federal Miller Act requires that performance bonds be used on all federally funded projects worth \$100,000 or more. Many jobs involving private property projects also take advantage of the protection provided by performance bonds<sup>21</sup>. Some lenders may even insist on them.

Impact fees (also known as development impact fees, system development charges and connection charges) are charges levied on new development to pay for the construction of off-site capital improvements that benefit the development, which usually includes water infrastructure.

#### **8.5 Australia**

Development contributions are effectively a tax on development land in the Australian context, these first emerged after the Second World War when private developers wanted to share the costs of the infrastructure needed to support the boom in housing construction<sup>22</sup>. The ability to levy contributions as a condition for planning permission has since been incorporated into State and Territorial planning legislation although the approaches vary between different areas. In addition, several kinds of more general charges are levied

---

<sup>19</sup> <http://www.artba.org/about/transportation-faqs/#1>

<sup>20</sup> <http://www.suretybonds.com/contract-bonds.html>

<sup>21</sup> <http://www.constructionlawtoday.com/2010/08/what-are-performance-bonds-and-how-do-they-work/>

<sup>22</sup> Monk S, Tang C, Burgess G, Whitehead C (2013) International Review of Land Supply and Planning Systems. Joseph Rowntree Foundation.

through the planning process to contribute to the costs of shared urban infrastructure<sup>23</sup>. These charges are not tied in such formal ways to landholder 'windfalls' following planning approval, or to the impacts of development (although impact formulae are used sometimes in their calculations). The charges are fixed and non negotiable. They are used to contribute to, or meet the whole cost of, basic service requirements such as utility connections, and also infrastructure such as local roads, footpaths, open space and community facilities.

When local authorities approve a development application, the applicant may be required to pay an infrastructure charge to the local authority. The State sets a limit on the amount a local authority can levy a development for local infrastructure<sup>24</sup>. Local authorities still have the flexibility to set charges for their region provided the charges are below the maximum charge. Water supply and waste water infrastructure charges are set by water distributor-retailers. The local government and distributor-retailers total infrastructure charge is limited to the maximum infrastructure charge.

---

<sup>23</sup> [https://www.be.unsw.edu.au/sites/default/files/upload/research/centres/cf/publications/ahuriprojectreports/AHURI\\_PP\\_No109.pdf](https://www.be.unsw.edu.au/sites/default/files/upload/research/centres/cf/publications/ahuriprojectreports/AHURI_PP_No109.pdf)

<sup>24</sup> <http://www.dsdip.qld.gov.au/infrastructure-planning-and-reform/infrastructure-charges.html>



## 9. Discussion and conclusions

The legal framework that governs highways, water and sewer adoption is complex and has developed in a piecemeal manner over a long time. Some aspects of provision and adoption are governed by legislation but most is determined by local policy and practice. The adoption of highways, water and sewer mains is a well-established process. However, the process for the adoption of SuDS is still unclear.

The distribution of bonds which have overrun fees is heavily concentrated among a few firms, and significantly more concentrated than actual house-building output by the industry overall. The big issue is highways in terms of the number of outstanding bonds and overrun fees.

House builders complain that the estimated costs of the works used by authorities to calculate bond requirements are hugely inflated. But authorities argue that they need to be able to cover the cost of the works at a rate they would be able to secure if they had to undertake the works themselves. Interviewees suggested that house builders' costs for road construction were perhaps 70% of those of highway authorities, so the requirement for bonds at 100% of highway authority costs increases the value of the bond required, further squeezing bond limits for house builders.

Many bonds overrun and therefore incur fees. This is for numerous reasons; there can be delays on both the side of the authority, e.g. in getting out to inspect remedial works, and on the side of the house builder, e.g. in returning to a site to complete repairs to enable adoption.

A major house builder commented that they were also aware that the failure to obtain adoptions, particularly for highways, was exposing them to significant additional risk in the event of possible injury to a member of the public.

Overall, the current system appears to offer poor protection for the consumer, with roads remaining unadopted for years, which can create problems when repairs are needed and it is not obvious who is responsible.

House builders do have systems to monitor bonds but in some cases this is a new process and there have been sites incurring overrun fees that had been forgotten about over time and as sites and companies change hands.

House builder interviewees commented that the business model of the industry meant that once the last property on a site had been sold, the emphasis would switch almost entirely to opening up the next site: staff would move on, leaving any remaining issues on the sold and occupied site as a low priority for further attention and staff time.

It appeared from the house builder interviews that the main motivation to deal with adoptions was to bring the total of outstanding bonds for a builder below their bond limit, thus allowing further bonds to be taken out. The cost of overrun fees was a relatively minor consideration, perhaps because whilst the per annum cost for an individual outstanding bond was low, the

cumulative cost was not taken into consideration, and may be higher than the actual cost of outstanding repairs.

From the interviews with house builders, it seemed clear that, while completing basic maintenance works was essentially a matter of simple organisation and prioritisation, there were other, more complex, issues that could delay adoption. These appeared to be largely legal issues over land ownership, which would very often require more time and resources than the value of the remaining bond, or the cost of overrun fees.

It is very rare for an authority to call in a bond. It is regarded as time consuming and difficult and often the outstanding value of the bond would not cover the cost of bringing the road to adoption standards. Nearly all interviewees among the house builders commented on the effect that cuts in local authority expenditure had had in reducing staff numbers, particularly in 'backroom' activities such as highways.

## 10. Contacts

For more information about the research please contact:

Dr Gemma Burgess  
Senior Research Associate  
Cambridge Centre for Housing and Planning Research  
Department of Land Economy  
University of Cambridge  
19 Silver Street  
Cambridge  
CB3 9EP

glb36@cam.ac.uk  
01223 764547

Michael Jones  
Research Associate  
Cambridge Centre for Housing and Planning Research  
Department of Land Economy  
University of Cambridge  
19 Silver Street  
Cambridge  
CB3 9EP

01223 337 128  
fmj22@cam.ac.uk

## **11. Appendix**

### **11. 1 Interview schedule: road bonds (Highway authorities)**

1. In what circumstances would a bond be required?
2. Who takes out bonds (types of builder)?
3. How is the size of the bond determined?
4. What other fees are charged?
5. How long does the bond last?
6. Who is responsible for monitoring to reduce the bond?
7. Who is responsible for monitoring to adopt the road when completed?
8. Any issues with the adoption process?
9. Is the bond then closed – how long is the maintenance period during which a % of the bond is still held?
10. In what circumstances would you call on a bond?
11. Have you even called on a bond?
12. NHBC has a proportion of bonds that are very old, but have neither been called in by LAs nor closed by developers – why might this happen?
13. Do builders complain about bonds?

## 11.2 Interview schedule: housebuilders

1. Most builders use the 'self lay' option for constructing roads and sewers, rather than have them built by the highways authority or the water company: what are the reasons for doing this? (Is it cheaper, is it easier to phase the work at the pace of sales, is it less administrative hassle, etc)
2. We assume that sewers are always adopted, but in some cases (such as apartment blocks) private, unadopted, estate roads may be preferable, which would then not require a bond: do you have any experience of providing unadopted roads?
3. And if 'yes', did this raise any problems (e.g. setting up a management company, procuring a maintenance contract, etc)?
4. Are there problems in having to take out bonds for roads and sewers? (Cost, time to arrange, local planning authorities that put time limits on agreements, delays in reducing bonds or achieving adoption)
5. Different highway authorities and water companies have different requirements for bonds (% of contract sum, willingness to reduce as work proceeds, etc). How significant are these differences? Would an agreed national standard be useful?
6. Have you experienced any problems in obtaining bonds (reached financial limits, etc)?
7. Do you use any bond providers other than NHBC?
8. If 'yes', which ones? And how do they compare (terms, costs, ease of administration etc)?
9. Other than the upfront administration cost, bonds through NHBC are free unless they overrun – why do bonds over run and therefore incur charges?
10. What systems do you have in place to monitor and manage bonds?
11. How are bonds treated in your financial accounts (does the total value outstanding, or the overrun fees have any significant financial impact)?
12. What would improve the current system? Do you have any examples of good practice?