Housing Design Standards: Report from Housing Overview & Scrutiny Task & Finish Group

Chair's Forward

I would like to begin by offering a huge thanks to the councillors and the Tenants Panel representative who made up this working group. I am very grateful to have been party to an unusually interesting and detailed range of deliberations. Hopefully, you will see the quality of these discussions reflected in the report which follows. I also wish to put on record my gratitude and that of the rest of the Task & Finish Group for the extensive support we have had both from officers and outside experts. The methodology section below relates those to who we owe a particular debt.

This report rests on a foundation laid by a previous Task & Finish Group on this topic undertaken in 2018. Our brief was to review their recommendations in light of legislative changes and to incorporate energy efficiency and sustainability into the design in order to contribute towards the Council's emissions reduction efforts, as well, of course, as value for money. Our scope, set by Housing Overview & Scrutiny in November 2020, set out our purposes as follows:

- *Affordability for tenants (Rent/Council Tax/operational costs)*
- *Incorporate design requirements arising from the Hackett review which followed the Grenfell Tower disaster/ Fire Safety Bill.*
- *Align housing insulation and heating standards with the objectives of the September 2019 declaration of a Climate Emergency by this Council.*
- *Capture any other regulatory changes that have arisen since mid-2018.*
- *Take into account the Government's proposals for the 'Future Homes Standard' including the results of the consultation on Parts L and F of the Building Regulations.*
- *Aligning the Standards with new Council policies.*
- *Consider Post-Covid working from home provisions*[1]

Our overriding philosophy has been to find practical ways of being ambitious. Our Council tenants need better, more environmentally friendly homes, and soon. We hope that these recommendations and standards will help to guide us towards this outcome.

Councillor David Else
Chair of Housing Design Standards, Task & Finish Group (2021)

Executive Summary

This report makes the follow recommendations:

1. Retain the standards set out in Appendix A
2. New homes shall be built with alternative heat sources to gas boilers.

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1 https://modgov.waverley.gov.uk/documents/s38267/Scoping%20document%20Housing%20Standards%20Review%202021%20002.pdf

3. The design standards should be mindful of facilitating parcel deliveries and reducing the strain on those making deliveries of parcels and letters.
4. Set standards for the future and explicitly connect the Council's housing design standards and its asset management plan in order to avoid retrofits.
5. The Council implements the SAP 10 assessment methodology as part of the assessment process to deliver net zero carbon homes.
6. The Council should align its plans for future developments with the timeframes contained in the "LETI Climate Emergency Design Guide".
7. The Council should work with our contractors and their supply chains through the tender process to work to achieve carbon neutrality as measured by a RICS whole life carbon assessment by 2030.
8. All new properties developed by the Council should receive a SAP rating of 100 to enable them to be Energy Efficiency A-rated with an Environmental Rating 99A (CO_2 emission rate 0 ton/year) – net zero carbon in operation.
9. The Council should make the budgetary provision necessary to achieve the standards outlined in this report to deliver a net zero home in operation measured using Part L 2021.
10. That the Council should not pursue Passivhaus accreditation unless there is a compelling additional reason to do so, for example, if grant funding is conditional upon achieving it.
11. New occupants of any mechanically ventilated properties should be provided with sufficient information and training to ensure the property performs in operation as in design.
12. Build homes such that renewable energy can be generated on-site whenever feasible.
13. Build homes using modern methods of construction, for example, timber frame.
14. The Council shall update the standards for new build properties in light of Building a Safer Future: Independent Review of Building Regulations and Fire Safety (Final Report) [May 2018] by Dame Judith Hackitt.
15. The Council should seek and apply best practice in the design of space for refuse and recycling containers.
16. Addition of further in use sound test sampling as part of the Employer's Requirements.
17. All new Council properties should be built on the assumption that during their lifespan electric vehicles will entirely displace those powered by internal combustion engines. This means providing charging infrastructure on parking spaces provided on land owned or controlled by the Council. Where parking spaces are provided elsewhere, the Council should ensure the necessary conduits are installed to allow for the easy installation of charging infrastructure if the demand arises.
18. Where the scale of provision on a given site makes it feasible, the development should make a contribution to improving walk- and cycle ways in the area.
19. For properties with good access to public transport, the Council should assess the feasibility of planning policies that provide a degree of flexibility for the minimum number of parking spaces to include pull-in or visitor spaces for short stays by emergency and delivery vehicles in place of residents parking.
20. Developers design in an arrangement for tenants without in-curtilage parking provision to be charged for electricity supplied to communal parking areas for vehicle charging points.
21. That for any future Council-lead development, an assessment in light of the considerations in Building for a Healthy Life should be undertaken and published.
22. Work with appointed architects, contractors and Designing Out Crime Officers to improve the securing of buildings and adopt crime prevention measures.

23. For new builds to continue to achieve <105 litres of water per person per day.
24. The Council should facilitate rainwater harvesting through the provision of water butts and for larger sites consider the larger systems such as underwater storage tanks.
25. The Council should, as a matter of routine, survey tenants of new homes about their experience of living in them.
26. The Council should explore the possibility of engaging external expertise to use qualitative research methods including depth interviews and focus groups to gain a more nuanced understanding of the experiences of new tenants.
27. Implement a co-design process for new home with a representative from the Tenants Panel.
28. Officers should produce a user-facing brochure and update the technical employer's requirements based on the recommendations of the Group. The user-facing brochure should be considered and agreed upon with the Tenants Panel.

Methodology

The Group consisted of the following members principally from the Housing Overview and Scrutiny Committee: Cllr David Else (Chair), Cllr Richard Cole, Terry Daubney (Tenants Panel), Cllr George Hesse, Cllr Peter Marriott, Cllr John Robini, and Cllr Richard Seaborne. Cllrs Hesse and Robini were co-opted to broaden the geographic representation of the Group and in the case of Cllr Robini, to provide linkage to the Community Wellbeing O&S committee.

In addition to considering multiple documents from the Council, National Government and professional organisations, the Group took evidence from the following witnesses:

- Peter David (Strategic Asset Manager, Waverley Borough Council)
- Steven Milner (Building Control Surveyor Team Leader, Waverley Borough Council)
- Josie Thornewill (Head of Sustainability, Thakeham Group)
- Fotini Vickers (Sustainability Manager, Waverley Borough Council)
- Brandon Wipperfurth (Senior Sustainability & Energy Consultant, Darren Evans)

Another important development is that since 2018 the Council has completed the building of 82 new homes around the Borough most recently at Ockford Ridge at Sites A. The Group, therefore, had the chance to survey people who had recently moved into these homes and learn from their experience of living in homes developed by the Council. The survey, which attracted a modest number of responses, is set out together with details of the responses, in Appendix B. Assistance with this survey was provided by Adrian Fennell, Ian Mackie, and Anita Sheppard.

The Group also had ongoing support from the following officers: Louisa Blundell (Housing Development Manager), Georgina Hall (Democratic Services Officer), and Mark Mills (Policy Officer [Scrutiny]).

Rationale and Overarching Principles

Waverley Borough Council first introduced design standards for new-build council-owned properties in 2014. Continuing progress in building and architectural delivery requires that housing design standards are reviewed on a regular basis. In 2018, a previous Task & Finish group updated the design standards which would apply to homes built by the Council. This report summarises the 2021 review work carried out by a Task & Finish Group (the Group) of the Housing Overview and Scrutiny Committee aimed at refreshing the standards recommended in that report with a particular

emphasis on improving energy efficiency in support of the Council's September 2019 target of new build homes attaining net-zero carbon operations by 2030.

The most significant development since the 2018 standards review has been that the Council has declared a Climate Emergency. Waverley Borough Council's Carbon Neutrality Action Plan 2020 - 2030 states that: *"We are committed to becoming a carbon-neutral council and doing everything in our power to ensure that Waverley is a carbon-neutral borough by 2030. We fully appreciate that meeting the target of carbon neutrality by 2030 will be challenging and it relies heavily on action beyond the council's control, but it is extremely important that we do everything we can within our power to work towards achieving it."*[2] The Indicative Action Plan includes a high-level target to: *"Ensure that all new council homes be carbon neutral by 2030".*[3]

Delivering this commitment demands making homes in Waverley – including council homes – significantly more energy efficient. Nationally, emissions from residential buildings amount to the equivalent 68 million tons of CO_2. Buildings account for 19% of total UK greenhouse gas emissions and are second as a source of emissions only to transport which accounts for 28% of total emissions.[4]

The Council can have the greatest impact on its operational emissions by reducing levels from the homes it owns. In 2016, the last time the Council published detailed emissions numbers, these emissions constituted 74% of the Council's operational emissions. While these represent a minority of the housing stock within our Borough at around 10%, with almost 5,000 homes held in the Council's Housing Revenue Account, action by the Council will not only have a significant direct impact on emissions but also set an example for other homeowners and developers.[5]

While there are definitely challenges to pursuing ambitious environmental standards, it also creates real opportunities: to bring down our tenant's energy bills, to promote the use of modern construction methods and, to better place the Council to apply for funding to develop new homes.

The members of the Group were impressed by the pace at which the technologies in this space are progressing. However, given the speed at which the tools available for developing environmentally friendly new homes are evolving, there is a real need for flexibility. Therefore, this report will recommend principles and targets rather than specific technologies, allowing builders and architects to utilise current solutions at the time each new development is commissioned.

Revisiting the 2018 review

The members of the Group noted *"Housing Design Standards for New Council Homes: A Review Report of the Housing Overview & Scrutiny Committee"* from 2018.[6] They felt that this was a valuable piece of work and commend its recommendations on Internal Design Standards, roof space, and, in the main, external appearances. These are set out in Appendix A.

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[2] https://www.waverley.gov.uk/Portals/0/Documents/services/environmental-concerns/climate%20change/Waverley%20Carbon%20Neutrality%20Action%20Plan%202020-2030.pdf?ver=SpUdY9hngMRQOcVKybZ9xg%3D%3D p.5

[3] Ibid, p.18

[4] https://www.gov.uk/government/publications/energy-white-paper-powering-our-net-zero-future/energy-white-paper-powering-our-net-zero-future-accessible-html-version#chapter-4-buildings

[5] https://www.waverley.gov.uk/Portals/0/Documents/services/environmental-concerns/climate%20change/Waverley%20Carbon%20Neutrality%20Action%20Plan%202020-2030.pdf?ver=SpUdY9hngMRQOcVKybZ9xg%3D%3D p.5

[6] https://modgov.waverley.gov.uk/documents/s24747/pdf%20Final%20draft%20of%20report%2021.06.18.pdf

Recommendation 1: Retain the standards set out in Appendix A

Advances in technology, changes to regulations, and the acceptance that climate change has become an even more urgent threat mean that it is now desirable to present more ambitious environmental targets. In particular, from 2025 national legislation will prohibit the building of new homes heated with fossil fuels, including by gas boilers.[7]

Recommendation 2: New homes shall be built with alternative heat sources to gas boilers.

The Group also considered whether increased levels of homeworking following the Covid-19 pandemic might necessitate revisions to the space standards. However, the Group felt that on balance this was unlikely to be necessary. This is supported by the majority of responses to the tenant survey, showing either that residents did not work from home or found the space available satisfactory for doing so.

However, the Group did note that the pandemic and subsequent lockdowns had led to a significant increase in home deliveries.[8] Furthermore, the design of letterboxes in the borough, both in terms of height and ease of use, is extremely variable and often inconvenient for those making deliveries.

Recommendation 3: The design standards should be mindful of facilitating parcel deliveries and reducing the strain on those making deliveries of parcels and letters.

Avoiding retrofits

The Group heard from multiple witnesses that retrofitting existing homes will be vital to meeting the Council's climate change goals. This reflects the fact that most of the homes in Waverley that will exist in half a century have already been built. However, the Group also recognises that it is much more cost-effective to build in features during construction rather than attempting to add or modify them later on.

Recommendation 4: set standards for the future and explicitly connect the Council's housing design standards and its asset management plan in order to avoid retrofits.

Emerging Government Policy Environment

In October 2019 the Ministry for Housing, Communities and Local Government (MHCLG) initiated a consultation on a Future Homes Standard for new build homes to be future-proofed with low carbon heating and energy efficiency. The proposed changes to energy efficiency requirements for new homes are set by Part L (Conservation of Fuel and Power and Part F (Ventilation) of the Building Regulations. The first consultation ran until January 2020 and following assessment of the responses to this consultation the MHCLG issued a second stage consultation in January 2021[9]. This second stage of the two-part consultation for domestic buildings put forward proposals to introduce a new overheating mitigation requirement in building regulations, re-consultation on the Fabric Energy Efficiency Standard, as well as other standards for building services in new homes and guidance on the calibration of devices that carry out airtightness testing, together with Changes to Part F

[7] https://www.gov.uk/government/publications/energy-white-paper-powering-our-net-zero-future/energy-white-paper-powering-our-net-zero-future-accessible-html-version#chapter-4-buildings

[8] https://www.theguardian.com/business/2021/feb/11/royal-mail-delivers-record-parcel-numbers-as-covid-cuts-despatch-of-letters

[9] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/956037/Future_Buildings_Standard_consultation_document.pdf

(ventilation) and its associated Approved Document guidance. The government is currently assessing the feedback from this stage of the consultation and whilst COVID-19 has delayed the programme slightly, the plan remains to introduce the Future Homes Standards, making homes 'zero carbon ready' by 2025.

The Standard Assessment Procedure (SAP) is the methodology required by the government to assess and compare the energy and environmental performance of dwellings, and is used to determine compliance with the 35 energy efficiency requirements of Part L. The government consulted on SAP 2016, now named SAP 10[10], in 2016. When new the new Part L Standard is implemented, the government has said that it will publish version 10.2 of the Standard Assessment Procedure, which reflects the greening of the grid and growing use of renewable energy and other changes resulting from the second stage of the Future Homes Standard Consultation.

Recommendation 5: The Council implements the SAP 10 assessment methodology as part of the assessment process to deliver net zero carbon homes.

The government has issued a Home User Guide Template[11] which provides non-technical advice to occupants on how to operate and maintain their home in a healthy and energy efficient manner. Consultants and contractors working with the Council are already required to provide a Home User Guide so our standard template will be updated to incorporate guidance about current and best technologies and their operation, when they are used in our new build homes.

Lifetime carbon neutrality

The members of the Group considered two different components which contribute to a home being 'carbon neutral'. The first refers to 'operational carbon' and the second encompasses the embodied carbon. The Group heard that Thakeham Homes will be delivering the new properties at Ockford Ridge (Site B) to net-zero carbon/carbon neutral in operation standard.

The members of the Group heard no evidence that it would presently be feasible to deliver the more ambitious standard that includes embodied carbon and note that its feasibility will partially depend on changes made within the Council's supply chain, such as a reasonable cross-section of suppliers being able to provide Environmental Product Declarations[12] demonstrating what the product is made of and how it impacts the environment across its entire lifecycle.

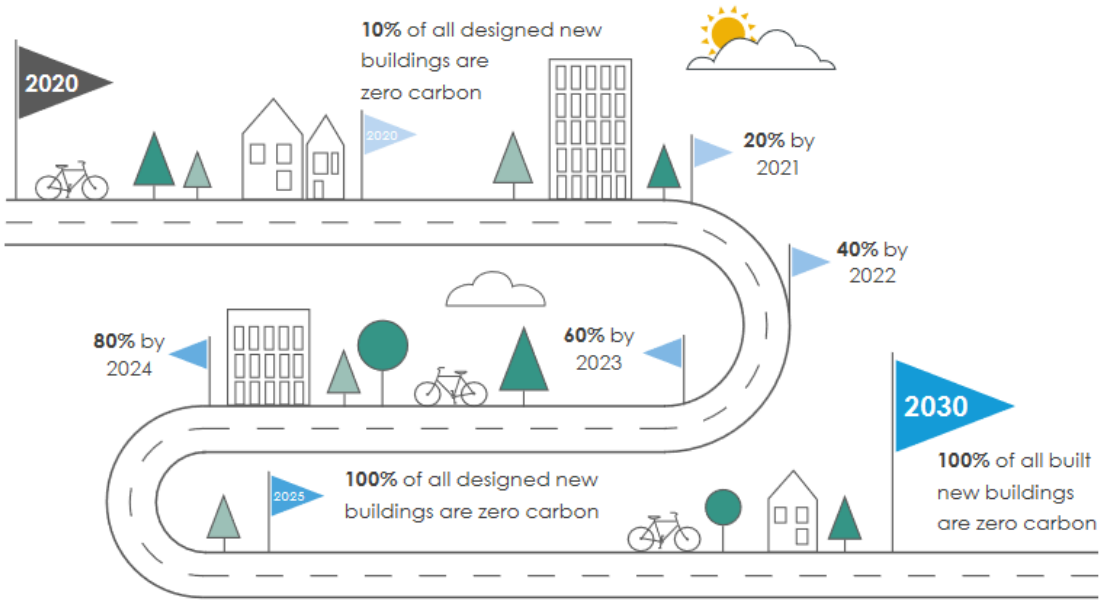
However, it is important that emissions from construction are considered and minimised where possible. Given the decarbonisation of energy sources, it is likely that these embedded emissions will account for a progressively larger share of the total emissions associated with buildings. For example, one of our contractors Thakeham has committed that all the new properties it delivers from 2025 will be Zero Carbon in lifetime operation and production. Therefore, the Council should see carbon neutrality in operation as a waypoint along the path towards achieving carbon neutrality in terms of both operational and embedded carbon in the next few years. This will require integration of whole life carbon assessment into the design, procurement, and construction process and beyond.

[10] https://www.bregroup.com/sap/sap10/

[11] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/953432/Home_User_Guide_Template.pdf

[12] https://www.bregroup.com/services/certification-and-listings/en-15804-environmental-product-declarations/

Recommendation 6: The Council should align its plans for future developments with the timeframes contained in the "LETI Climate Emergency Design Guide" (illustrated below).[13]



Recommendation 7: The Council should work with our contractors and their supply chains through the tender process to work to achieve carbon neutrality as measured by a RICS whole life carbon assessment by 2030.[14]

Performance of Council Homes - Standard Assessment Procedure (SAP) rating

The table below shows the standards achieved in typical properties (1, 2, and 3-bed homes) in recent Council developments.

Development	Median current CO_2	Median current SAP rating	Median current SAP band
Badger Close	900	90	B
Barnett Lane	1733	79	C
Cedar Close	1200	86	B
Church View	1000	85	B
Nursery Close	1100	84	B
Perrior Close	900	89	B
Ridge Court	1100	84	B
Wey Court	1000	82	B
Whitebeam Way	1500	84	B

[13] LETI Climate Emergency Design Guide

[14] https://www.rics.org/globalassets/rics-website/media/upholding-professional-standards/sector-standards/building-surveying/whole-life-carbon-assessment-for-the-built-environment-1st-edition-rics.pdf

This shows that properties are usually B-rated. This informs the Group's assessment of where the Council should aim in the future.

Recommendation 8: All new properties developed by the Council should receive a SAP rating of 100 to enable them to be Energy Efficiency A-rated with an Environmental Rating 99A (CO_2 emission rate 0 ton/year) – net zero carbon in operation.

Review of design and energy standards

In 2018 the Task and Finish Group reviewing the Council Design Standards chose to implement the proposed standards in a scheme coming forward in the development programme which was Site C Ockford Ridge. For this Task and Finish Group Ockford Ridge, Site F will be used as the sample site.

Officers appointed an energy consultant to undertake a number of energy assessments at different standards on one of the properties which will form part of this scheme. It is a three-bedroom home.

The SAP rating is just one element of an Energy Performance Certificate for a property. Other information included in the certificate includes:

- Estimated energy costs for the dwelling over 3 years
- Estimated current and potential costs for lighting heating and hot water
- Energy performance-related features, for example, airtightness, wall thickness
- Current primary energy use per square meter floor area (kWh/m^2/year)
- Heat demand – space and water heating

The evidence given to the Group by our sustainability and energy consultant indicated that reaching the energy standards recommended by this report would result in a 5-10% increase in construction costs relative to the baseline. This would be equivalent to between £10 – 20k extra to bring a 3 bedroom, 2 story property to net zero in operation.

Whilst this is a significant sum of money, the group believes it represents value for money. As well as providing tangible environmental improvements, it achieves the objective of mitigating the need for costly retrofits in the future.

Furthermore, with improvements in technology it will be possible to also achieve broadly stable or even slightly reduced running costs for tenants relative to the current baseline, whilst also moving away from fossil fuel-based means of heating.

The table below shows the end user indicative running costs when assessed against the proposed SAP10 methodology and requirements of Part L 2021.

Specification	Baseline (Site A Ockford Ridge spec (2021))	Part L 2021 Pass (2021)	Part L 2021 Net Zero (2021)	Part L 2021 Net Zero (simulated modern Heat Pump)	Part L 2021 Net Zero Passivhaus Part (2021)
End User Indicative Running Costs (standard tariff, £0.189/kWh+£0.25/day standing charge, +£642 unregulated electricity, 2.79 People)	£1,161.63	£1,346.18	£1,199.51	£1,089.33	£1,095.56

Recommendation 9: The Council should make the budgetary provision necessary to achieve the standards outlined in this report to deliver a net zero home in operation measured using Part L 2021.

Passivhaus Standard

This is one of the best-known standards for designing and building environmentally friendly homes. It requires the property to achieve energy efficiency by reducing heat loss through a combination of very high levels of insulation, airtight building fabric, and mechanical ventilation, such that the air can be kept at a comfortable temperature mostly through passive heat sources.

However, the Group does not believe it is the right standard for Waverley. It prescribes particular technologies and approaches in a manner that deprives the Council of the flexibility to achieve reductions in carbon emissions and energy use using other more appropriate means. The Group saw estimates indicating that Passivhaus indeed requires a larger initial outlay and produces smaller reductions in ongoing running costs to achieve the same carbon and energy outcomes.

In addition, the reliance on mechanical rather than natural ventilation may create issues with overheating and poor indoor air quality.[15] The process for operating and maintaining these systems may be unfamiliar to occupants, who have not resided in a mechanically ventilated property before. If the occupants do not adhere to the operating requirements of a Passivhaus home, this may significantly undermine the performance of the home.

Recommendation 10: That the Council should not pursue Passivhaus accreditation unless there is a compelling additional reason to do so, for example, if grant funding is conditional upon achieving it.

Recommendation 11: New occupants of any mechanically ventilated properties should be provided with sufficient information and training to ensure the property performs in operation as in design.

Maximising on-site renewable energy and use of modern methods of construction

In order to receive funding from Homes England, the Council will likely have to show it is *"maximising renewable energy especially through decentralised sources, including on-site generation and community-led initiatives."*[16]

Recommendation 12: Build homes such that renewable energy can be generated on-site whenever feasible.

When considering funding applications Homes England is also encouraging increasing the number of bids using either partial or fully offsite or innovative methods of construction.[17]

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[15] http://radar.gsa.ac.uk/3680/1/McGill%20et%20al.%202017%2C%20An%20investigation%20of%20IAQ%20in%20UK%20Passivhaus%20dwellings.pdf

[16] https://www.gov.uk/guidance/affordable-housing-funding-strategic-partner-application-process

[17] MHCLG Joint Industry Working Group MMC Definition Framework

Recommendation 13: Build homes using modern methods of construction, for example, timber frame.

The Hackitt Report

In May 2018 Dame Judith Hackitt issued a report updating building regulations, particularly in relation to fire safety, following the Grenfell Tower disaster in June 2017. The Group accepts the need for all new Council homes to comply with the requirements of this report.

Recommendation 14: the Council shall update the standards for new build properties in light of Building a Safer Future: Independent Review of Building Regulations and Fire Safety (Final Report) [May 2018] by Dame Judith Hackitt.[18]

Concerns raised in the Tenant's Survey

82 residents of new Council properties were sent copies of the questionnaire and 14 responded. However, not every respondent addressed every question. Though a clear majority of respondents expressed satisfaction with most aspects of their new home and stated they would recommend a council-built property to a friend or family, there was feedback indicating concerns on a pair of issues.

Satisfaction with *"the location, space, and convenience for refuse and recycling containers"* was notably lower than on other topics. A number of comments also mentioned this issue. Some of these indicated that it was partly to do with the management of the facilities and the behaviour of other users. However, a number specifically mentioned issues with the design of the facilities.

Recommendation 15: The Council should seek and apply best practice in the design of space for refuse and recycling containers.

A number of comments mentioned inadequate soundproofing in the properties despite this issue not being specifically mentioned by the survey. Building Regulations (Approved Document Part E) sets minimum standards for the sound insulation that separating walls and floors offer between dwellings, and also for internal walls and floors separating rooms within dwellings. As part of building regulation requirements, contractors are required to commission acoustic testing. To ensure the properties perform in use, the Council could require contractors to undertake further testing of a sample of properties when occupied.

Recommendation 16: Addition of further in use sound test sampling as part of the Employer's Requirements.[19]

Sustainable transport

As noted above, transport is the one area of life in the UK that produces more carbon emissions than buildings. Therefore, one of the Council's most important objectives in designing new homes should be facilitating more sustainable travel.[20]

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18 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/707785/Building_a_Safer_Future_-_web.pdf

19 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/468870/ADE_LOCKED.pdf

20 https://bills.parliament.uk/Publications/41447/Documents/196/21003.pdf

Recommendation 17: all new Council properties should be built on the assumption that during their lifespan electric vehicles will entirely displace those powered by internal combustion engines. This means providing charging infrastructure on parking spaces provided on land owned or controlled by the Council. Where parking spaces are provided elsewhere, the Council should ensure the necessary conduits are installed to allow for the easy installation of charging infrastructure if the demand arises.

However, whilst electric vehicles represent an improvement on petrol or diesel fuelled vehicles in terms of emissions, they are still inferior to active travel and public transport from an environmental perspective. The Council now has a sustainable transport officer, whose work housing design standards should be integrated with.

Recommendation 18: where the scale of provision on a given site makes it feasible, the development should make a contribution to improving walk- and cycle ways in the area.

Recommendation 19: for properties with good access to public transport, the Council should assess the feasibility of planning policies that provide a degree of flexibility for the minimum number of parking spaces to include pull-in or visitor spaces for short stays by emergency and delivery vehicles in place of residents parking.

Where parking is in communal parking courts or on-road, each development will need to ensure that electric vehicle charging points are set up with a mechanism for ensuring that the user is charged for the electricity supplied, be it through allocated parking spaces with the charging point linked to a switch in the tenant's property or through a pay-at-source arrangement.

Recommendation 20: developers design in an arrangement for tenants without in-curtilage parking provision to be charged for electricity supplied to communal parking areas for vehicle charging points.

Building for a Healthy Life

The frequent issuing of guidance and regulations to 'stay local' during the pandemic has underlined the importance of their neighbourhoods to the welfare of our residents. Given this, the Group is keen to see consideration given not only to the quality of individual homes developed by the Council but also the quality of the neighbourhoods they are embedded in.

Building for a Healthy Life is a Design Code written in partnership by Homes England, NHS England, and NHS Improvement. It aims to *"help people improve the design of new and growing neighbourhoods"* by setting out 12 considerations *"to think about the qualities of successful places and how these can be best applied to the individual characteristics of a site and its wider context"*.[21] These are organised under the headings of Integrated Neighbourhoods, Distinctive Plans, and Streets for All.

Recommendation 21: That for any future Council-lead development, an assessment in light of the considerations in Building for a Healthy Life should be undertaken and published.

Designing Out Crime – Secure by Design

Secured by Design (SBD) is the official police security initiative that works to improve the security of buildings and their immediate surroundings to provide safe places to live, work, shop and visit.

[21] https://www.creatingexcellence.net/wp-content/uploads/2020/07/Building-for-a-Healthy-Life-July-2020.pdf

Designing Out Crime Officers collaborate with Local Authorities, architects and contractors to provide advice and guidance from scheme inception until the development is complete.

Recommendation 22: Work with appointed architects, contractors and Designing Out Crime Officers to improve the securing of buildings and adopt crime prevention measures.

Sustainable water use

The Environment Bill 2020 sets out how we plan to protect and improve the natural environment in the UK. The water measures in the Environment Bill will help to secure long-term, resilient water, and wastewater services, making sure that the UK becomes a cleaner, greener, and more resilient country for the next generation.[18]

Building Regulations Part G provides guidance on the supply of water to a property, including water safety, hot water supply, and sanitation and water efficiency i.e. an easily accessible water supply that doesn't incur waste. The current regulation for water usage per person per day is set at 125 litres of water per person per day. However, through the specification of water efficiency measures, it is recommended to continue to achieve the former Code for Sustainable Homes Level 4 standard of 105 litres of water per person per day. Efficient water use makes our supply more resilient against the impacts from climate change, such as droughts.

Recommendation 23: For new builds to continue to achieve <105 litres of water per person per day.

Recommendation 24: The Council should facilitate rainwater harvesting through the provision of water buts and for larger sites consider the larger systems such as underwater storage tanks.

Tenant involvement

This report has been substantially strengthened by being able to draw on the insights from the tenant's survey. The first homes designed using the 2018 standards are those to be constructed as part of the regeneration programme at Ockford Ridge, Site C and it would be desirable to also learn about the experiences of the tenants who move into them.

Recommendation 25: The Council should, as a matter of routine, survey tenants of new homes about their experience of living in them.

Despite its utility, it should be noted that the survey for this review was of a relatively small population. Therefore, despite a reasonable response rate, a modest number of responses were received. In addition, because respondents were promised anonymity, there was not an opportunity to seek clarification from respondents or go into further depth on answers.

Recommendation 26: The Council should explore the possibility of engaging external expertise to use qualitative research methods including depth interviews and focus groups to gain a more nuanced understanding of the experiences of new tenants.

Given the endorsement of co-design in the Government's 'Charter for Social Housing'[22], current Waverley tenants should be brought into the design process at an early stage.

Recommendation 27: Implement a co-design process for new home with a representative from the Tenants Panel.

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[22] https://www.gov.uk/government/publications/the-charter-for-social-housing-residents-social-housing-white-paper/the-charter-for-social-housing-residents-social-housing-white-paper

Final output: standards

This report is written as a guide to the Group's findings for consideration by the Housing Overview & Scrutiny Committee and the Executive. If these committees are minded to accept the Group's recommendations, then these new standards should be distilled into guides for other audiences.

Recommendation 28: Officers should produce a user-facing brochure and update the technical employer's requirements based on the recommendations of the Group. The user-facing brochure should be considered and agreed upon with the Tenants Panel.

Glossary

Building for a Healthy Life: A Design Code written in partnership between Homes England, NHS England, and NHS Improvement to *"help people improve the design of new and growing neighbourhoods"*.

Carbon footprint: "A carbon footprint is the total amount of greenhouse gas emissions that come from the production, use, and end-of-life of a product or service. It includes carbon dioxide — the gas most commonly emitted by humans — and others, including methane, nitrous oxide, and fluorinated gases, which trap heat in the atmosphere, causing global warming."[23]

Carbon neutral: "All carbon emissions are either eliminated or are offset by counteracting emissions through carbon-absorbing projects. To become carbon neutral an organisation should be considering its own direct emissions as well as those created by suppliers."[24]

Embodied carbon: "The carbon emissions associated with the extraction and processing of materials and the energy and water consumption used by the factory in producing products and constructing the building. It also includes the 'in-use' stage (maintenance, replacement, and emissions)."[25]

Future Homes Standard: "The Future Homes Standard is a set of standards that will complement the Building Regulations to ensure new homes are subject to higher energy standards. The standard will comprise a series of amendments to Part F (ventilation) and Part L (conservation of fuel and power) of the Building Regulations for new homes. Once the legislation is passed 2025, all new homes will have to be built according to the standards."[26]

Operational carbon: "The carbon dioxide and equivalent global warming potential (GWP) of other gases associated with the in-use operation of the building. This usually includes carbon emissions associated with heating, hot water, cooling, ventilation, and lighting systems, as well as those associated with cooking, equipment, and lifts (i.e. both regulated and unregulated energy uses)"[27]

[23] https://www.nytimes.com/guides/year-of-living-better/how-to-reduce-your-carbon-footprint
[24] https://www.waverley.gov.uk/Portals/0/Documents/services/environmental-concerns/climate%20change/Waverley%20Carbon%20Neutrality%20Action%20Plan%202020-
[25] https://b80d7a04-1c28-45e2-b904-e0715cface93.filesusr.com/ugd/252d09_3b0f2acf2bb24c019f5ed9173fc5d9f4.pdf
[26] https://www.homebuilding.co.uk/advice/future-homes-standard
[27] https://b80d7a04-1c28-45e2-b904-e0715cface93.filesusr.com/ugd/252d09_3b0f2acf2bb24c019f5ed9173fc5d9f4.pdf

Passivhaus Standard: Certification by the Passivhaus Trust that a building enables thermal comfort to be "achieved solely by post-heating or post-cooling the fresh air flow required for a good indoor air quality, without the need for additional recirculation of air."[28]

Qualitative research: "collecting and analysing non-numerical data (e.g., text, video, or audio) to understand concepts, opinions, or experiences. It can be used to gather in-depth insights into a problem or generate new ideas for research."

Retrofit: "providing something with a component or feature not fitted during manufacture or adding something that it did not have when first constructed".[29]

Standard Assessment Procedure: "the methodology used by the Government to assess and compare the energy and environmental performance of dwellings."[30]

Tenants Panel: "a non-political, unincorporated organisation comprising a group of no more than 15 elected members representing the interests of tenants and leaseholders of Waverley Borough Council."[31]

Whole life carbon (WLC): "This includes embodied carbon, as defined above, and operational carbon. The purpose of using WLC is to move towards a building or a product that generates the lowest carbon emissions over its whole life (sometimes referred as 'cradle-to-grave')."[32]

Whole life carbon assessment: Accounting "for all emissions arising over the entire life of a built asset."[33]

Zero carbon balance: "A building that achieves a zero carbon balance is 100% powered by renewable energy, achieves a level of energy performance in-use in line with our national climate change targets and does not burn fossil fuel."[34]

[28] https://www.passivhaustrust.org.uk/what_is_passivhaus.php#2
[29] https://www.designingbuildings.co.uk/wiki/Retrofit
[30] https://www.gov.uk/guidance/standard-assessment-procedure
[31] https://www.waverley.gov.uk/Portals/0/Documents/services/housing/council-housing/Waverley%20Tenants%20Panel%20Constitution%20-%20ratified%20September%202019%20accessible%20doc%20(1).pdf?ver=s5DvNdxoPThj3oPkkpQ9Ew%3D%3D
[32] https://b80d7a04-1c28-45e2-b904-e0715cface93.filesusr.com/ugd/252d09_3b0f2acf2bb24c019f5ed9173fc5d9f4.pdf
[33] https://www.rics.org/globalassets/rics-website/media/news/whole-life-carbon-assessment-for-the--built-environment-november-2017.pdfon
[34] https://b80d7a04-1c28-45e2-b904-e0715cface93.filesusr.com/ugd/252d09_3b0f2acf2bb24c019f5ed9173fc5d9f4.pdf

Appendix A: 2018 standards carried forward

Internal Design Standards

7. For new builds to meet the minimum gross internal area[2] requirements per property type:

	1 bed/2 person Flat (m^2)	2 bed/4 person Flat (m^2)	2 bed/ 4 person House (m^2)	3 bed/ 5 person House (m^2)
Recommendation: Proposed new Waverley Standard	50	70	83	86 (1 storey) 96 (2 storey) 102 (3 storey)

8. For the minimum size of a single bedroom to be no less than 7.5m2, for a double bedroom to be no less than 12.5m2 and a twin room to be the equivalent of two single rooms of 7.5m2 , and for all to have the below corresponding widths:

	Single Bedrooms (m)	Double Bedrooms (m)	Twin rooms (m)
Recommendation: Proposed Waverley Standard	2.15	2.75	2.75

9. For ceilings to be a maximum of 2.4m in height, excluding rooms with sloped ceilings.

10. For new builds to meet the minimum living space requirements per property type:

	1 bed/2 person Flat (m^2)	2 bed/4 person Flat (m^2)	2 bed/ 4 person House (m^2)	3 bed/ 5 person House (m^2)
Recommendation: Proposed new Waverley Standard	23	27	27	29

11.For new builds to meet the minimum storage space per property type:

	1 bed/2 person Flat (m^2)	2 bed/4 person Flat (m^2)	2 bed/ 4 person House (m^2)	3 bed/ 5 person House (m^2)
Recommendation: Proposed new Waverley Standard	2.5	3.0	3.0	3.5

12.The revised standard should reflect the space standards contained in table 4 (page 20) and should specify separate floor to ceiling ventilated airing cupboard of a minimum area of 1m2 with a heat source.

13.For the design standards to include a covered porch at the main defined entrance point (either at the front of the house, but not necessarily enclosed, or where there is a defined rear access), with the additional optional provision of a reception area adjacent to the main defined entrance point.

External Appearance

14. That the number of car parking spaces per dwelling meets the requirements set out in the current Waverley parking guidelines.

15. To continue to make the distinction between the number of spaces in urban and rural settings by following the existing Waverley Parking Guidelines.

16. Continue to provide 4.8m x 2.4m for C35 general needs in-curtilage parallel / bay car parking with at least one space that can be widened to 3.3m.

17. Continue to provide 6.1m x 2.4m for C3 general needs 0°/linear car parking with at least one space that can be widened to 3.3m. 18.For group parking specify disabled parking dimensions and ensure spaces are no less than 4.8m x 3.6m, with an additional demarcated area of 1.2m at the rear to enable wheelchair access; and in grouped parking situations where 10 or more spaces are provided, for 10% of spaces to meet the minimum

18. For group parking specify disabled parking dimensions and ensure spaces are no less than 4.8m x 3.6m, with an additional demarcated area of 1.2m at the rear to enable wheelchair access; and in grouped parking situations where 10 or more spaces are provided, for 10% of spaces to meet the minimum disabled parking dimensions. For grouped parking situations with fewer than 10 spaces one space shall meet the minimum disabled parking dimensions.

19. To include provision of wiring for one electrical charging point per residential property with in-curtilage parking, and provision of wiring for one electrical charging point per 10% of group or undedicated parking spaces with a minimum of one space.

20. Continue to provide per dwelling a 6’ x 4’ shed with a secure locking cycle point within the rear private garden.

21. Where a communal play area is part of the design in a development, for ‘A’ frame stands to be included to accommodate secure visitor and children’s cycle parking.

22. New builds should aim to meet the recommended garden space size per property type, whilst seeking to utilise the site’s full development potential:

	1 and 2 bed flat (m^2)	2 bed house (m^2)	3 bed house (m^2)	4 bed house (m^2)	5 bed house (m^2)
Recommendation: Proposed new Waverley Standard	25	50	60		

23. To continue to ensure paths within the curtilage of individual dwellings are a minimum 900mm (0.9m) in width.

24. To continue to ensure building entrances with communal paths are a minimum 1.2m in width.

25. Gateways should be a minimum of 850mm wide.

26. For significant developments, particularly where planning and construction are carried out in distinct phases, to include an integration and whole site design plan; and

27. For significant developments to include an infrastructure needs assessment, which includes broadband, mobile phone coverage and fifth generation wireless (5G).

Roof space

32.That the revised Design Standards include a design element for loft space to incorporate a habitable bedroom; and that this should only apply to house types with 3 + bedrooms and would therefore vary scheme to scheme.

33.Building into the roof to create a habitable bedroom should be considered per scheme as a cost effective solution for creating additional bedroom space in 1 and 2 bed homes without increasing the building's footprint.

Appendix B
How is your home?
Survey

Context

86 surveys were sent by post to residents of recently built Council homes in Cedar Close, Nursery Close and Wey Court Whitebeam Way, Ockford Ridge, and Ridge Court. We received 14 replies, though not all respondents answered every question.

The big picture

1. What do you particularly like about your home?

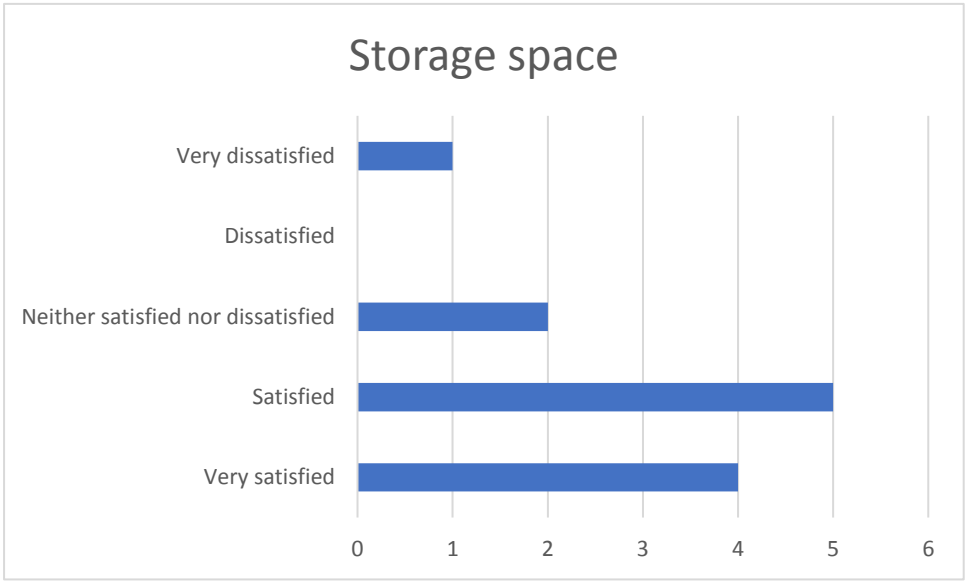
Space & finish, kitchen, driveway, size of bedrooms, spacious, good storage, allocated parking, near playground and school, lovely size, everything, I don't, nice modern kitchen, nice & modern, windows & doors, space.

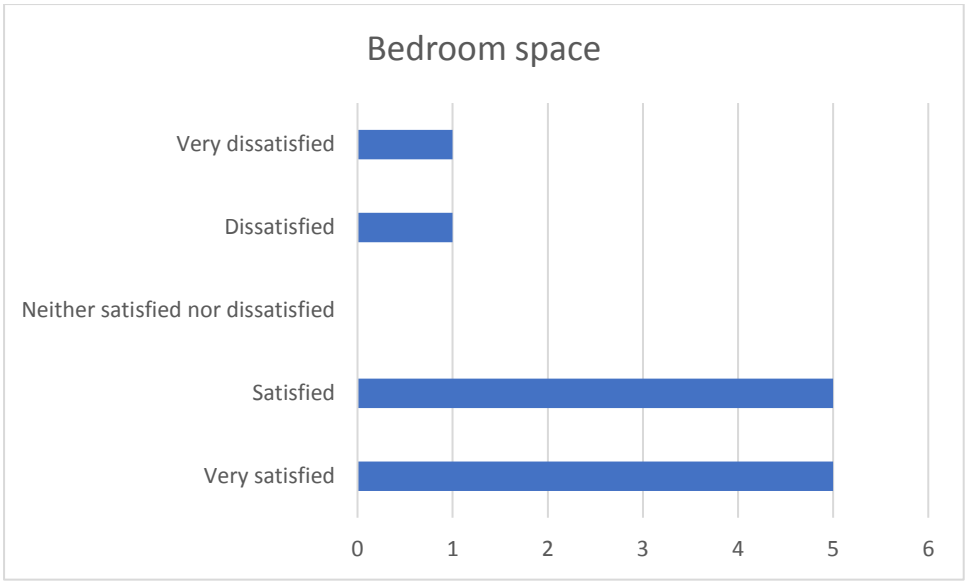
2. What do you particularly dislike about your home?

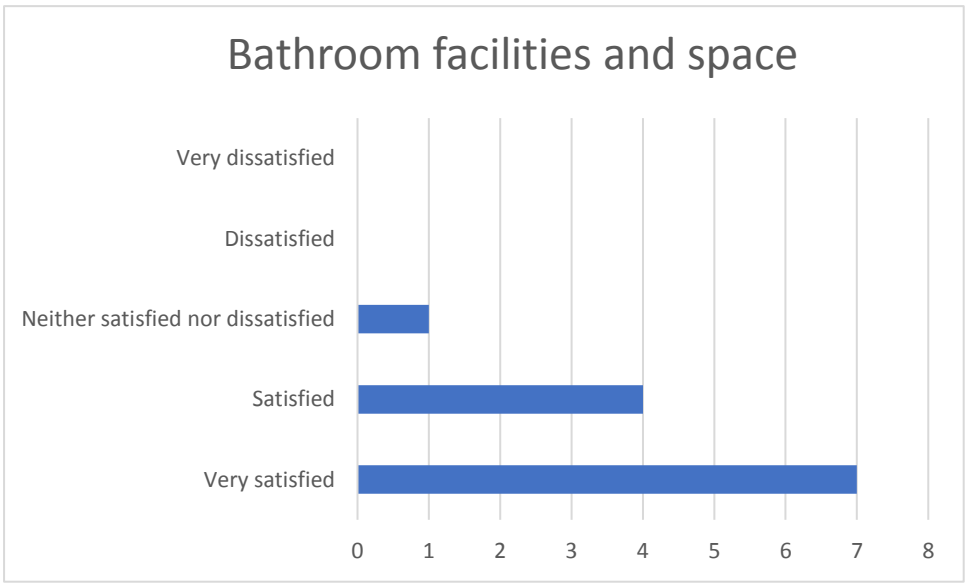
Lack of sound proofing between rooms, lack of privacy in garden as neighbours can see through chainlink fence, poor quality of fittings, backyard not fully fenced, nothing, noise up stairs, too few bedrooms, lack of daylight in the kitchen open plan kitchen and living room

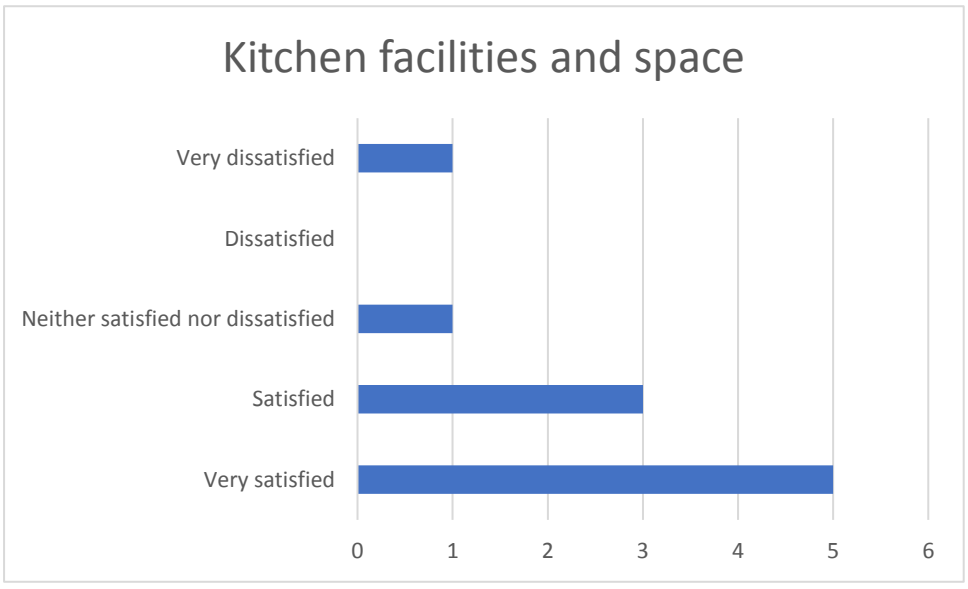
Likes and dislikes

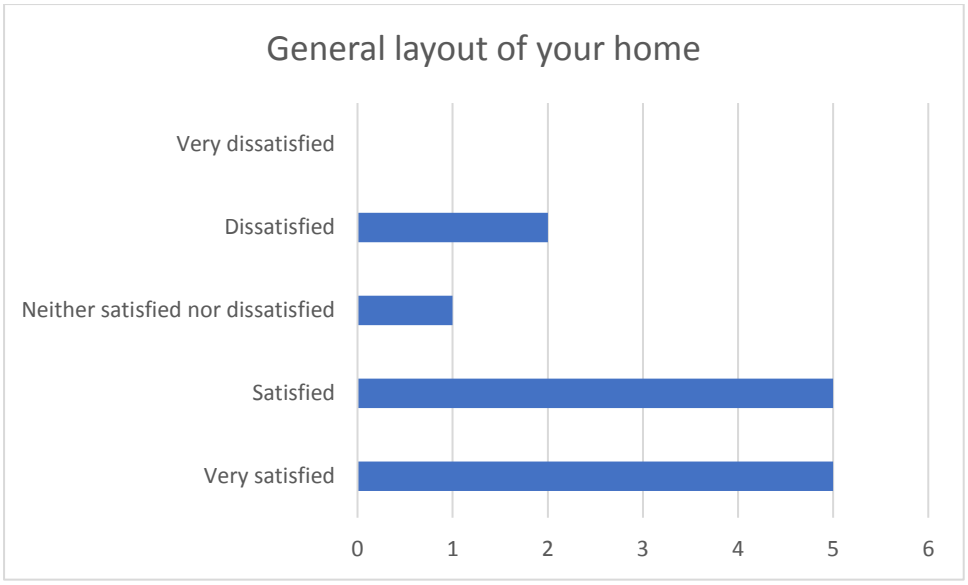
3. More specifically, how satisfied / dissatisfied are you with the following:

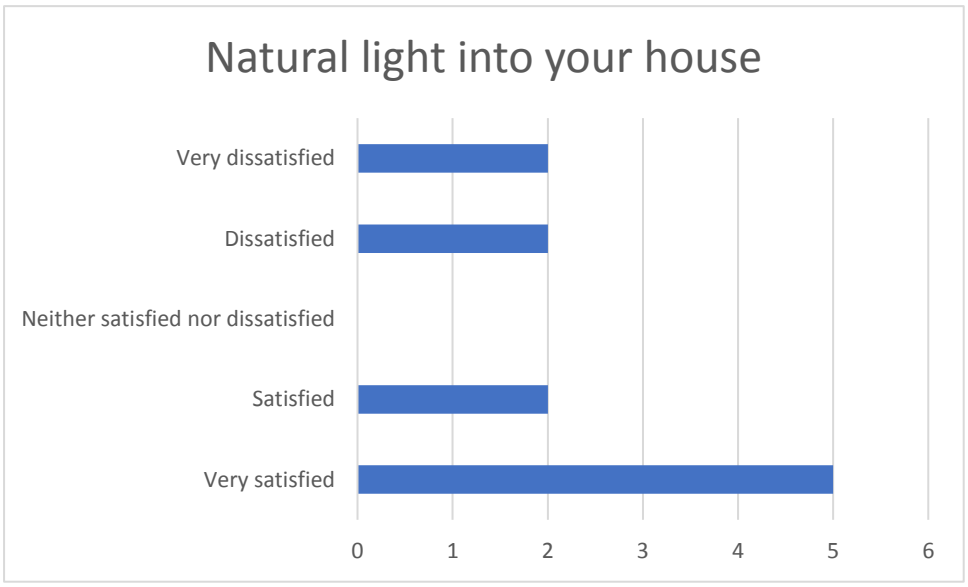


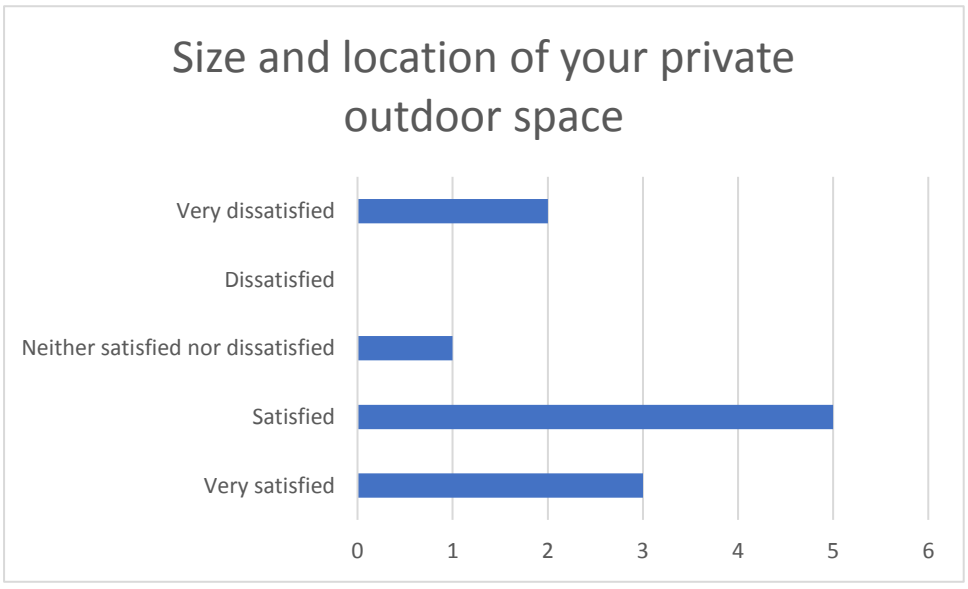

Bedroom space
Very dissatisfied
Dissatisfied
Neither satisfied nor dissatisfied
Satisfied
Very satisfied
0
1
2
3
4
5
6

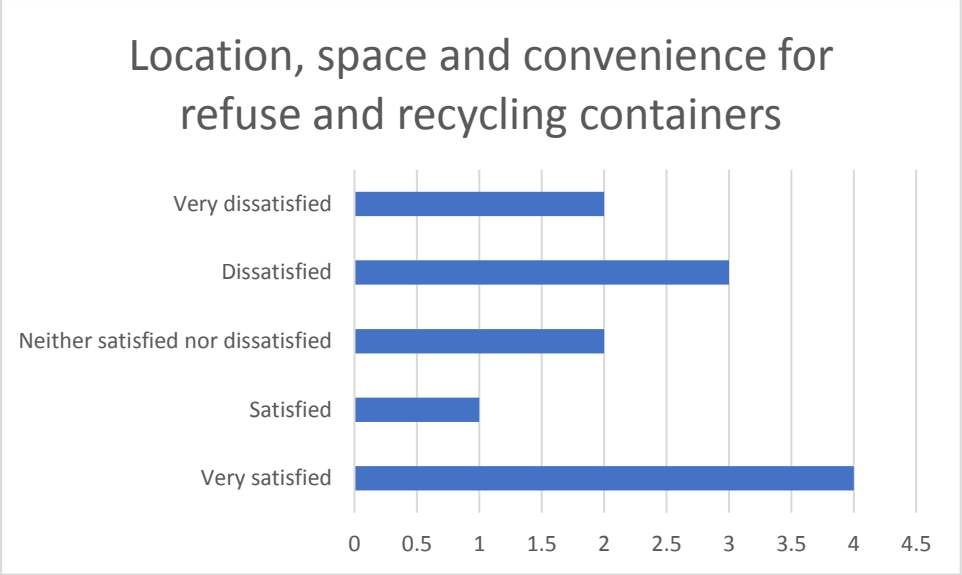

Bathroom facilities and space
Very dissatisfied
Dissatisfied
Neither satisfied nor dissatisfied
Satisfied
Very satisfied
0
1
2
3
4
5
6
7
8

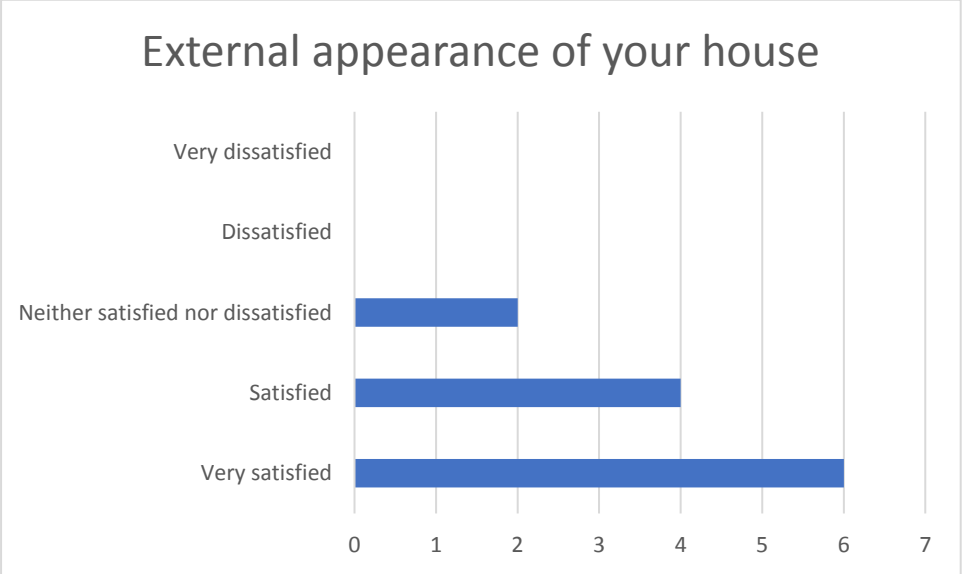

Kitchen facilities and space
Very dissatisfied
Dissatisfied
Neither satisfied nor dissatisfied
Satisfied
Very satisfied
0
1
2
3
4
5
6


General layout of your home
Very dissatisfied
Dissatisfied
Neither satisfied nor dissatisfied
Satisfied
Very satisfied
0
1
2
3
4
5
6


Natural light into your house
Very dissatisfied
Dissatisfied
Neither satisfied nor dissatisfied
Satisfied
Very satisfied
0
1
2
3
4
5
6

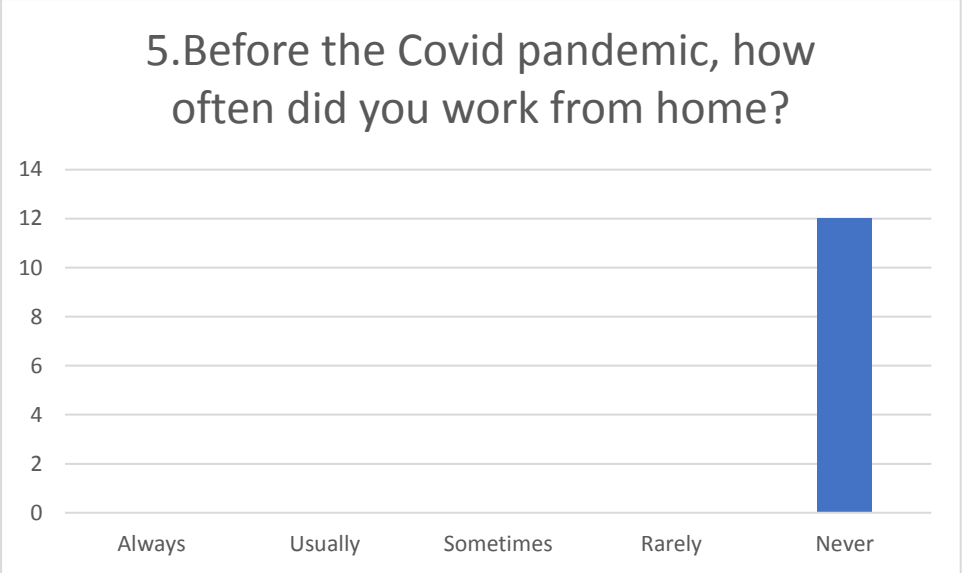

Size and location of your private outdoor space
Very dissatisfied
Dissatisfied
Neither satisfied nor dissatisfied
Satisfied
Very satisfied
0
1
2
3
4
5
6

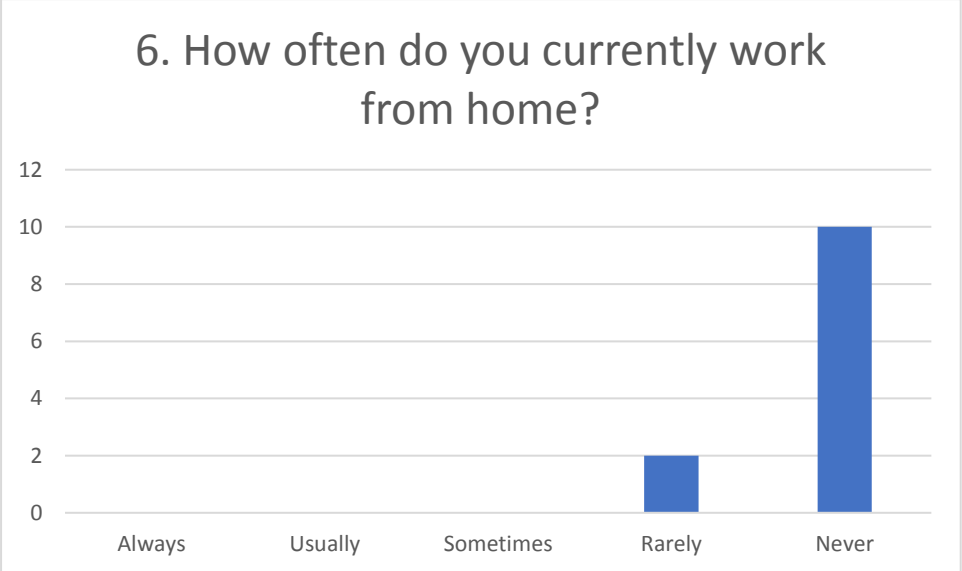


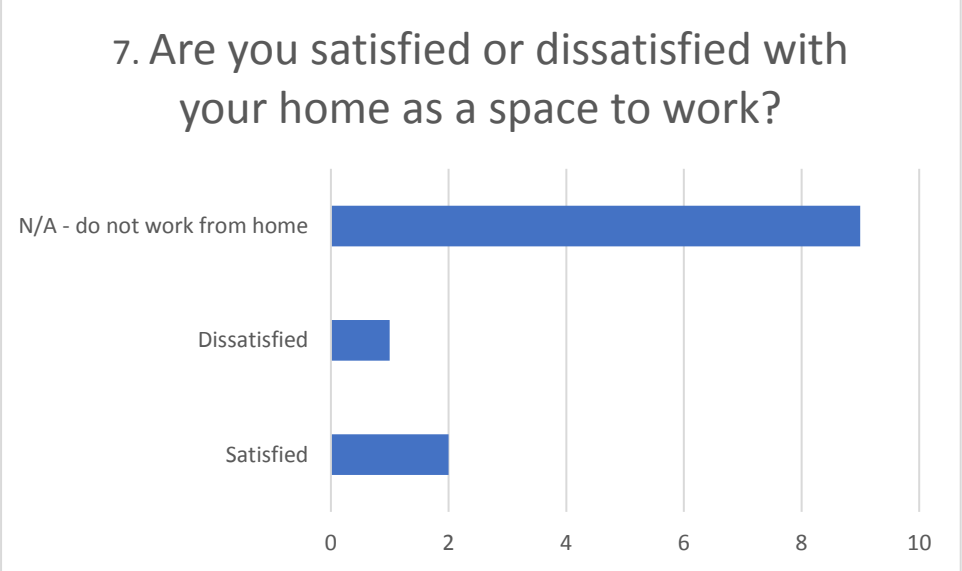


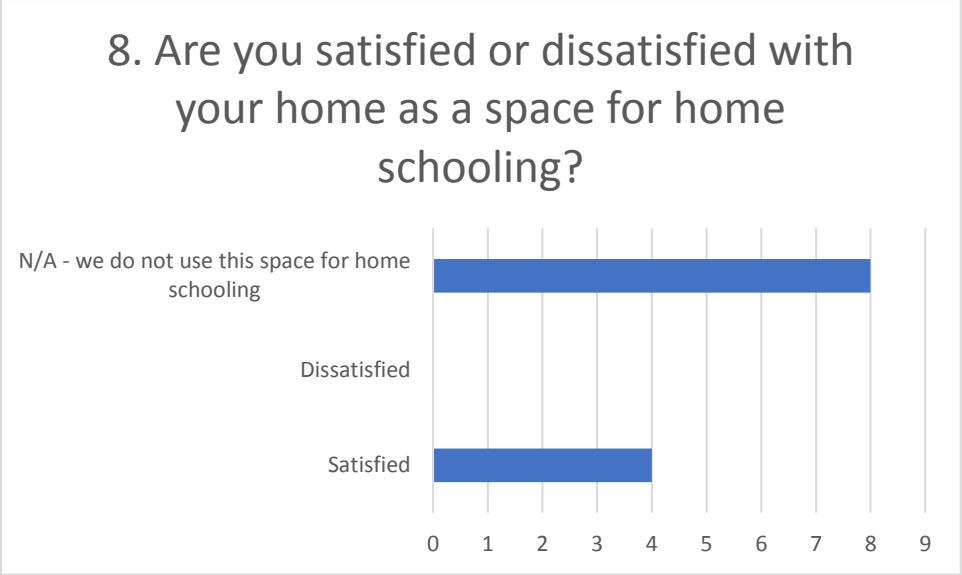
4. If you are particularly dissatisfied with any of the above points, please tell us more:
Nowhere to put bins without them being in the way, a lack of privacy in the garden, bin stores are dirty, communal bin area is dirty, distance to bin area

Home working


5.Before the Covid pandemic, how often did you work from home?
14
12
10
8
6
4
2
0
Always
Usually
Sometimes
Rarely
Never


6. How often do you currently work from home?
12
10
8
6
4
2
0
Always
Usually
Sometimes
Rarely
Never


7. Are you satisfied or dissatisfied with your home as a space to work?
N/A - do not work from home
Dissatisfied
Satisfied
0
2
4
6
8
10

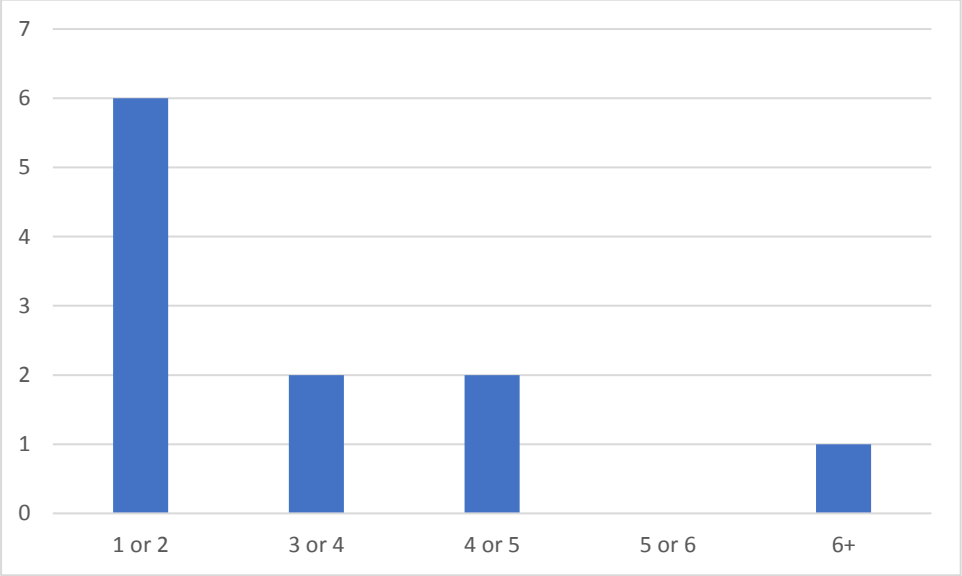


9. What are the reasons for your answer?

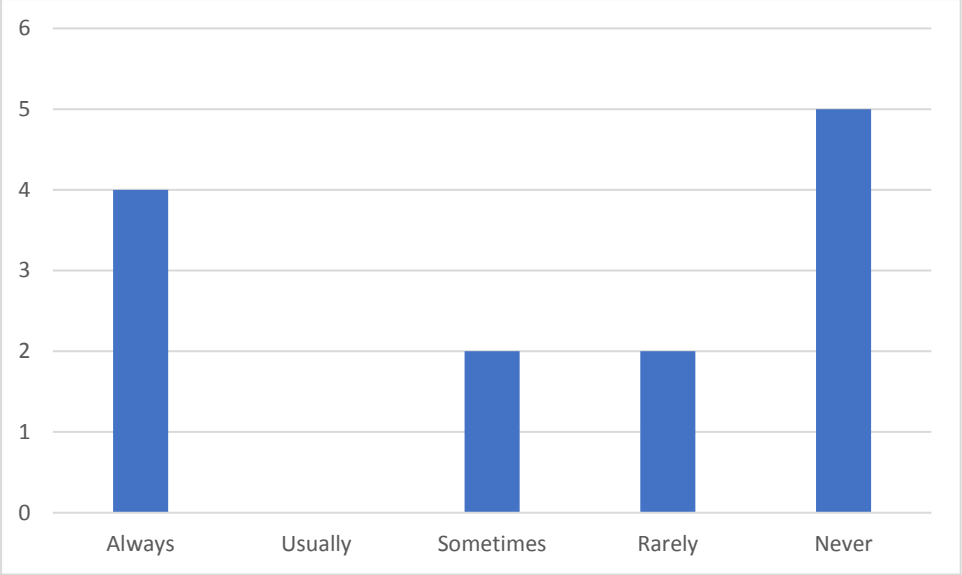
Home is very spacious, space to work on kitchen table, not space for computer desk, lots of storage space

Transport and local facilities

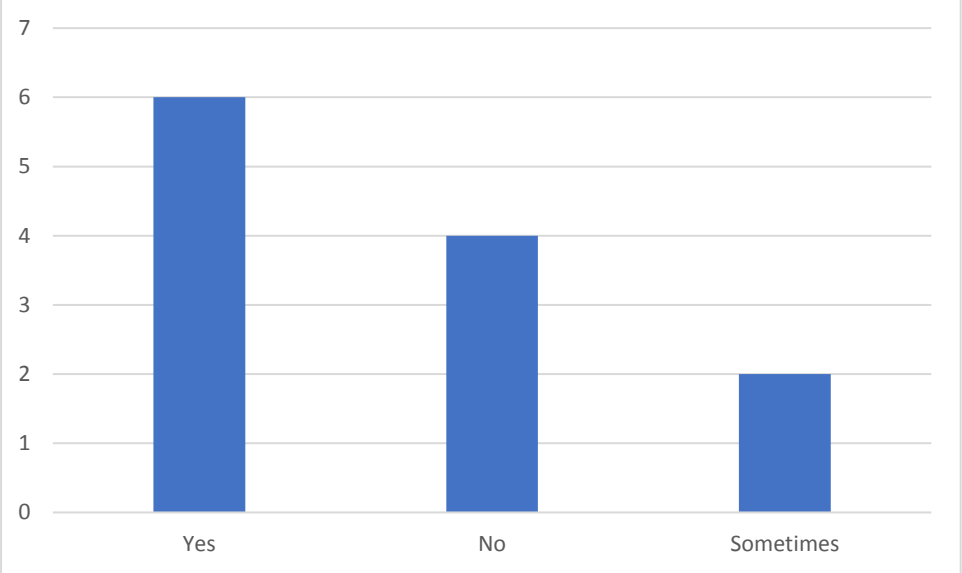
10. In a typical week (excluding the impact of Covid-19 and lockdowns), how many times do you have to travel for more than 15 minutes to reach essential shops or other local facilities?



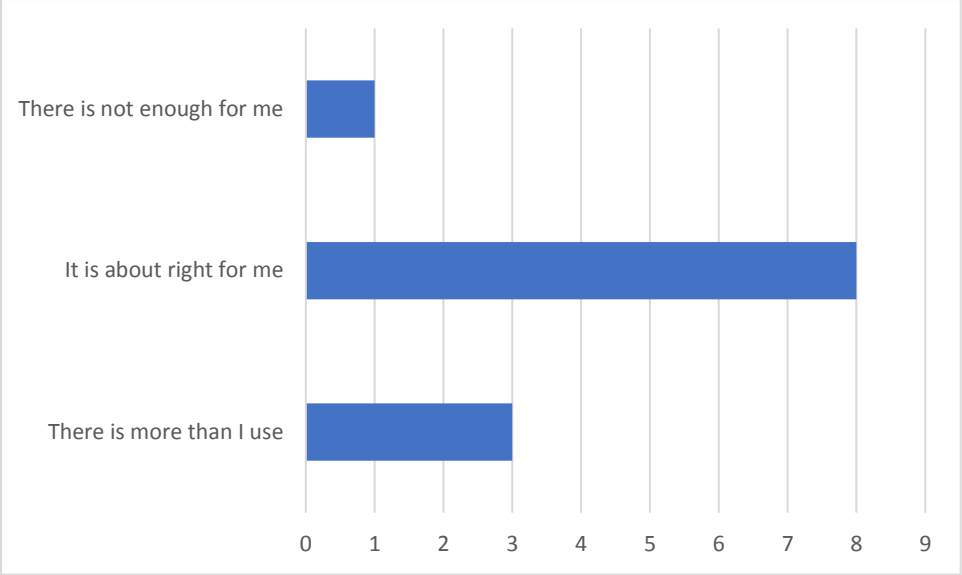
11. How often do you have to drive to reach essential shops or other local facilities rather than walking, cycling or taking public transport? (Please disregard the impact of Covid-19 and lockdowns)



12. Do visitors find it easy to locate your home on the development site?

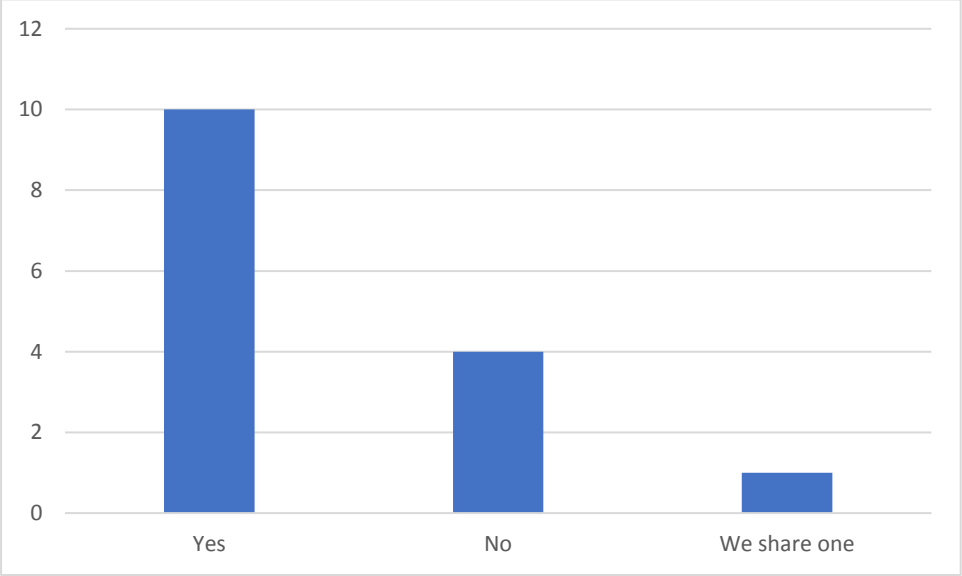


13. Thinking about the amount of parking at your house, which statement best describes your view:



Garden

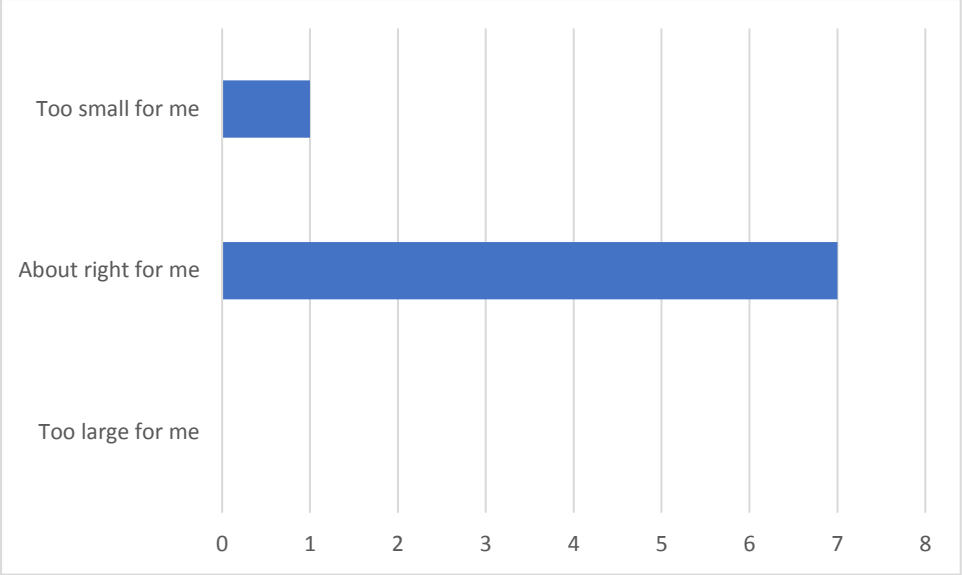
14. Does your home have a garden? [If no, please go to question 20]



15. How would you describe this garden in three words?

Large, tidy, a project to fulfil, good size, overlooked, easy to look after, large enough, spacious, organised, beautiful, plenty of space, brilliant, perfect, open, space, shared, lovely size, lack of sun

16. Is your garden?

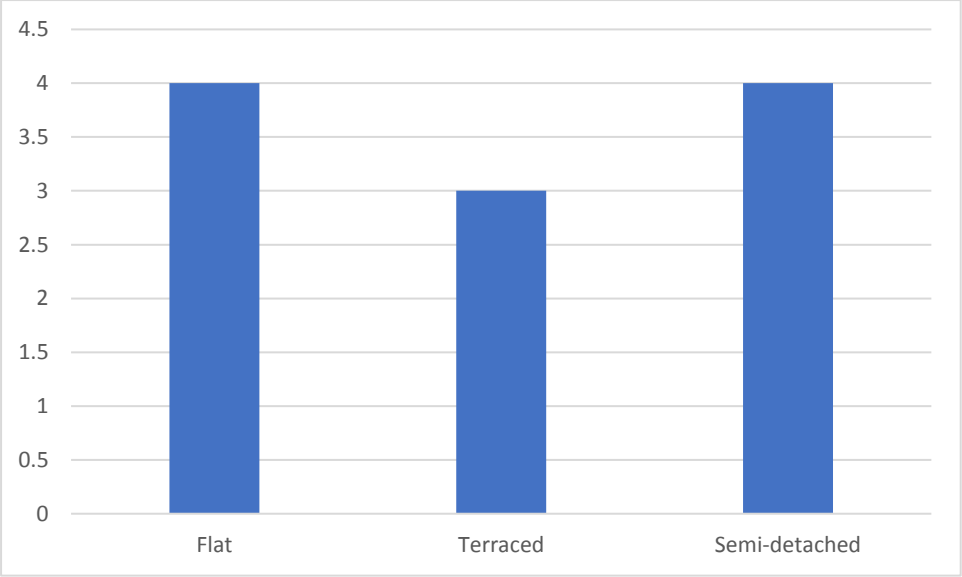


17. What do you mainly use your garden for?

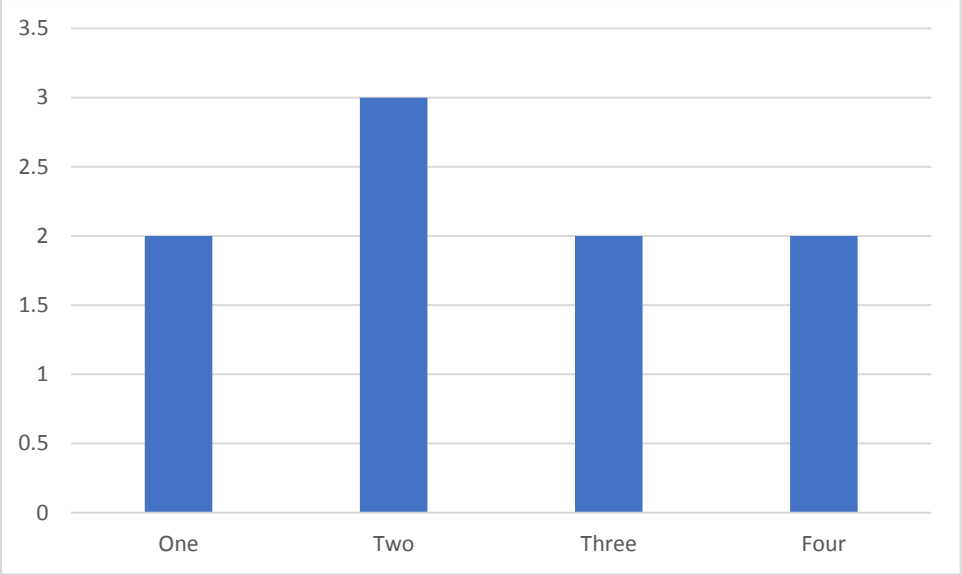
Gardening, recreation, socialising, children's play, seeing grandchildren, kid's playing, sitting on patio, not using due to covid, storage of refuse bins, storing sheds and water butts

About your home

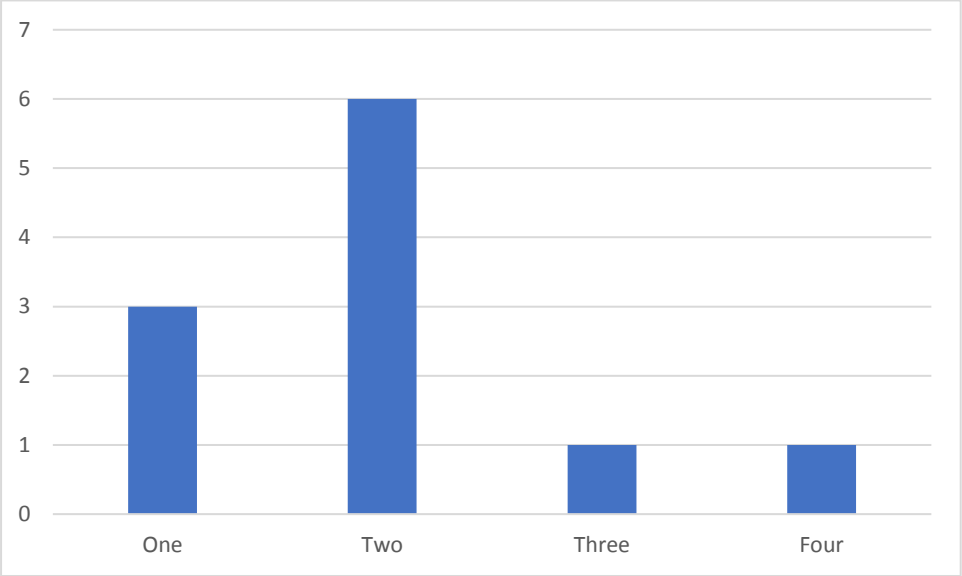
18. Is your home?



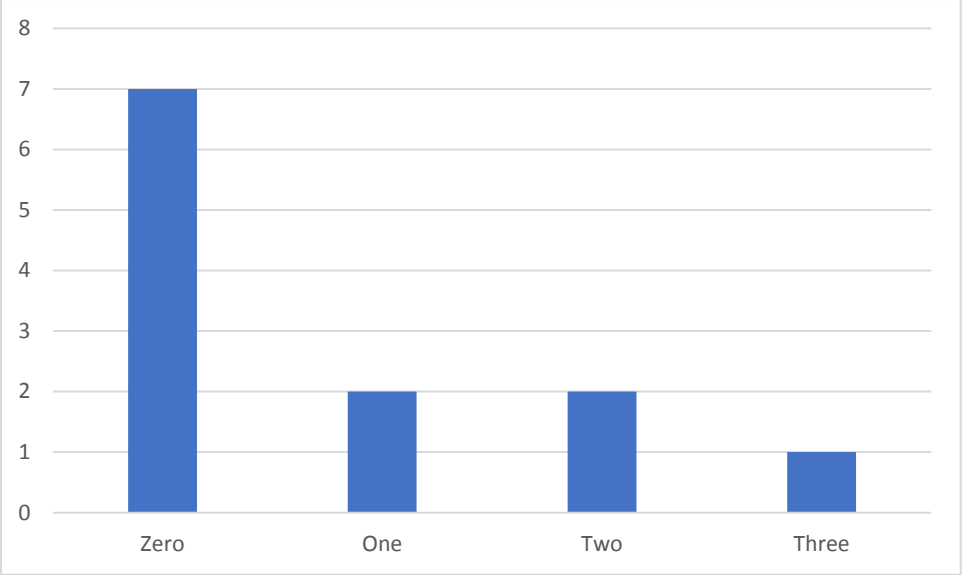
19. How many bedrooms are there?



20. How many adults usually live there?



21. How many children usually live there?



22. Which neighbourhood is it in?

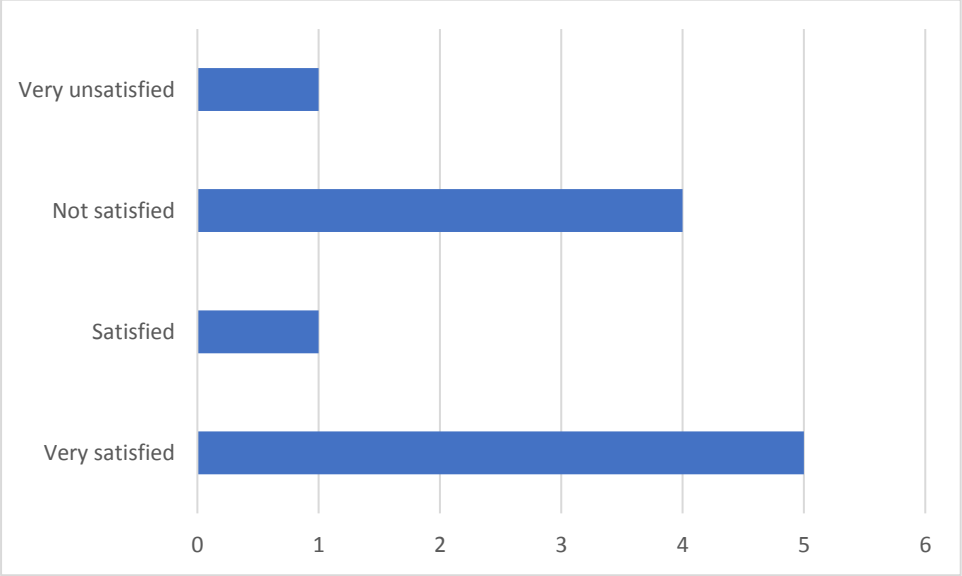
Almost all the respondents said they were from Ockford Ridge

The long-term

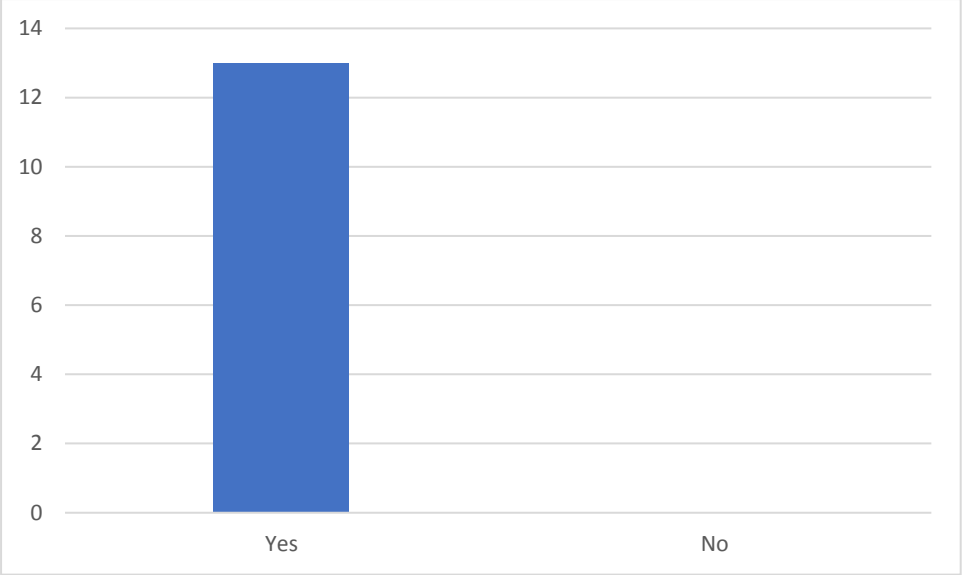
23. Do you think the size and layout of your home would allow you to stay if your needs change in the future?

5 – yes, 1 – depends, 2 – no, 1 – need two bedrooms, 1 – no too small

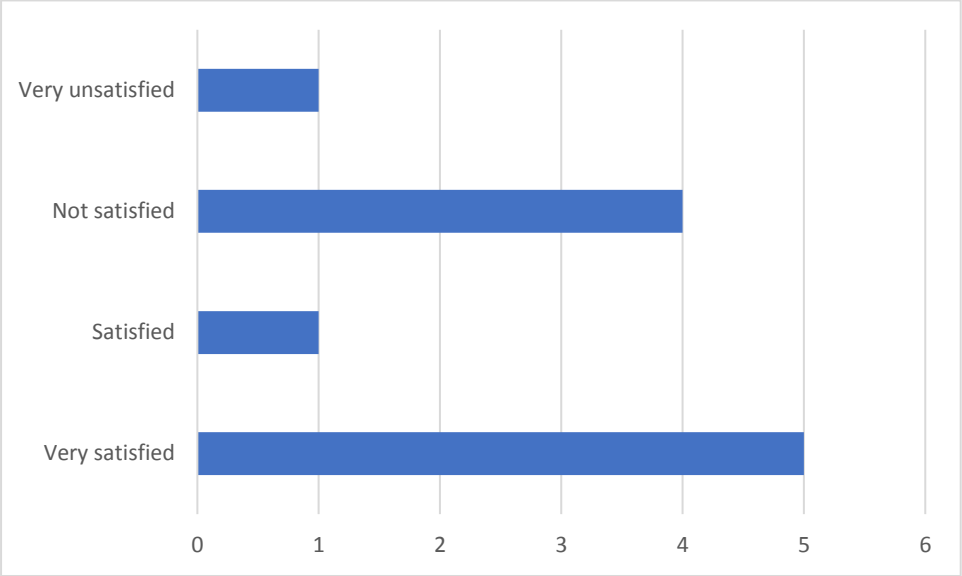
24. Are you planning to move in the next:



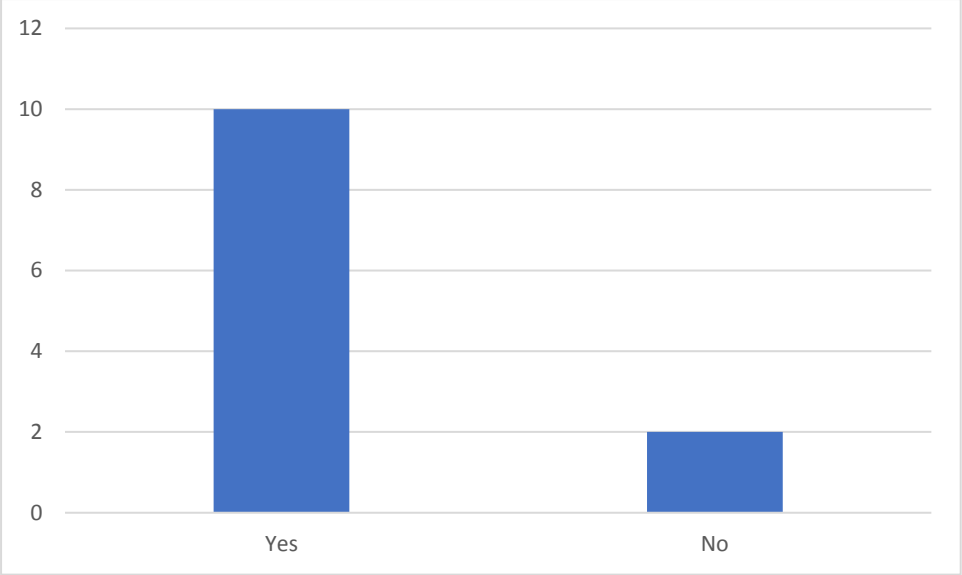
25. Do you think the development fits in well with the surrounding buildings and space?



26. Overall, how satisfied are you with your home and the development as a whole?

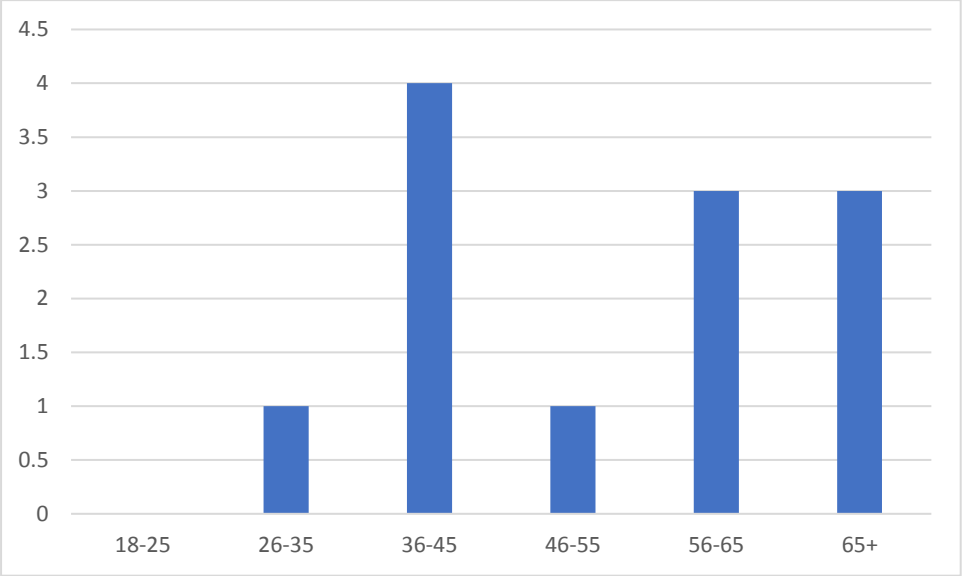


27. Would you recommend a new home developed by the Council to family and friends?

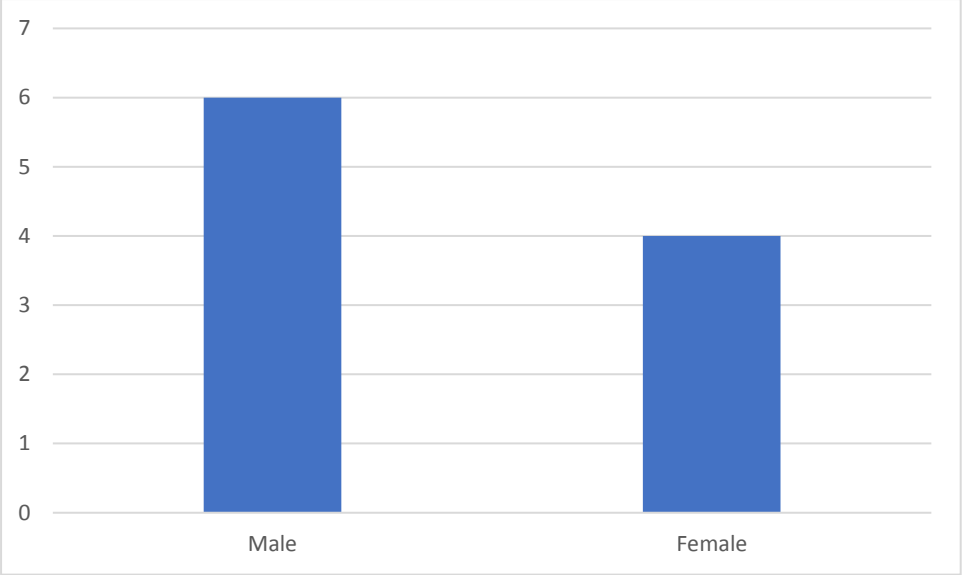


About you

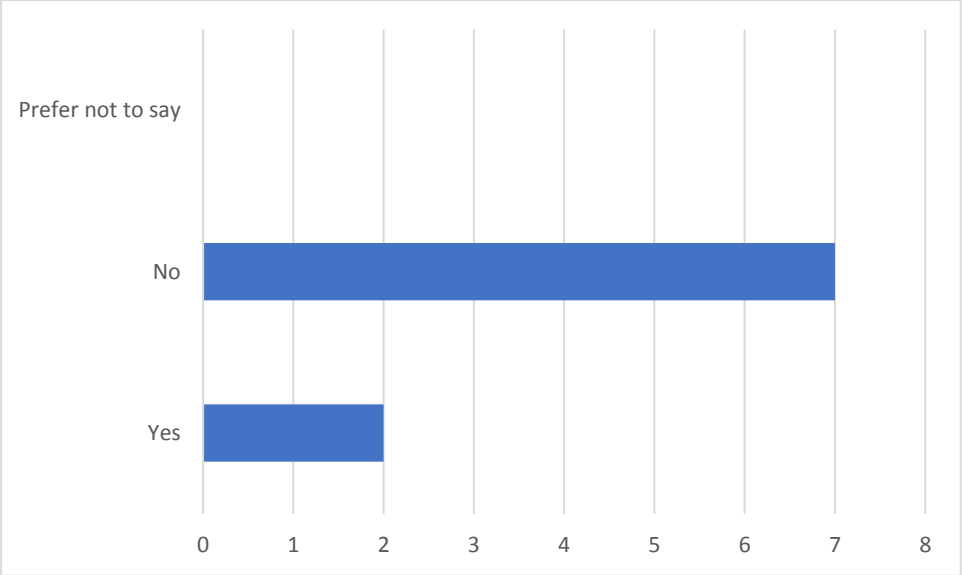
28. Age



29. Gender



30. Disability



31 – 33. Ethnicity, religion and sexual orientation

Freeform answers were received which were not necessarily comparable or easily summarisable. If this exercise is repeated, it would be preferable to provide answers for respondents to choose from.