

Appendix 4 – Cognitive testing summary

This appendix summarises the main findings from the survey design and testing phase, involving ten cognitive interviews.

A4.1 Objectives

The purpose of the design and testing phase was to:

- Test whether participants understood what the survey was about and what its purpose was;
- Understand what and how much contextual information was required by participants;
- Test the layout and appearance of the survey;
- Test how much effort was required to complete the survey;
- Assess the relevance of visual materials;
- Assess how easy or difficult it was to complete, and to assess the clarity of instructions; and
- Understand the thinking behind how participants made their choices.

A4.2 Research process

The survey design and testing phase utilised ten cognitive interviews undertaken in February 2022. The cognitive interviews were conducted online, and as an assessment of visual stimulus was required, Zoom was used to achieve this.

The testing phase assessed all the survey materials (questionnaire wording and showcards) to check they were clearly understood by participants. It sought to clarify any ambiguities and ensured that information could be presented in the most meaningful way to participants. It therefore played a crucial part in making sure the survey was fit for purpose before moving on to the pilot stage of the survey.

In terms of recruitment, all participants had to be solely, or jointly, responsible for paying their household bills. In addition, a broadly equitable split in terms of age, gender and socio-economic group was desirable and was duly achieved.

A4.3 Key findings

A4.3.1 Survey understanding

Overall, participants understood what the survey was about and what they were being asked to do. They cited various responses as summarised in Table A2.1, with direct quotes in Box A2.1.

Table A2.1: Purpose of survey summary

Purpose of survey	No. mentions
How brownfield sites could be redeveloped	7
Willingness to pay for Brownfield redevelopment	7
What factors are important in redeveloping brownfield sites (e.g., cost, safety)	4
Importance of redeveloping brownfield sites	3

Box A2.1: Quotes around the purpose of the survey

How brownfield sites could be redeveloped

"To find out what people are interested in when it comes to redeveloping brownfield sites"

"Gauge which sites could be redeveloped"

"Asking opinions on what I would like to see and what possibly could happen"

"...to see what facilities could be offered in the redevelopment of brownfield sites"

Willingness to pay for brownfield redevelopment

"Whether people are willing to pay for brownfield redevelopment"

"What people are willing to pay for brownfield redevelopment"

"To get views on using public money being used to fund redevelopment"

Importance of redeveloping brownfield sites

"Gauging if brownfield sites are important to redevelop"

"To understand the value I would place on redeveloping brownfield sites"

What factors are important in redeveloping brownfield sites e.g., cost, safety

"To understand which factors are most important in terms of brownfield redevelopment"

"What are the criteria for deciding on brownfield redevelopment"

A4.3.2 Views on Homes England consulting the public

Overall, participants thought it was a good thing that Homes England was consulting the public about redeveloping brownfield sites, and particularly providing participants with various choices (Box A2.2).

Box A2.2: Quotes on Homes England consulting the public and how results would be used.

Consulting the public

"It's good, I'm all for it, asking people what they prefer, rather than what they want and just giving it"

"It's a really good thing; it puts things into perspective on what's most important"

"It's empowering because we're contributing to what's going to impact us and others"

"...fair enough, not an obvious answer, you're forcing people into a decision about what's important, or not..."

"Any public consultation is good, but what happens afterward is the big thing"

How results might be used (positive) –

"To inform decisions of which projects to invest in, and which not"

"I hope they do listen and bear in mind the things that matter to local people..."

"Hopefully they'll get an overall view from a cross section of society about the wants of brownfield sites"

"I'd like to think they'd consider and analyse all the data"

How results might be used (negative)

"Not sure, nine times out of ten if the government wants to do it, they just go ahead; not sure they'll take much notice"

A4.3.3 Ease of survey completion

Participants found the survey easy to understand and straightforward to complete. As well as having a clear and concise layout, participants felt the subject matter was interesting, and something they could easily engage with (Box A2.3).

Box A2.3: Quotes on survey ease

"It was very clear where the survey was taking you"

"...succinct, easy to follow"

"...layout was simple, the questions and answers giving good options to choose from..."

Overall, the information provided on the showcards was clear, and crucially, it provided useful context to inform participant's answers. Detailed commentary on the showcards is provided in the following sections highlighting what worked and what elements needed amending and / or removing.

One or two participants were challenged by the DCE task, taking their time to ensure they had understood the choices correctly. Further details about completing the choice task are detailed later in section A2.3.7.

A4.3.4 Contextual questions about the local area

Participants had no issues with questions relating to their local area (Box A2.4). These included asking participants to describe the characteristics of their local neighbourhood, whether there were any brownfield sites nearby, and if so, what was the previous use of those sites.

Box A2.4: Quotes on describing local area.

"Know the area exactly off the back of my hand"

Some participants felt that the terminology of local area being equated with neighbourhood might be misleading, as these could potentially be different land types depending on the size of the location (e.g., village, town or city).

A4.3.5 Characteristics and examples of brownfield sites

A variety of cards and descriptions were shown to participants providing examples of previously developed land (Figure A2.1), the characteristics of brownfield sites (Figure A2.2), as well as some examples of redeveloped brownfield sites (Figure A2.3) and the typical features they comprise (Figure A2.4). All of these showcards were considered very clear, helpful and relevant. Participants also felt the words and pictures complemented each other and one participant commented on how titles were very good, *'hitting the nail on the head so you understand straightaway'* (Box A2.5).

Box A2.5: Quotes on brownfield descriptions

"They were helpful and realistic, they had impact and are telling a story"

"The information was really helpful, although it would have been good to have more rural, semi-rural developments"

On rare occasions, the odd participant thought that the similarities in outcomes were too difficult to differentiate from the various types of brownfield site being redeveloped.

Examples of previously developed land



Upper left: Icknield Port Loop in Birmingham. Abandoned industrial and commercial site of 23 hectares.

Upper right: Houlton (Warwickshire). Rural site with abandoned agricultural and industrial buildings.



Lower: Hackney (London). Underused council estate.

Figure A2.1: Examples of brownfield sites (remained unchanged throughout the three phases of cognitive interviews).

Phase 1 & 2 wording and layout

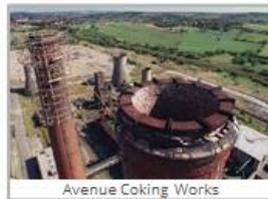
Brownfield sites come in different forms. Here are two common negative characteristics that might be found at a brownfield site:

- Contamination – contamination from chemicals, heavy metals, or other substances from previous use for the site. This contamination can be harmful to the environment and people.
- Damaged or condemned buildings – abandoned buildings often fall into disrepair after time, leading to unsafe conditions and negative visual impacts to the surrounding areas.

There are many other negative aspects of these sites such as underuse (i.e. mostly vacant car-parks), social blight (i.e. the space is used for anti-social behaviour), or land-degradation (i.e. green space that is currently in poor condition).



Heygate Estate – London



Avenue Coking Works

Phase 3 wording and layout

Some features that might be found at a brownfield site are:

- Damaged or condemned buildings – abandoned buildings often fall into disrepair after time
- Underuse (e.g. mostly vacant car-parks, empty apartments, or empty store-fronts)
- Social blight (e.g. the space is used for anti-social behaviour)
- Land-degradation (e.g. park space that is currently in poor condition)
- Rare cases of contamination – contamination can be harmful to the environment and people and would need to be cleaned or removed if on site

Figure A2.2: Characteristics of brownfield sites

There were some minor amendments to the wording and layout of the text in Figure A2.2. In terms of the of the layout, some participants suggested that the block text utilised in phases one and two *'had too many words'*, *'was not punchy enough'*, and *'needed to be more concise'*. As such, bullet points were introduced for phase three which helped make the text more engaging to read.

Another tweak made between phases two and three was the order of the text. In the first two phases, it was felt the text on contamination did not relate to the picture next to it. As such, for phase three, the contamination text was placed next to the 'coking works' picture.

Examples of brownfield redevelopment



Upper: Houlton (Warwickshire). Previously a rural site with abandoned agricultural and industrial buildings.

Lower right: Ancoats (Manchester). Previously home to several dilapidated cotton processing factories.



Lower left: Wapping Wharf (Bristol). Previously the site of a disused car park.

Figure A2.3: Examples of brownfield redevelopment (remained unchanged throughout the three phases of cognitive interviews).

Phase 1 & 2 wording and layout

The primary goal of Homes England when redeveloping brownfield sites is to remove the negative aspects of the brownfield site (such as condemned buildings) and provide new or refurbished homes. However, as a part of these projects, improvements are also made that will benefit the local community. Some examples include:

- New walking paths
- New or expanded park spaces
- Space for nature, such as ponds or greenspace
- Public improvements, such as new community centres or sports facilities
- Improved local public transit or pedestrian travel options

Phase 3 wording and layout

The **primary goal** of Homes England when redeveloping brownfield sites is to **remove the negative features of the brownfield site** (such as condemned buildings) and **provide new or refurbished homes**. However, improvements are also made that will benefit the local community. Some examples include:

- New walking paths
- New or expanded park spaces
- **Playgrounds with play areas and equipment**
- Space for nature, such as ponds or greenspace
- Public improvements, such as new community centres or sports facilities
- Improved local public transit or pedestrian travel options

Figure A2.4: Features of redeveloped sites

Following feedback in phases one and two, an additional feature (highlighted in yellow) was provided in the final phase, and key points from the main text were highlighted in bold to emphasise them.

Prior to showing participants examples of various types of redevelopment, participants were asked about their experience of brownfield sites and the perceptions they had of those sites in regard to safety, being an eyesore and a waste of land. And, that if brownfield sites were to be redeveloped, what amenities would they like to see included as part of the redevelopment.

These questions were understood by participants and they suggested a variety of amenities that they would like to see as part of any redevelopment. These included:

- Shops/restaurants (9 mentions)
- Parks and green spaces (7 mentions)

Brownfield Development Values

- Sports facilities / leisure centre, including swimming (6 mentions)
- Ecozone / nature reserve (5 mentions)
- Playground / play areas (3 mentions)
- Affordable housing for a wide demographic (2 mentions)
- Affordable business space (2 mentions)
- Libraries
- Cycle paths
- Better bus service

The list above indicates that participants were very able to engage with the idea of new amenities for brownfield redevelopment. The rationale for participants' answers were focussed on benefits to the community, providing opportunities for all, rather than the individual alone (Box A2.6).

Box A2.6: Quotes on additional features

"It's about the whole community and thinking about the bigger picture"

"...creating a new community hub with a bustling high street..."

"I'd like to think that if they're spending huge amounts of money, they would ensure a good community spirit"

In relation to affordable housing, participants were especially concerned for younger people being able to get on to the property ladder.

One of the debrief questions asked how common or uncommon the images were in Figure A2.1 to Figure A2.4. There was a mix of responses with roughly a 50:50 split saying they were familiar / unfamiliar with such images in and around their locale (Box A2.7).

Box A2.7: Quotes on familiarity with brownfield sites as depicted in the survey

"We live close to Hull where there are lots of Brownfield sites, especially around the dock area, although quite a few of the buildings are listed"

"You see them everywhere – there's one in Ipswich town centre, and one on the waterfront"

"They are uncommon in my local area, but they've done loads in Leeds city centre in last five years"

A4.3.6 Example of redeveloped brownfield sites

Prior to moving on to the choice experiments, participants were shown examples of different brownfield redevelopments.

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In the first two phases of cognitive interviewing, Figure A2.5 (showing two general examples of redevelopment) was provided to participants. However, participants did not feel it was adding any value and included too much jargon like *'street hierarchy'*, *'amenity'* and *'net gain in biodiversity'*. The card was completely removed for phase three of testing.



Figure A2.5: Example redevelopments (removed for phase three).

As such, in phases two and three, specific examples of different types of brownfield redevelopment were provided including residential, commercial and industrial redevelopments as shown in Figure A2.6 (residential), Figure A2. 7 (commercial) and Figure A2.8 (industrial).

Figure A2.6 shows a before and after example of a residential brownfield redevelopment. There were some minor textual changes between phases two and three, which were to make the descriptions less ambiguous. For the example of a commercial brownfield development (Figure A2. 7). Participants were uncomfortable with the mention of *'contamination from old oil spills or previous chemicals use'* because they felt the terminology was too emotive and could therefore have a wrong influence on participants' perspectives. The industrial brownfield example (Figure A2.8) was altered between phases two and three of the cognitive testing to remove superfluous information and to provide more specifics about contamination, green spaces, and the type of homes.



Figure A2.6: Example of a residential brownfield redevelopment (highlighted texts marks changes).



Figure A2.7: Example of a commercial brownfield redevelopment (highlighted texts marks changes).



Figure A2.8: Example of an industrial brownfield redevelopment (highlighted texts marks changes).

A fourth example of brownfield redevelopment was provided in phase two only – ‘*derelict urban business or industrial areas*’ (Figure A2.9). Feedback was that it was too similar to the example of the industrial brownfield redevelopment shown in Figure 8; it also served to complicate the number and types of redevelopment examples. As such, this example was not used for phase three.

The contextual information provided in the previous section was considered enough to inform participants and enable them to make their choices. A small number thought there was a bit too much information to take in and that the material could have been condensed down.

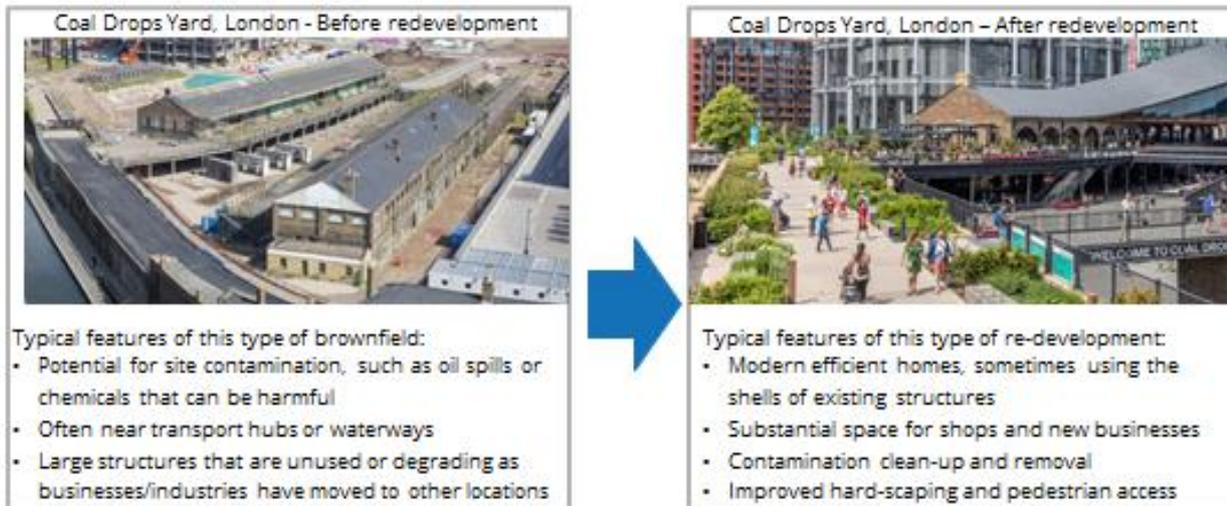


Figure A2.9: Example of a derelict urban business or industrial area

A4.3.7 Discrete choice experiment (DCE)

Clarity of instructions

Throughout the testing process, most participants found the instructions clear and easy to follow. There were two areas where participants would have liked a bit more clarification; instructing participants to read the title of each choice, and to ensure option C (no action, no redevelopment on these sites) was a credible choice, as some participants overlooked it.

Choice task attributes

There were between five and seven attributes tested depending on the phase of cognitive interviewing. Figure A2.10 details the attributes shown in the first two phases of testing, with the contamination attribute (highlighted in yellow) removed for phase two. The reason for this was that participants interpreted it in two different ways and because it had a disproportionate effect on participants' decision making.

- Site type – A description of both the previous use and the general nature of the site being considered for redevelopment.
- Distance to your home – A measurement of how close the site is to your home, both in terms of miles (kilometres) and in terms of walking time.
- Site size – A measurement how large the site is in terms of land area. The measurement used is hectares: one hectare is 100m x 100m, or approximately 1.5 standard football pitches.
- Current occupancy – A measurement the occupancy level of the site as a percentage of the total units on that site. Please assume that it is even distributed across use types if the site is mixed use.
- Current building condition – A description of the building condition for the majority of the buildings on the site.
- Contamination level – A description of the WORST contamination levels found on the site.
- Cost – How much the local authority tax for your household would increase on a yearly basis, from 2023-2042

Figure A2.10: Attribute definitions (first and second phases of testing)

In the third wave of testing, the number of attributes was reduced to five (Figure A2.11) with 'current

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occupancy' being removed as it caused confusion as to what it meant exactly (Figure A2.10). 'Brownfield site type' was also expanded, instructing participants to use the relevant rollovers to view the appropriate redevelopment.

- **Brownfield site type** – A description of the previous or current use of the site. **Each site type has a typical redevelopment, please refer to the rollovers to see this.**
- **Distance to your home** – A measurement of how close the site is to your home, both in terms of miles (kilometres) and in terms of walking time.
- **Site size** – A measurement how large the site is in terms of land area. The measurement used is hectares: one hectare is 100m x 100m, or approximately 1.5 standard football pitches.
- **Current building condition** – A description of the building condition for the majority of the buildings on the site.
- **Cost** – How much the local authority tax for your household would increase on a yearly basis, from 2023-2042

Figure A2.11: Attribute definitions (third phase of testing)

Choice tasks

During the first two phases of testing, example choice tasks like those in Figure A2.12 were presented, albeit without the contamination attribute in phase two.

Example: Two sites near you are available for redevelopment. If you select a site for redevelopment it will be developed into a primarily residential area, of high density, with public park area on 10% of the site, and pedestrian walkways with a central plaza available for public use. Please select your most preferred option:

You can hover over each attribute for a reminder	Develop Site A	Develop Site B	Neither
Site type	Estate in poor condition	Derelict urban business area	No Redevelopment
Distance to your home	½ mile (0.8km) or a 10-15 minute walk	¼ mile (0.4 km) or a 5-10 minute walk	
Site size	10 ha.	5 ha.	
Current occupancy	50% occupied	0% occupied	
Current building condition	Out of date, but useable	No usable structures	
Contamination level	Very little (no risk of health impacts)	Moderate (insignificant risk of health impacts, but will require remediation to redevelop)	
Cost (per year from 2023-2042)	£50	£100	£0
Selection	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure A2.12: Example choice task (first and second phases of testing)

In the last round of testing, the choice task changed (Figure A2.13) to reflect the revised wording and definitions of the attributes as shown in Figure A2.11. The major changes were: (i) the removal of both the 'contamination level' and 'current occupancy' attributes; and (ii) the clarification to the cost attribute to read 'cost per household per year' as opposed to 'cost per year'.

The cost attribute was explored in more detail in the cognitive debriefs to ensure participants had understood it correctly. Participants appreciated that redevelopment of brownfield sites would be funded via a local authority tax, participants were also clear that the cost was shown both as a monthly and annual payment, and most also understood that the redevelopment costs would have to be paid over the course

of 20 years, from 2023-2042.

Two sites near you are available for redevelopment. If you select a site for redevelopment it will be developed into:

- A primarily residential area with a variety of flats;
- Park or landscaped areas on 10% of the site with pedestrian walkways and a central area available to public use.
- Other features may be available depending on the brownfield type being redeveloped (see roll-over for more information).

Please select your most preferred option:

<i>You can hover over each attribute for a reminder</i>	Develop Site A	Develop Site B	Neither
Brownfield site type	Residential	Commercial	No Redevelopment
Distance to your home	½ mile (0.8km) or a 10-15 minute walk	¼ mile (0.4 km) or a 5-10 minute walk	
Site size	10 ha.	5 ha.	
Current building condition	Out of date, but useable	No usable structures	
Cost (£ per household per year from 2023-2042)	£5 per household per month (£60 per household per year)	£10 per household per month (£120 per household per year)	No Cost
Selection	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure A2.13: Example choice task (third phase of testing)

Ease of completion

Most participants found the choices straightforward to complete, some saying they were very easy. They understood what they were being asked to do in terms of choosing their preferred option. Two participants struggled with the amount of information they had to think about in order to make their choices. A couple of participants also found it quite hard to visualise and relate to the size of a football pitch to understand the size of the sites.

Trading behaviour

The way participants were trading off their most preferred option confirmed that participants understood what they were supposed to do in the choice experiments. A range of preferences were given for the various choice tasks, and all attributes were considered in all choices, some to a greater extent than others. Furthermore, participants were able to clearly articulate the reasons why they chose specific options.

Supplementary questions were asked about the three most and least preferred features of a redevelopment half a mile from their homes. These questions worked well, were easily understood and straightforward to answer, and were consistent with responses from earlier in the survey.

It is worth noting that all participants chose some form of redevelopment (either option A or B). In most cases this was a very deliberate choice. However, one participant did not notice option C, the status quo, but would not have changed their choice anyway. Another participant felt option C was not a credible option and reluctantly chose the cheapest option.

Willingness to pay

Participants provided a variety of reasons for why they willing to pay for one of the redevelopment options (Box 2.8).

Box A2.8: Quotes on reasons for choosing development options.

Improvement of the local area / community

"...it affects the whole community, not just me and my family..."

"...more sense of community for all types of people"

"Reinvestment into an area is a good thing; why wouldn't you? It's for the good of the area, community, nature and wildlife"

...removing and improving potentially dangerous, anti-social and ugly eyesores

"The brownfield sites near us are dangerous and have been empty for quite a while; something needs to be done"

"It's nice to see an area that's under/mis-used by anti-social behaviour redeveloped into something that everyone can benefit from"

"It will remove dangerous, unusable structures and improve the overall look of the area"

Increasing local home prices

"...because the value of your house will be increased when it comes to selling"

Increasing stock of affordable properties

"...shortage of housing and affordable property without doing greenfield redevelopment; it's not a big issue for a small contribution from local residents"

"It will help people on low incomes with affordable housing"

Improving the environment

"...renewing nature and giving wildlife the chance to flourish by rewilding and providing green spaces"

Participants who chose redevelopment options in the choice tasks were also asked if they would be willing to pay to have an additional one-hectare park included as part of the development. Most participants said they would be prepared to pay spend between £1 to £5 a month to support such a development.

Finally, the main reason for participants making their choices between was based on how they would improve the neighbourhood relative to cost.

Layout of choices

Participants said the choices were all clearly laid out in a tabular format and that the information was straightforward to understand. There was no need to stylise the display or add images to make it look more engaging (Box A2.9).

Box A2.9: Quotes layout/information in the choice tasks and including photos / visuals

"...saw the pictures before, so I was imagining those when I was answering"

"...does what it says on the tin"

"Images could confuse things, they're not required"

"Doesn't need to be overcomplicated with images"

The only thing suggested by participants was to use colours to differentiate between each of the options, however they understood this could potentially lead to bias in decision making.

A4.3.8 General points

Payment vehicle (council tax)

During the cognitive testing participants were asked whether the indicated changes in their council tax that might occur due to brownfield redevelopment were large or small amounts. All the participants compared the additional amount of tax to the current amount they pay. There was a mixed response, some saying it would not make a material difference to their council tax regardless of the annual or monthly cost, and others saying it was material, or might even cause financial stress (Box A2.10).

Due to other potential impacts on household expenditure, some participants compared the proposed increase in council tax to these other household expenses, and a small number were concerned about being under more financial pressure. Finally, some participants expressed unhappiness with increasing the council tax to pay for brownfield redevelopment based on how much they already pay in tax.

Box A2.10: Quotes on potential tax/cost increases for brownfield redevelopment

Responses indicating little material difference for bill impact:

"Am I going to notice the increase, not really"

"£100 over the course of a year, no"

"It won't make a big difference to my council tax"

"...it wouldn't impact; I wouldn't notice or fret about it"

Responses indicating some to substantial material difference for bill impact:

"Every little [bit] counts..."

"£18 a month more is too much in my mind, so I'd say £5 a month but no more"

"Yes, I did compare [to my existing council tax] and I already pay quite a lot"

Responses indicating concerns due to other expenses / household costs:

"I'm not keen on paying anything extra – incomes are being stretched: fuel bills, inflation, national insurance to pay for social care..."

"...even more expenses in addition to increases in electricity and the mortgage"

Responses for tax increase based on current level of tax:

"To be honest I pay so much already, but if something like this is communicated well and I can see the benefit, I'm happy"

"I'd be disgruntled if it was just more private housing, but if adding value, I wouldn't mind paying a sports centre"

Survey credibility and length

There was unanimity that the both the survey in general, and the choice tasks specifically, were credible. This was due to the clarity of questions and the background information that was provided. Two participants had a concern about the cost figures and wanted further clarification on why the costs were as presented. Some mentioned that the credibility of the survey would be enhanced once it was fully online. Finally, participants thought the length of the survey was 'about right' and 'absolutely fine'.

A4.4 Summary

Overall, the survey work well and was fit for purpose. Participants understood what was being asked of them and overall, they comprehended the various options for brownfield redevelopment as put forward by Homes England. Apart from a few minor tweaks to the text and how the information was displayed, all of which was discussed with the client prior to the pilot survey, it was recommended that the survey could be go live.