In Confidence

Office of the Minister of Housing and Urban Development

Chair, Cabinet Social Wellbeing Committee

Preferred Options for the Healthy Homes Standards

Proposal

1 This paper seeks Cabinet agreement on the healthy homes standards for residential rental homes as required under the *Healthy Homes Guarantee Act 2017*. The analysis on the proposed standards has been informed by a cost benefit analysis undertaken by the New Zealand Institute of Economic Research (NZIER), input into the cost benefit analysis by the University of Otago, and feedback from public consultation on a discussion document that detailed options for each standard.

Executive Summary

2 Nearly a third of households (592,300) rent in New Zealand and a significant proportion of these rental homes are cold and damp.[1,2] Evidence shows that rental homes are more likely to be in poorer condition than owner-occupied homes with low indoor temperatures and a high incidence of mould.[3] Renters may lack the means to make particular changes to make their rental homes warmer and drier.

3 I am concerned about the health and social impacts of poor rental housing quality. A cold, damp, mouldy home is associated with ill health, particularly cardiovascular and respiratory illnesses, and other negative social outcomes.

4 In December 2017, this Government passed the *Healthy Homes Guarantee Act 2017* (HHGA), which amended the *Residential Tenancies Act 1986*. The HHGA enables healthy homes standards to be set to make rental homes warmer and drier. The standards cover heating, insulation, ventilation, moisture ingress and drainage, and draught stopping.

5 In March 2018, Cabinet further agreed that ensuring everyone has a warm and dry home is a priority in order to improve the wellbeing of New Zealanders and their families [CPC-18-MIN-0001 refers].

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[1] Statistics New Zealand estimate of number of households in private occupied dwellings, as at quarter ended September 2018 https://www.stats.govt.nz/information-releases/dwelling-and-household-estimates-september-2018-quarter

[2] White, V. Jones, M., (2017) Warm, dry, healthy? *Insights from the 2015 House Condition Survey on insulation, ventilation, heating and mould in New Zealand houses*. SR372. BRANZ Ltd.

[3] White, V. Jones, M., (2017) Warm, dry, healthy? *Insights from the 2015 House Condition Survey on insulation, ventilation, heating and mould in New Zealand houses*. SR372. BRANZ Ltd.

6 A number of options for the standards were developed in a discussion document and summary information, released for public consultation from 4 September to 22 October 2018 [CAB-MIN-0401.01 refers]. The discussion document evaluated the options for the standards against the following criteria:

6.1 able to achieve the objective (warm, dry rental homes)

6.2 costs and benefits to landlords and industry (time and money)

6.3 costs and benefits to tenants (time and money)

6.4 costs and benefits to government (clear and enforceable standards, court administration)

6.5 enduring, flexible, and enabling adoption of future innovation and building solutions.

7 Following the conclusion of the consultation, submissions were analysed from a range of stakeholders. Broadly, tenants and health advocates supported the higher standards, while landlords and property managers tended to prefer the status quo or minimal change.

8 The options for the standards were evaluated against the same criteria in the discussion document in that they aim to be pragmatic and enduring, without imposing an unreasonable burden on landlords or tenants or industry. Landlords and suppliers need time to build resources to successfully implement the standards. Equally, tenants and wider society need to experience the benefits at the earliest opportunity.

9 The standards proposed reflect the feedback received through public consultation, the cost benefit analysis, qualitative and quantitative research, and further conversations with building industry researchers and experts. As a result of feedback during consultation, some standards have been clarified or modified to ensure the wording better reflects the policy intent, they are easy to understand and implement, and they are enduring.

10 Under the HHGA , the standards will be implemented between 1 July 2019 and 30 June 2024. I seek the approval of Cabinet to the proposed healthy homes standards, to ensure the healthy homes standards can be made and be in force in time, and that the necessary education and information material to support the changes can be developed.

Improving the quality of New Zealand's rental housing stock

At-risk groups in particular will benefit from the healthy homes standards

11 Damp, cold and mouldy rental homes are associated with ill health and other negative social outcomes.[4] Poor quality homes raise the likelihood of contracting respiratory infections, and increase the severity of existing conditions (e.g. asthma), contributing to

[4] Telfar Barnard, L.F. (2010) Home truths and cool admissions: New Zealand housing attributes and excess winter hospitalisation (University of Otago); Hirvonen M.R., Huttunen K., & Roponen M. (2005) Bacterial strains from mouldy buildings are highly potent inducers of inflammatory and cytotoxic effects. Indoor Air 15(s9), 65-70; Ormandy D., Ezratty V. (2012) Health and thermal comfort: from WHO guidance to housing strategies, Energy Policy 49(2012);

higher medical costs, avoidable hospitalisations, and winter deaths. At-risk groups include tenants in low-income households, [5,6,7] the elderly,[8] children,[9,10] and disabled persons.[11] Māori and Pacific peoples have the highest rates of renting, so are more likely to be impacted by cold, damp homes.[12]

12 I expect improving the quality of rental homes will address the needs of identified at-risk groups, as well as benefitting tenants and wider society through improved health and wellbeing, reduced pressure on publicly funded health and social services, improved school and work attendance and productivity, and reduced atmospheric carbon emissions.

The healthy homes standards recognise the integrated nature of a home system

13 The proposed standards work together to have a cumulative effect of creating a warmer, drier rental home. Table 1 details the specific questions posed in the discussion document, released on 4 September 2018, to determine the proposed standards:

[5] Witten K, Wall M, Carroll P, Telfar-Barnard TL, Asiasiga L, Graydon-Guy T, Huckle T & Scott K (2017), The New Zealand Rental Sector. Study Report ER22. BRANZ Ltd and Massey University SHORE and Whariki Research Centre

[6] Howden-Chapman P., Viggers, H., Chapman, R., O'Sullivan, K., Barnard, L.T., & Lloyd, B. (2012). Tackling cold housing and fuel poverty in New Zealand: a review of policies, research and health impacts. Energy Policy, 49, p. 135-136.

[7] Davie GS, Baker MG, Hales S & Carlin JB (2007), Trends and determinants of excess winter mortality in New Zealand: 1980-2000; BMC Public Health 2007,7.

[8] Telfar Barnard L & Preval N (2018) *Healthy Homes Guarantee Standard Cost Benefit Input: Warm Up New Zealand evaluation rental sector sub-analysis: differences in health events and costs by existing insulation status;* Housing and Health Research Programme, University of Otago Medical School, Wellington May 2018.

[9] Ministry of Health data as at 8 August 2018; "children" are counted as 'individual person' by the Ministry of Health and are aged under 15 years old in this dataset. "Hospitalisations" are counted as 'hospital events' by the Ministry of Health. A person can have more than one hospitalisation in a year. This figure has been relatively stable since 2014. To note, only the medical conditions of 'Pneumonia', 'Acute bronciolitis', 'Unspecified LRTI+Bronchitis', 'Bronchiectasis' and 'Asthma' are "potentially housing related" rather than all respiratory diseases in children.

[10] Somerville M, Mackenzie I, Owen P & Miles D (2000) Housing and health: does installing heating in their homes improve health of children with asthma? Public Health, 114(6).

[11] Statistics New Zealand (2013) Disability and housing conditions: 2013: Wellington: Statistics New Zealand

[12] Statistics New Zealand Census data 2013; Europeans have the higher homeownership rate at 57% compared with Māori at 28% and Pacific peoples at 19% as at 2013

Table 1: Healthy homes standards options for public consultation

Standards	Options
Heating	Location: where in the rental home should landlords be required to provide heating? • Option One: in the living room only • Option Two: in the living room and bedrooms Indoor temperature: what achievable indoor temperature should heating devices be sized for? • Option One: heaters that landlords provide must be capable of achieving an indoor temperature of **at least 18°C** in rooms applicable to the heating standard • Option Two: heaters that landlords provide must be capable of achieving an indoor temperature of **at least 20°C** in rooms applicable to the heating standard Heating devices: should landlords only be required to provide heating devices where portable electric heaters are not capable of achieving the required indoor temperature? • Option One: landlords provide fixed heating devices only • Option Two: landlords provide fixed **and** portable heating devices Acceptable devices: should we not accept particular heating devices where we know they are inefficient, unaffordable, and unhealthy?
Insulation	Minimum level installed: what minimum level of insulation should be required for a rental home? • Option One: minimum level for existing insulation akin to the 1978 insulation standard/new insulation being installed to the 2008 Building Code (the status quo) • Option Two: a higher minimum level of ceiling and underfloor insulation than the status quo, where the minimum level for existing insulation is akin to the 2001 Building Code/new insulation is akin to the 2008 Building Code • Option Three: an even higher minimum level of ceiling and underfloor insulation, where the minimum level for both existing and new insulation is akin to the 2008 Building Code Degradation levels: what should be the appropriate level that insulation can degrade over time before it needs to be replaced? • Option One: insulation can settle or degrade by about 30% before it is in an unreasonable condition • Option Two: insulation can settle or degrade by up to and around 10% before it is in an unreasonable condition
Ventilation	What is the appropriate method of ventilation? • Option One: the status quo o every bathroom has at least one window that directly opens to the outside air unless other adequate means of ventilation are provided to the satisfaction of the local authority o each habitable room must be constructed with windows with an area amounting to not less than one twentieth part of the area of the floor can be opened for the admission of air o every room which is not habitable shall be provided with a window or windows that the local authority considers necessary for adequate ventilation • Option Two: openable windows in the living room, dining room, kitchen, and bedrooms, unless an exception applies, and appropriately sized and installed extractor fan(s) in rooms with a shower or bath • Option Three: openable windows as for Option Two, and appropriate sized and installed extractor fan(s) in rooms with a shower, bath, or indoor cooktop

Standards	Options

Moisture ingress and drainage	How should landlords protect rental homes against moisture entering the home and inadequate drainage?
	• Option One: the status quo
	  ○ every house shall, to the extent the local authority deems necessary, be provided with efficient drainage for the removal of storm water, surface water and ground water
	  ○ every house shall be provided with gutters, downpipes and drains for the removal of roof water to the satisfaction of the local authority
	  ○ timber floors shall have adequate space and vents to ensure proper ventilation to protect the floor from damp and decay
	• Option Two: landlords must ensure efficient drainage and guttering, downpipes and drains at their rental home, and ensure the subfloor has a ground moisture barrier, unless there is already adequate subfloor ventilation

Draught stopping	What appropriate measures should be taken to stop unnecessary draughts making the indoor temperature colder?
	• Option One: the status quo
	  ○ the walls and ceiling of every habitable room, bathroom, kitchen, kitchenette, hall and stairway shall be sheathed, plastered, rendered or otherwise treated, and shall be maintained to the satisfaction of the local authority
	  ○ every floor shall be kept in a good state of repair, free form crevices, holes and depressions
	• Option Two: landlords must block any unused fireplaces and chimneys and stop any unnecessary gaps or holes that cause noticeable draughts and a colder home, and are 3mm or greater in and around windows and doors, walls, ceilings, floors, and access hatches

Compliance timeframe	When and how should the healthy homes standards be implemented? • Option One: landlords must comply with the standards within 90 days of a new or renewed tenancy starting after a single compliance date, with all rental homes compliant by 30 June 2024 • Option Two: a single compliance date • Option Three: stagger compliance dates between 1 July 2019 and 30 June 2024, either by the standard or the location of the rental home

A variety of submissions were received during the public consultation process

14 The discussion document was released for public consultation from 4 September to 22 October 2018. 1,777 submissions were analysed from a range of stakeholders, of which 862 were written submissions or phone calls, and 915 were received through an online survey. A summary of the submissions is attached as Annex One, and will be proactively released in 2019.

15 The largest proportion of submissions received were from tenants (44%), followed by landlords (38%). Submissions were also received from a range of stakeholders, including social housing providers, equipment suppliers and installers, public health experts, researchers, engineers, building inspectors, and home performance advisors. Many of the submitters were also affiliated with Māori interests.

16 Broadly, tenants and health advocates were more likely to support higher standards, while landlords and property managers were more likely to support the status quo.

17 A few ideas were raised during consultation that fell outside the immediate scope of the healthy homes standards, however the ideas were still considered in the analysis. The consideration of these comments is detailed in Annex Two.

The Recommended Healthy Homes Standards

The current law for rental homes

18 Rental homes are primarily regulated under the *Housing Improvement Regulations 1947* (the HI Regulations), the *Building Act 2004*, and the *Residential Tenancies Act 1986* (the RTA).

19 The HHGA amends the RTA to enable healthy homes standards to be made about indoor temperature, heating, insulation, ventilation, moisture ingress and drainage, and draught stopping, to improve the quality of rental homes.

20 In determining the proposed heathy homes standard, each option was considered against a number of objectives. The objectives seek to strike a balance between the costs and the benefits of these proposals to ensure the regulations reflect the outcome of the public consultation, and are enduring and fit-for-purpose:

20.1 tenants experience the benefits from warmer, drier homes, and can understand landlords' obligations, to allow them to raise issues with the landlord or the Tenancy Tribunal

20.2 landlords can clearly understand their obligations and have time to prepare to comply with their new responsibilities, and costs on landlords are reasonable

20.3 suppliers have clear and certain requirements to build capacity to help implement the standards

20.4 government sees the benefits from warmer, drier homes through less reliance on public services (such as the reduced use of publicly funded health services), and has clear requirements to ensure higher compliance and reduce administrative burden

20.5 the standards are enduring, flexible, and enable adoption of future innovation and building solutions

21 In determining the proposed healthy homes standards, officials have analysed all submissions and considered the options against the above assessment criteria and the cost benefit analysis prepared by the New Zealand Institute of Economic Research (NZIER). In some cases, officials have also sought clarity on specific points from building and industry experts, such as the Building Research Association of New Zealand (BRANZ).

22 In all cases, the standards will also ensure the condition of devices, appliances and products are safe, well maintained, and consistent with other expectations in the RTA.

Heating standards

23 Many New Zealand rental homes' winter indoor temperatures are colder than recommended by World Health Organisation guidance.[13] Cold homes are associated with poor health, higher rates of winter death, and negative social outcomes. Heating can reduce illness by maintaining a healthy air temperature, lowering relative humidity and dampness, and reducing the risk of mould and fungi.[14]

24 Feedback was sought on four areas under the heating standard:

24.1 Location: should landlords be required to provide heating in the living room only, or the living room and bedrooms?

24.2 Indoor temperature: should heating devices be capable of achieving an indoor temperature of 18°C or 20°C?

24.3 Heating devices: should landlords be required to provide fixed heating devices only, or fixed and portable heating devices?

24.4 Acceptable or unacceptable devices: should we not accept particular heating devices known to be inefficient, unaffordable, and unhealthy?

25 An online tool will be developed to assist landlords and tenants in determining the type and capacity of heating device needed to achieve the appropriate indoor temperature, based on such things as the level of insulation, the size and type of windows, and location (climate zone) of the house. The tool is intended to be user-friendly, downloadable and printable, and easily accessible for landlords and tenants.

26 I propose the overall heating standards be: landlords provide **fixed heating devices** that are capable of achieving an **indoor temperature of 18°C, with a minimum capacity of no less than 1.5 kilowatts, with a thermostat for electric heaters,** in the **living room only (including open plan spaces).** I also propose a **list of heating devices that are considered to be not acceptable for the heating standard**. The rationale for this is provided below.

Location: where in the rental home should landlords be required to provide heating?

27 Currently, the *Housing Improvement Regulations 1947* require every 'living room' to be fitted with a fireplace and chimney or other approved form of heating.[15] The BRANZ 2015

[13] World Health Organisation (1087) Health Impacts of Low Indoor Temperature: Report on a WHO meeting, Copenhagen 11-14 November 1985, Copenhagen: WHO

[14] WHO Regional Office for Europe. 2009. Guidelines for Indoor Air Quality; Dampness and Mould. Copenhagen: WHO

[15] Regulation 6 of the Housing Improvement Regulations 1947

House Condition Survey found that 22 percent of New Zealand rental homes have no fixed heating, compared to 7 per cent of owner occupied properties with no fixed heating.[16]

28 Two options were put forward in the discussion document:

- Option One: in the living room only (including kitchen and dining room if open plan rental home)
- Option Two: in the living room and bedrooms.

29 The majority of respondents (mostly tenants) considered that landlords should be required to provide heating in living room(s) and bedrooms, citing factors such as the risk of illness and overcrowding. The majority of landlords and property managers supported the option to heat the living room only due primarily to cost factors. Both landlords and tenants commented on the possibility that fixed heating may be a large cost imposition on landlords if not used where cannot afford the running costs.

30 Table 2 summarises the analysis of the two options considered for the location of the heating device. The summary incorporates the information from the cost benefit analysis, other quantitative and qualitative research, and the high level comments from public consultation.

[16] White, Jones M (2017) *Warm, dry, healthy? Insights from the 2015 House Condition Survey on insulation, ventilation, heating and mould in New Zealand houses*. SR372. BRANZ Ltd

Table 2: Summary of options for location of heating device

Options	Advantages[17]	Disadvantages
Option One recommended Landlords provide a heating device in the living room only (includes kitchen and dining room if open plan rental home)	• Estimate of 179,000 (18°C) to 285,200 (20°C)[18] homes would receive new heaters in living rooms, or use their existing living room heating more[19] Benefits per affected household of $3,741(18°C)-$2,681(20°C). Cost benefit ratio of 1.34(18°C)-1.28 (20°C). Net present value (NPV) of $168 million if heated to 18°C and $169 million if heated to 20°C. Some benefits could not be quantified[20] • Tenants that use heating may gain health benefits • Landlords will have a clear, modern standard to comply with • Government / taxpayers likely to benefit from less demand on publicly funded services (such as health) and reductions in carbon emissions from more efficient heating devices • Tenants who are currently using heating may see a reduction in energy costs • Portable electric heaters will be sufficient for most bedrooms (average purchase cost is $30-50 including GST), and tenants can provide these themselves	• Landlords incur cost for new heating if not already provided. The average installed cost for a medium-sized heat pump of 5-7 kilowatts is about $3,000-3,500 including GST[21] • Tenants who are not currently using heating may see an increase in energy costs • At risk groups - children and the elderly - may continue to live in rental homes that are not able to achieve the necessary temperature in bedrooms for their particular needs • Relative to option two, there may be an increased risk that people will (functionally) crowd into one heated room to live and sleep increasing the risk of infectious disease transmission • Tenants continue to experience higher energy costs if they need to heat larger bedrooms with less effective and more costly to operate, portable heating devices • In some rental homes, portable heaters will be insufficient to heat certain bedrooms, so tenants will not be able to heat these bedrooms to the appropriate temperature unless the landlord voluntarily provides adequate fixed heating

[17] Estimates and costings based on NZIER (2018) cost benefit analysis of proposed healthy homes standards.

[18] This figure relates to the assumption that the home will be heated to 18°C. If the home is heated to 20, the number will be 285,200 houses

[19] Modelling assumes 50% of households pursue target temperature.

[20] The cost benefit analysis does not include unquantifiable benefits such as subjective wellbeing, effects on mental health and reductions in school absences and property maintenance.

[21] As a present value, discounted over 15 years at 4% this cost including maintenance would be $2,800 GST exclusive per affected household.

Options	Advantages[22]	Disadvantages
Option Two Landlords provide a heating device in the living room(s) and the bedrooms	• **Living rooms:** option one above states benefits of heating living rooms • **Bedrooms:** an estimate of 71,300 (18°C) -125,900 (20°C) homes[17] would receive new heaters in bedrooms or use existing bedroom heating more. Benefits per affected household from bedroom heaters are $58 (18°C) -$194 (20°C) with a benefit cost ratio of 0.26 (18°C) – 0.8 (20°C)[23] • **Combined living/bedroom:** cost benefit ratio of 1.30 (18°C) – 1.26 (20°C). Some benefits could not be quantified[24] • Tenants that use heating in bedrooms may gain health benefits • Government / taxpayers likely to benefit from less demand on publicly funded services, reductions in carbon emissions due to more efficient devices being used	• Landlords incur cost for new heating if not already provided. Larger living rooms will require fixed heating (e.g. heat pump) at about $3,000-3,500 including GST • Tenants who are not currently using heating may see an increase in energy costs

31 I propose the specific standard be **Option One: in the living room only (including open plan areas).** Most living rooms are of a size that would require fixed heaters of a higher capacity than portable heaters, which tenants cannot provide or are not permitted and unlikely to install themselves, and living rooms are the most heated rooms in a rental home, with bedrooms less commonly heated. Tenants would be able to heat their living room to a healthy temperature and therefore are likely to experience a warmer home and a consequential reduction in ill health.

32 General public health advice is that people benefit from heating in bedrooms, particularly in winter months. With this proposed standard, tenants can continue to provide their own portable heating devices for their bedrooms, and government assistance is available where necessary. Tenants should also experience an improvement in the quality of their overall living environment from the standards working together to create a warm and dry rental home.

Indoor temperature: what indoor temperature should heating devices be sized for in a rental home?

33 The World Health Organisation (WHO) recently released new housing and health guidelines that recommend and minimum indoor temperature of 18°C for the general population, noting indoor temperatures higher than 18°C may be necessary for vulnerable

[22] Estimates and costings based on NZIER (2018) cost benefit analysis of proposed healthy homes standards.

[23] See Table 8, p. 21 of NZIER (2018) cost benefit analysis for the heating standard. The total benefits ($4,155m) have been divided by the properties affected (71,373) = $58.

[24] Cost benefit analysis does not include some benefits that were unquantifiable such as subjective wellbeing, effects on mental health and reductions in property maintenance.

groups, including older people, children and those with chronic illnesses, particularly cardiorespiratory disease.[25]

34 Data from a BRANZ study indicates that, during the winter months, mean living room temperatures in New Zealand fall below the recommended range.[26] During the day, living room and bedroom mean temperatures are typically 15.8°C and 14.2°C respectively, and fall to 13.5°C and 12.6°C respectively overnight.

35 Two options were put forward in the discussion document. Note Option 2 was formulated using previous WHO guidance, which recommended indoor temperatures of at least 20°C for vulnerable groups.[27]

- Option One: heaters that landlords provide must be capable of achieving an indoor temperature of **at least 18°C** in the rooms applicable to the heating standard
- Option Two: heaters that landlords provide must be capable of achieving an indoor temperature of **at least 20°C** in the rooms applicable to the heating standard

36 The majority of tenants chose 20°C, noting a higher temperature would be particularly important for children and the elderly who are more susceptible to illness related to a cold home. Those that supported 18°C as an achievable indoor temperature considered this to be a temperature that is realistic, adequate and achievable, and applicable to the general population. The 18°C temperature was supported by the majority of landlords.

37 The creation of an online tool was widely favoured as a proactive and simple way to guide landlords to understand and meet the necessary requirements. The formula within the online tool, and within the guidance information, expects the required indoor temperature can be reached within a reasonable time, and compensates for particular characteristics of the house and the average outside temperature.

38 Table 3 summarises the analysis of the two options considered for the indoor temperature. The summary incorporates the information from the cost benefit analysis, other quantitative and qualitative research, and the high level comments from public consultation.

[25] WHO Housing and health guidelines. Geneva: World Health Organization; 2018. Licence: CC BY-NC-SA 3.0 IGO.
[26] BRANZ (2010) Energy Use in New Zealand Households: Final Report on the Household Energy End-use Project, BRANZ Study Report SR221: the Household Energy End-use Report
[27] WHO (1987) Health Impact of Low Indoor Temperatures: Report on a WHO meeting, Copenhagen 11-14 November 1955, Copenhagen WHO

Table 3: Summary of options for a minimum indoor temperature of 18°C or 20°C

Options	Advantages[28]	Disadvantages
Option One (recommended) Heaters that landlords provide must be capable of achieving an indoor temperature of at least 18°C in the rooms applicable to the heating standards	• Estimate of 179,000 homes would receive new living room heaters or use their existing heating more[29]. Benefits per affected household of $3,741.[30] Cost benefit ratio of 1.34. Some benefits could not be quantified[31] • Bedrooms: Estimate of 71,300 homes would receive new heaters in bedrooms or use their existing heating more. Benefits per affected household $58 with a benefit cost ratio of 0.26 • Combined living room/bedroom: cost benefit ratio of 1.30. Some benefits could not be quantified[32] • Homes where heating is upgraded will be capable of meeting a healthy temperature under this option • Tenants are likely to benefit from improved health and lower energy bills • Fewer landlords are likely to need to incur costs compared to option two. • Landlords will have a clear and modern standard to comply with • Government/taxpayers likely to benefit from less demand on publicly funded services, reductions in carbon emissions • Heaters that have capacity to reach 18°C even during very cold weather are capable of reaching higher temperatures most days of the year	• At risk groups - children and the elderly - may continue to live in rental homes that are not able to achieve the necessary temperature for their particular needs

[28] Estimates and costings based on NZIER (2018) cost benefit analysis of proposed healthy homes standards.
[29] Modelling assumes 50% of households pursue target temperature.
[30] The total benefit is calculated using NZIER (2018) cost benefit analysis for the heating standard. Total benefit (669,950 divided by 179,071) equals $3,741.
[31] Cost benefit analysis does not include some benefits that were unquantifiable such as subjective wellbeing, effects on mental health and reductions in property maintenance.
[32] Ibid

Options	Advantages[28]	Disadvantages
Option Two Heaters that landlords provide must be capable of achieving an indoor temperature of at least 20°C in the rooms applicable to the heating standards	• Living rooms: Estimate of 285,200 homes would receive new heaters in living rooms, or use their existing living room heating more. Benefits per affected household of $2,681. Cost benefit ratio of 1.28. Some benefits could not be quantified[33] • Bedrooms: Estimate of 125,900 homes would receive new heaters in bedrooms or use their existing heating more. Benefits per affected household $194 with a benefit cost ratio of 0.80 • Combined living room/bedroom: cost benefit ratio of 1.26. Some benefits could not be quantified[28] • Tenants, including at-risk groups, will have heating capable of achieving the necessary temperature for their particular needs at all times of the year • Landlords will have clear, modern standards to comply with	• Landlords would be upgrading their homes to a higher standard, regardless of the needs of the tenant • The higher temperature will be more than what is required by most of the general population to avoid ill health

39 I propose the specific standard be **Option One: heaters that landlords provide must be capable of achieving an indoor temperature of at least 18 °C (in the living room)**. Heating devices capable of achieving 18°C will be capable of achieving 20°C the majority of the time, except on a few exceptionally cold days during the year where they may not be able to operate as efficiently.

40 This is also consistent with the new WHO guidelines (released November 2018), which only refer to the 18°C option, and no longer refer to the 20°C option.

Heating devices: what heating devices should landlords provide in rental homes?

41 In order to achieve the required indoor room temperatures, a fixed heating devices may be necessary. An online tool and information material will be developed to assist landlords and tenants to determine the adequate device(s) required, depending on the characteristics of the home (such as room size, existing insulation levels, window type and size of glazing, and so on).

42 Two options were put forward in the discussion document:

- Option One: landlords provide fixed heating devices only, in the room(s) covered by the heating standard
- Option Two: landlords provide fixed **and** portable heating devices in the room(s) covered by the heating standard

43 The majority of respondents considered that fixed heating devices were most appropriate given they were most likely to be efficient, healthy and affordable. The majority of landlords and some tenant advocacy groups were of the view that portable heating devices that are not easily secured could be stolen or taken in error, those portable devices are relatively

[33] The cost benefit analysis does not include unquantifiable benefits such as subjective wellbeing, effects on mental health and reductions in school absences and property maintenance.

cheap for tenants to purchase, and that tenants had personal preferences on the types of portable heating.

44 Table 4 summarises the analysis of the two options considered for whether landlords should provide fixed, or fixed and portable, heating devices.

Table 4: Summary of options for fixed, or fixed and portable heating devices

Options	Advantages[34]	Disadvantages
Option One Landlords only provide fixed heating devices in cases where portable electric heaters are insufficient to heat the required rooms	• Landlords would incur only the cost of providing and maintaining a fixed heating device(s) • Tenants have the choice and discretion on the design and type of portable electric heating they use • Landlords would avoid investing in the types of heaters that tenants already own and can easily provide themselves • Portable electric heaters are present in about half of all rentals[35]	• Landlords would incur new cost for heating if not already provided, e.g. average installed cost for a medium sized heat pump of 5-7 kilowatts is about $3,000-3,500 incl GST, with annual maintenance costs of $20-100 • Less likely to meet the objective of a warm, dry home where tenants are unable to provide their own portable heater (estimated cost of $30-$50) • Tenants may need to seek financial assistance to purchase portable heaters if required
Option Two Landlords must provide fixed and portable heating devices to heat the required rooms	• This option is more likely to meet the objective of warm and dry home where tenants are unable to afford their own portable heater • All tenants, including those who cannot afford to buy a portable heater, can still heat a room to the appropriate indoor temperature, and so are more likely to experience health benefits	• Landlords incur higher capital costs for this option to provide both fixed and portable heating devices. E.g. average installed cost for a medium sized heat pump of 5-7 kilowatts is about $3,000-3,500 incl GST, and average cost per portable heater is about $30-50, with maintenance costs of $20-100 per year for heat pumps
Modified Option Two Landlords must provide fixed heating devices of a minimum capacity of no less than 1.5 kilowatts, with thermostat for electric heaters	• This option is more likely to meet the objective of warm and dry home where tenants are unable to afford their own portable heater • All tenants, including those who cannot afford to buy a portable heater, can still heat a room to the appropriate indoor temperature, and so are more likely to experience health benefits • The standard is clearly understood and easy to enforce	• Landlords incur higher capital costs for this option to provide small and large fixed heating devices. E.g. average installed cost for a medium sized heat pump of 5-7 kilowatts is about $3,000-3,500 incl GST, and average cost per fixed small heater is about $110 installed, with maintenance costs of $20-100 per year for heat pumps • An additional 120,000 homes (estimated) will require a new fixed heating device where portable were previously used • There may not be additional health benefits where portable devices were previously used

[34] Estimates and costings based on NZIER (2018) cost benefit analysis of proposed healthy homes standards.

[35] White V, Jones M (2017) op cit

45 I believe fixed, modern, affordable heating devices will make the biggest step change to achieving the outcome of warmer, drier homes. I propose the specific standard be **Modified Option Two: landlords should be required to provide fixed heating devices of a minimum capacity of no less than 1.5 kilowatts with a thermostat for electric heaters** (that is capable of achieving an indoor temperature of at least 18°C in the living room only).

46 A minimum capacity of no less than 1.5 kilowatts will mean most rental homes will have a modern, affordable fixed heating device in the living room, and that the living room is able to achieve the indoor temperature of 18°C reasonably quickly. Electric heaters will have thermostats to enable tenants to operate these efficiently to help manage their running costs.

47 The calculation within the online tool will set a threshold that will require a fixed heating device able to achieve the minimum indoor temperature on the coldest days of the year. This will mean most homes will likely require a fixed heating device, with some exceptions which are detailed later in this paper.

Should we accept some heating devices and not others?

48 A large proportion of New Zealand rental homes have no heating device(s), or have inadequate, costly to operate or unhealthy heating available for tenants to reach a required indoor temperature.[36]

49 Some rental properties may have existing heating devices that have sufficient capacity to meet the minimum temperature, but could be less cost-effective to run than modern appliances, meaning tenants may be unlikely to use them and therefore miss out on the health benefits of a warmer home. Existing heating devices may also generate moisture and toxic combustion gases, resulting in mould and indoor air pollution and contributing to poor health outcomes.

50 The discussion document sought feedback on whether the heating standard should be set so that unhealthy, inefficient, or unaffordable devices would not meet the standard.

51 Submitters were broadly in support of the need to ensure the heating devices in rental homes are efficient, healthy and affordable for tenants.

52 The discussion document also asked if particular forms of heating devices should be considered ‘not acceptable’ in the heating standard, as these devices are particularly inefficient, unaffordable, and unhealthy to run. The heating standard could be set so that these heating devices would not meet the standard.

53 I consider the following heating devices would not be acceptable to meet the heating standard:

- **unflued combustion heaters**, including gas and kerosene heaters, as these release moisture and toxic gases in the air and are one of the most expensive heating options
- **open fires**, as these generally operate between 5 to 15 per cent efficiency, with the majority of heat escaping through the chimney, and they significantly contribute to indoor and outdoor air pollution

[36] White, V. Jones, M (2017) op cit

- **all electric heaters (except heat pumps) with a heating capacity of greater than 2.4 kilowatts** because they are expensive to run and reduce the likelihood of tenants using them
- **multiple portable electric heaters in one room** with a combined capacity greater than 2.4 kilowatts, because they could overload electrical wiring, cause fire hazards, and are expensive to run and thus reduce the likelihood of tenants using them

54 The advantages of not accepting certain heating devices include:

54.1 landlords do not incur capital costs on inefficient, unaffordable or unhealthy heating devices

54.2 tenants are not exposed to noxious gases or particular emissions

54.3 tenants see a reduction in energy costs on their primary heating if replaced by devices that are more affordable and efficient to operate

54.4 government and the public benefit from acceptable heating devices through a reduction in carbon emissions, and from improved heating behaviours through less demand on publicly funded health and social services

55 There was a high level of agreement from respondents that these forms of heating devices should be considered as 'not acceptable' in the heating standard, particularly unflued heaters.

56 Heating devices must also meet the emission and efficiency requirements set in the National Environmental Standards for Air Quality.

57 I propose the standard **include a list of heating devices that are considered unacceptable to satisfy the heating standard because they are inefficient, unaffordable to operate, and unhealthy to run.**

Exceptions in the heating standard

58 Some homes may not require a fixed heating device, due to the nature of their design, or, in some instances, it may not be possible to install a fixed heating device.

59 I propose a number of simple exceptions be included in this standard that would exempt certain rental properties from requiring a fixed heating device. These exceptions would include:

59.1 certified passive houses, which are usually designed to maintain an indoor temperature of 20°C, and so a fixed heating device is not required to maintain a comfortable indoor temperature throughout the year

59.2 rental properties that are part of a Body Corporate under the *Unit Titles Act*, where the body corporate rules do not allow a heating device above 2.4 kilowatt to be installed;

59.3 s 9(2)(f)(iv)

59.4 the landlord intends to demolish or substantially rebuild the home within 12 months and applied for any necessary resource consent or building consent s 9(2)(f)(iv)

59.5 for 12 months from the date the tenancy commences, if the tenant is the former owner of the home, e.g. compulsorily acquired properties by the New Zealand Transport Agency in areas designated for roading projects

Insulation standard

60 Many rental homes do not have adequate insulation to retain heat. Therefore, they are more likely to be cold, damp and mouldy. Insulation in the ceiling and underfloor of a home helps to retain heat, keeps a home warm during cooler periods, and reduces heat gain in warmer months.

61 Ceiling and underfloor insulation can be fairly easily retrofitted where rental homes have accessible roof and/or subfloor spaces. In contrast, retrofitting wall insulation and double glazing is more costly and often involves considerable building work. For this reason, current insulation requirements and the options proposed in the discussion document were limited to requirements for ceiling and underfloor insulation retrofitting.

62 Feedback was sought on two areas under the insulation standard:

- Minimum level installed: what should be the minimum level of ceiling and underfloor insulation installed in rental homes:
    - Option One: (status quo) minimum level for **existing** ceiling and underfloor insulation akin to the **1978** insulation standard, and **new** insulation being installed to the **2008** building code
    - Option Two: a higher minimum level of ceiling and underfloor insulation than the status quo, where the minimum level for **existing** insulation is akin to the **2001** Building Code, and **new** insulation is akin to the **2008** Building Code
    - Option Three: an even higher minimum level of ceiling and underfloor insulation, where the minimum level for both existing and new insulation is akin to the 2008 Building Code
- Reasonable condition: what should be the appropriate level that insulation can degrade over time before it needs to be replaced:
    - Option One: insulation can settle or degrade by about 30% before it is in unreasonable condition
    - Option Two: insulation can settle or degrade by up to and around 10% before it is in unreasonable condition

63 I recommend the insulation standards be modified to combine the minimum level of insulation installed (Option Three) and the reasonable condition (Option One), so that the standard for ceiling and underfloor insulation would be **based on the 2008 Building Code OR, for ceiling insulation, a minimum thickness of insulation of 120mm.** The rationale for this is provided below.

64 For the minimum level of insulation installed, the majority of submitters, driven by tenant respondents, supported the minimum level installed described in Option Three. They noted that it made sense to use the current Building Code requirements for best outcomes. Landlords and property managers were more likely to support Option One for the minimum level installed. For this group of respondents, the existing standards were sufficient and

many had already upgraded their insulation to comply with existing requirements. Only a few landlords and property managers supported Option Two.

65 For the level of reasonable condition, a majority of submitters, driven by tenant respondents, supported the degradation level detailed in Option Two, with the main themes being that there would be health benefits for tenants and lower heating costs. Those in support of Option One considered the current rules easy to understand and apply. The majority of submitters also expressed the view that the current exceptions should continue (such as accessibility into the roof cavity).

66 Tables 5 and 6 summarise the analysis of the two options considered for the minimum level of insulation installed and for reasonable condition. The summary incorporates the information from the cost benefit analysis, other quantitative and qualitative research, and the high level comments from public consultation.

Table 5: Summary of options for minimum level of insulation installed

Options	Advantages[37]	Disadvantages
Minimum level installed		
Option One (status quo) Akin to 1978 Building Code for existing, and 2008 Building Code for new	• Landlords incur less capital costs and do not need to understand new obligations • Most tenants will at least have some level of ceiling and underfloor insulation in their rental home, and be experiencing health benefits and some energy savings (compared to those without insulation) • Government may incur less cost compared to the other options to communicate the requirements • Government may benefit from less demand on publicly funded services	• Tenants in rental homes with some, but not optimal, levels of insulation are not targeted under this option so may miss out on the benefits from insulation improvements to their home. This could lead to negative health outcomes and higher heating costs than the other options • If a more stringent level of 'reasonable condition' for insulation was applied, an estimated additional 40,000 rental homes would require ceiling insulation top up
Option Two Akin to 2001 Building Code for existing and 2008 Building Code for new	• A higher number of rental homes (10,000-70,000), depending on how 'reasonable condition' is assessed will benefit from an insulated rental home than Option One so it is likely that more rental homes will be warmer and drier • Benefits per affected household of about $2,056. Cost benefit ratio of 1.54 • Tenants potentially experience reduced costs from improved health and lower energy bills • Government and taxpayers benefit from homes being able to be heated more efficiently, leading to a reduction in carbon emissions, and less demand on publicly funded services in health and social support	• More landlords will incur capital costs to purchase and install ceiling insulation top ups (estimated average of $1,665 including GST)[38]. An estimate of 10,000-70,000 homes would require ceiling insulation top up, depending on how 'reasonable condition' is assessed • Government will likely incur greater costs to develop and deliver an information and education campaign and assist with enforcement

[37] Estimates and costings based on NZIER (2018) cost benefit analysis of proposed healthy homes standards.

[38] Energy, Efficiency and Conservation Authority, *Warm Up New Zealand Programme* 2017 average cost of ceiling top up including GST

Options	Advantages[39]	Disadvantages
Minimum level installed		
Option Three (recommended in combination with New Option Three in Table 6) Akin to 2008 Building Code for existing and new	• A higher number of rental homes (80,000-190,000) will benefit from increased insulation, depending on how 'reasonable condition' is assessed, with benefits per affected household of $2,017-2,025 • The cost benefit ratio of 1.50-1.51 is slightly lower than Option Two, however, as it covers more homes, it produces greater total benefits than Option Two • Tenants potentially experience improved health and lower energy bills • Landlords and government have a single standard that is clear and applies to all rental homes (including new build homes) • Government and taxpayers benefits from homes being able to be heated more efficiently, leading to a reduction in carbon emissions, and less demand on publicly funded services in health and social support	• More landlords will incur capital costs to purchase and install insulation ($1,665 including GST), compared to Options One and Two • An estimate of 80,000-190,000 rental homes will be required to top up their insulation • Due to diminishing returns in thermal performance from additional insulation, up to 50,000 homes would receive reductions in heat loss of less than 3 percent • Industry capacity constrains could mean longer compliance timeframes are required • Government is likely to incur greater costs to develop and deliver information and education campaigns to explain the new requirement and prevent confusion

Table 6: Summary of options for reasonable condition of insulation

Reasonable condition		
Option One (status quo) Insulation can settle or degrade by about 30% before it is in unreasonable condition	• Likely to meet the objective to make rental homes warm and dry by ensuring existing ceiling and underfloor insulation, as installed, is reasonably effective • Landlords and government have clear guidance on the definition of the insulation condition. Tenants will also be able to check if the insulation complies • A higher allowance for ceiling insulation settlement or compression means fewer landlords will be required to top up insulation so landlords will incur less costs	• A generous allowance for ceiling insulation or settlement means some tenants will miss out on the benefits of insulation improvements to their home, leading to negative health outcomes and higher heating costs • Difficult for landlords and tenants to assess "30% degradation" without industry assistance, thus putting industry resources under pressure
Option Two Insulation can settle or degrade by up to and around 10% before it is in unreasonable condition	• More likely to meet the objective to make rental homes warmer and drier • More tenants are likely to experience health benefits and heating cost savings • Government may benefit from a reduction in energy use and reduced carbon emissions	• Landlords face higher costs as it will require more rental homes to top up their ceiling insulation • Difficult for landlords and tenants to assess 10% degradation without industry assistance, thus putting industry resources under pressure

[39] Estimates and costings based on NZIER (2018) cost benefit analysis of proposed healthy homes standards.

Reasonable condition			
New Option Three (recommended in combination with Option Three in Table 5) Insulation in the ceiling must be a minimum thickness of 120mm	• Likely to meet the objective of warm and dry rental homes • Simpler for tenants and landlords to determine • Allows for clear and enforceable standard • Captures homes where the condition may not be ideal • Aligns with industry practice • Equivalent to 30% degradation in climate zone 3, and 20% for rest of the country • Avoids additional top ups that would have only minimal benefit	• More rental homes may need to top up their insulation (140,000) • Landlords may incur capital costs to purchase and install additional insulation	

67 In assessing the two questions under the insulation standard, I propose combining **option three, akin to the 2008 Building Code** for the minimum level standard with a modified assessment of 'reasonable condition' for existing ceiling insulation to be **a minimum thickness of 120mm**, where 120mm is equivalent to 30% degradation in climate zone 3 (South Island and middle of the North Island), and 20% for the rest of the country. The 120mm thickness measure avoids additional top ups where doing so would provide minimal additional benefits. Where existing insulation does not achieve this level, or is not in 'reasonable condition' (e.g. gaps, dampness or other contamination), new ceiling and/or underfloor insulation must be installed to the 2008 standard.

68 Therefore, the proposed standard for ceiling and underfloor insulation would be **akin to the 2008 Building Code OR a minimum thickness for existing ceiling insulation of 120mm.**

69 This proposed standard is likely to meet the objective of warm and dry rental homes, allows for clear and enforceable standards, and is future proofed by aligning to the current code. The 'reasonable condition' measure of 120mm (rather than strictly 30% or 10% degradation) aligns with industry practice and the Energy Efficiency and Conservation Authority's *Warm Up New Zealand* and *Warmer Kiwi Homes* programmes for the past decade.

70 A high number of rental homes (140,000) will benefit from additional insulation under this proposed standard. Further, the simplified measure for 'reasonable condition' makes it easier for tenants, landlords and industry to check the thickness of existing insulation, rather than relying on R-value records. This proposed standard captures those homes where the condition is not ideal, given that insulation with a thickness of 120mm is likely to have been installed recently and not be of concern.

71 However, more landlords will incur capital costs to purchase and install insulation ($1,665 including GST), as more rental homes (140,000) will need to top up their insulation.

72 The proposed standard does not require further work from landlords who have installed insulation to meet existing 2016 insulation requirements. The proposed standard affects a new group of rental properties that were not previously required to retrofit insulation.

73 The provisions in the 2016 insulation requirements will continue, such as no new foil insulation installations, new installation to be installed to NZS4246, insulation remains in a

reasonable condition including no gaps, no dampness, and not excessively settled or compressed.

Exceptions in the insulation standard

74 I recommend the following exceptions to the insulation standard will continue from the 2016 regulations[40], if:

74.1 it is not reasonably practicable to install insulation, e.g. inaccessible roof or underfloor cavity space

74.2 the landlord intends to demolish or substantially rebuild the home within 12 months and applied for any necessary resource consent or building consent s 9(2)(f)(iv)

74.3 for 12 months from the date the tenancy commences, if the tenant is the former owner of the home, e.g. compulsorily acquired properties by the New Zealand Transport Agency in areas designated for roading projects

Ventilation standard

75 Many New Zealand rental homes are poorly ventilated, leading to dampness and mould.[41] Mould can lead to poor health outcomes for tenants, and damage to walls, floors, ceilings, and personal property.

76 The presence of dampness and mould is a particular problem in areas with high moisture due to activities such as showering or cooking. A study by BRANZ shows New Zealand rental homes had visible mould at greater levels than owner-occupied homes in all areas of the home. Bathrooms were the most common rooms with mould, followed by the laundry and the kitchen.[42]

77 BRANZ data supplied to guide the discussion document suggests that around 37 per cent of rental homes in New Zealand do not have mechanical ventilation in the kitchen, and 44 per cent do not have mechanical ventilation in the bathroom. A further 17 per cent of kitchens and 12 per cent of bathrooms have mechanical ventilation that is not vented outside. Bathrooms without mechanical extractor fans were twice as likely to have moderate or worse patches of mould compared to those with extractors. Kitchens without any mechanical ventilation were three times as likely to have visible mould compared to those with mechanical ventilation.[43]

78 Feedback was sought on three options for the ventilation standard:

- Option One: (status quo):
    - every bathroom has at least one window that opens to the outside air unless other adequate means of ventilation are provided to the satisfaction of the local authority

[40] Regulations 18 to 21 of the *Residential Tenancies (Smoke Alarms and Insulation) Regulations 2016*
[41] White, V. Jones M (2017) op cit
[42] White V, Jones M, Cowan V, Chun S, (2017) BRANZ 2015 House Condition Survey: Comparison of house condition by tenure. Study report SR270. BRANZ Ltd
[43] White, V. Jones M (2017) op cit

- each habitable room must be constructed with windows with an area amounting to not less than one twentieth part of the area of the floor that can be opened for the admission of air
- every room which is not habitable shall be provided with a window or windows that the local authority considers necessary for adequate ventilation

- Option Two: openable windows in the living room, dining room, kitchen, and bedrooms, unless an exception applies, and appropriately sized extractor fan(s) in rooms with a shower or bath
- Option Three: openable windows in the living room, dining room, kitchen, and bedrooms, unless an exception applies, and appropriately sized extractor fan(s) in rooms with a shower, bath, or indoor cooktop

79 Exceptions for certain rental homes could be provided in some cases where it is not practicable to have an openable window in a room, including:

79.1 if, at the time the home was built, it received building consent even though it did not have an openable window(s) in the relevant location

79.2 s 9(2)(f)(iv)

80 I recommend the ventilation standard be **Option Three, requiring openable windows in the living room, dining room, kitchen, and bedrooms, unless an exception applies, and appropriately sized extractor fan(s) in rooms with a shower, bath, or indoor cooktop.** The rationale for this is provided below.

81 The majority of respondents (mainly tenants, health and industry groups) preferred Option Three, considering it would improve the health of the home by reducing condensation, mould, and dampness. Landlords and property managers were more likely to support Option One, noting that current requirements are sufficient and tenant behaviour (not opening windows) contributes significantly to mould issues in bathrooms and kitchens. A majority of those that responded to this question agreed that there should be exceptions for certain rental homes from requiring openable windows, such as those in multi-storey complexes.

82 Many respondents considered that there needs to be greater education provided to tenants on the activities that generate moisture inside the home, and how to properly ventilate a room.

83 Table 7 summarises the analysis of the two options considered for the ventilation standard. The summary incorporates the information from the cost benefit analysis, other quantitative and qualitative research, and the high level comments from public consultation.

Table 7: Summary of options for ventilation standards

Options	Advantages[44]	Disadvantages
Option One (status quo) Openable windows	• No additional cost to landlords , tenants and government	• Some rental homes will continue to be damp and mouldy • Landlords do not have clear, modern standard to comply with
Option Two Openable windows and extractor fan(s) in rooms with a shower or bath	• Estimate of 252,600 homes would require bathroom fans • Most moisture-prone area on a home likely to be drier, with less mould and associated health benefits • Landlords will incur less capital cost to install extractor fans in just the bathroom (compared to option three)	• 252,600 homes would require new bathroom fans, costing approximately $211-301 incl GST per household[45] • Landlords incur more cost than option one but less than option three • The cost benefit analysis could not quantify the benefits of the proposed ventilation options on health, reduced heating costs, school absences and productivity, decreased maintenance and subjective wellbeing. The cost benefit ratio is 0.05 but only additional benefits of $19.43 per year per household are required to break even • Higher costs to government to educate landlords and tenants and enforce compliance • Rooms with an indoor cooktop may continue to be inadequately ventilated and potentially damp and mouldy • Government is likely to incur greater costs to develop and deliver information and education campaigns to explain the new requirement and prevent confusion
Option Three (recommended) Openable windows and extractor fan(s) in rooms with a shower or bath and indoor cooktop	• Most likely to achieve the objective of warm, dry rental home • 212,300 rental homes will require kitchen extraction fans in addition to 252,500 homes requiring bathroom fans • Tenants who are able to use mechanical ventilation in rooms with showers, baths, and indoor cooktops will have a drier, less mouldy home, and less likely to experience poor health	• Landlords for an estimated 212,300 homes would incur costs to purchase and install new kitchen fans if not already provided, in addition to fans required under option two costing approximately $211-301 incl GST per household[46] • The cost benefit analysis could not quantify the benefits of the proposed ventilation options on health, reduced heating costs, school absences and productivity, decreased maintenance and subjective wellbeing. The cost benefit ratio is 0.04 but only additional benefits of $48.36 ($28.93 and $19.43) per year per household are required to break even • Tenants may not use the equipment • Government is likely to incur greater costs to develop and deliver information and education campaigns to explain the new requirement and prevent confusion

[44] Estimates and costings based on NZIER (2018) cost benefit analysis of proposed healthy homes standards

[45] As a present value, this cost would be $216 GST exclusive per affected household

[46] As a present value, this cost would be $322 GST exclusive per affected household

84 I propose the ventilation standard be **Option Three: openable windows in the living room, dining room, kitchen, and bedrooms, unless an exception applies, and appropriately sized extractor fans in rooms with a bath, shower or indoor cooktop,** as it is the most likely of all the ventilation options to achieve a warm and dry home.

Exceptions in the ventilation standard

85 Some exceptions to aspects of the moisture ingress and drainage standard will need to be considered, such as where:

85.1 if, at the time the home was built, it received building consent even though it did not have an openable window(s) in the relevant location

85.2 s 9(2)(f)(iv)

85.3 it is not reasonably practicable to install extractor fan(s);

85.4 the landlord intends to demolish or substantially rebuild the home within 12 months and applied for any necessary resource consent or building consent s 9(2)(f)(iv)

85.5 for 12 months from the date the tenancy commences, if the tenant is the former owner of the home, e.g. compulsorily acquired properties by the New Zealand Transport Agency in areas designated for roading projects

86 Guidance will be provided on the detail of what is "not reasonably practicable".

Moisture ingress and drainage standard

87 Moisture entering the home from outside contributes to dampness and mould issues inside the home, exacerbating health issues.[47]

88 New Zealand-based research shows that the most effective method of stopping ground moisture from entering a home is to install a ground moisture barrier (black polythene) under homes with a suspended floor.[48] [49] Subfloor moisture is potentially the largest source of moisture in the home, depending on occupant habits. BRANZ research shows this could be up to 40 litres each day under a 100m^2 house, even if the soil appears dry.[50]

89 The options proposed in the discussion document aimed to target rising dampness from under the home. We sought feedback on two options for the moisture ingress and drainage standard:

- Option One: (status quo)
    - every house shall, to the extent the local authority deems necessary, be provided with efficient drainage for the removal of storm water, surface water and ground water

[47] WHO (2009) Dampness and mould: guidelines for indoor temperature, available at https://www.euro/who/int
[48] McNeil S, Li Z, Cox-Smith I, and Marston N (2016) Managing subfloor moisture, corrosion and insulation performance. Study Report SR354, BRANZ Ltd
[49] Trethowen H.A, Middlemiss G (1988) A survey of moisture damage in southern New Zealand buildings. Study Report SR007, BRANZ Ltd
[50] NcNeil S (2015) BRANZ Build 149 August/September 2015:; Ventilation and sub floors

- every house shall be provided with gutters, downpipes and drains for the removal of roof water to the satisfaction of the local authority
- timber floors shall have adequate space and vents to ensure proper ventilation to protect the floor from damp and decay

- Option Two: landlords must ensure efficient drainage and guttering, downpipes and drains at their rental home, and ensure the subfloor has a ground moisture barrier, unless there is already adequate subfloor ventilation

90 I recommend the standard be a modified version of Option Two, updated to reflect the feedback received and further analysis, being that **landlords must ensure efficient drainage and guttering, downpipes and drains at their rental home, and wherever practicable ensure the subfloor, if enclosed, has a ground moisture barrier**, regardless of the presence of air vents. The rationale for this is provided below.

91 Overall, submitters were in favour of Option Two, and considered this option would better support drier, healthier homes. Those that preferred Option One (the majority of landlords and property managers) considered that current legislation was sufficient, and that the focus should be on enforcing current requirements rather than creating new ones. Some also noted that retrofitting older homes can be difficult and expensive.

92 Concern was raised during the public consultation period regarding the requirement for adequate subfloor ventilation in the form of vents where the instalment of these vents could compromise the structural walls. Concerns were also raised around the difficulty of establishing whether existing subfloor vents were adequately sized, which is difficult for a landlord or tenant to measure. Further discussion with BRANZ identified that ground moisture barriers were the most effective means of preventing moisture from entering the home, and vents made little material difference, as long as there was a ground moisture barrier installed.

93 Table 8 summarises the analysis of the two options considered for the moisture ingress and drainage standard. The summary incorporates the information from the cost benefit analysis, other quantitative and qualitative research, and the high level comments from public consultation.

Table 8: Summary of options for moisture ingress and drainage standards

Options	Advantages[51]	Disadvantages
Option One (status quo) Landlord maintains the premises in a reasonable state of repair with adequate subfloor vents and efficient drainage and storm water removal	• No additional cost to landlords , tenants and government	• The overall objective of drier rental homes is unlikely to be met • Tenants continue to live in damp and mouldy homes, leading to poor health and higher energy bills to heat a home • Government is unlikely to benefit from a reduction in carbon emissions or a reliance on public health and social services
Option Two In addition to Option One (the status quo), landlords must ensure a suspended floor has a ground moisture barrier, unless there is already adequate subfloor ventilation	• Objective for drier rental homes is more likely to be met • 191,900 homes would require ground moisture barriers or additional subfloor ventilation • Tenants will likely live in a less mouldy home, with potentially fewer illnesses and less damage to their personal property • Landlords may incur lower maintenance costs because of reduced mould damage to wall and ceiling linings, carpeting, curtains, and other supplied soft furnishings • Tenants may experience energy savings if a rental home has reduced moisture levels, making it easier to heat • The ground moisture barrier is easy to install	• 191,900 homes would require ground moisture barriers, costing approximately $800 GST incl per household[52] • The cost benefit analysis could not quantify the benefits of the proposed options on health, reduced heating costs, school absences and productivity, decreased maintenance, and subjective well-being. The cost benefit ratio was 0.08 but the analysis calculated that if these benefits had a value of $52 per year per household, this option would break even
Modified Option Two (recommended) Landlords must ensure efficient drainage and guttering, downpipes and drains at their rental home, and wherever practicable ensure the subfloor, if enclosed, has a ground moisture barrier	• Removes the requirement to otherwise have adequate subfloor ventilation • Simpler than option two for landlords to comply and government to enforce • Removes risk of requiring vents in structural walls • Objective for drier homes more likely to be met than status quo • Homes likely to be easier to heat – tenants likely to benefit from drier home and may see energy savings • Some homes that have sufficient subfloor ventilation but damp subfloor soil or poor natural ventilation (ie suburban areas) will benefit from a ground moisture barrier	• 287,918 homes would require ground moisture barriers, costing approximately $800 GST incl per household[53] • Up to 104,698 of these homes may currently have adequate subfloor ventilation. Of these homes those with dry subfloor soil and good local wind conditions will receive minimal benefit from a ground moisture barrier.

[51] Estimates and costings based on NZIER (2018) cost benefit analysis of proposed healthy homes standards.

[52] As a present value this cost would be $583 GST exclusive per affected household

[53] As a present value this cost would be $583 GST exclusive per affected household

94 Following assessment of this option, and taking on board the feedback received through consultation and from BRANZ, I propose a **revised standard to Option Two**, being **landlords must ensure efficient drainage and guttering, downpipes and drains at their rental home, and wherever practicable, ensure the subfloor, if enclosed, has a ground moisture barrier.**

95 The revised option, which requires a ground moisture barrier regardless of the number and size of subfloor vents, captures a large proportion of homes that currently have sufficient subfloor ventilation but do not have a ground moisture barrier. Based on BRANZ data, it is estimated that potentially 104,000 rental homes that currently have sufficient subfloor ventilation would require a ground moisture barrier. Input from technical experts suggested many of these homes would still experience a benefit. The revised option also simplifies compliance and enforcement for landlords, tenants and government, because the revised standard averts the need to test the adequacy of existing subfloor ventilation.

Exceptions in the moisture ingress and drainage standard

96 Some exceptions to aspects of the moisture ingress and drainage standard will need to be considered, such as where:.

96.1 it is not reasonably practicable to install a ground moisture barrier, e.g. inaccessible subfloor cavity space

96.2 the landlord intends to demolish or substantially rebuild the home within 12 months and applied for any necessary resource consent or building consent s 9(2)(f)(iv)

96.3 for 12 months from the date the tenancy commences, if the tenant is the former owner of the home, e.g. compulsorily acquired properties by the New Zealand Transport Agency in areas designated for roading projects

Draught stopping standard

97 Draughts are common in many New Zealand rental homes, particularly those built before 1960. Draughts increase the risk of cold indoor temperature.[54] Homes need to be well ventilated, but reducing draughts prevents uncontrolled heat loss that makes a home colder and more difficult and costly to heat. Draughty homes can also limit the benefits of improved insulation and heating.

98 Feedback was sought on two options under this standard:

- Option One: status quo
    - the walls and ceiling of every habitable room, bathroom, kitchen, kitchenette, hall, and stairway shall be sheathed, plastered, rendered or otherwise treated and shall be maintained to the satisfaction of the local authority
    - every floor shall be kept in a good state of repair, free from crevices, holes and depressions
- Option Two: Landlords must block any unused fireplaces and chimneys, and stop any unnecessary gaps and holes that cause noticeable draughts and a colder

[54] McNeil S, Plagman M, McDowall P, Bassett M (2015) The role of ventilation in managing moisture inside New Zealand homes. BRANZ Study Report SR341. BRANZ Ltd

home, and are 3mm or greater in and around windows and doors, walls, ceilings, floors, and access hatches

99 I recommend the draught stopping standard be Option Two, but modified to reflect the feedback received and further analysis, where **landlords must stop any unreasonable gaps or holes in walls, ceilings, windows, floors, and doors that cause noticeable draughts, and block unused fireplaces and chimneys**. The rationale for this is provided below.

100 The majority of respondents were in support of Option Two, noting that stopping draughts is critical to efficiently heating a home, and improves the condition of the house, thus benefitting both the landlord and the tenant. Of those in support of Option One, the broad themes were that there should not be different standards for rental properties and owner occupied properties, and that a degree of ventilation is necessary to keep homes healthy. However, many respondents expressed concern at how a requirement for '3mm or greater' would be enforced or measured.

101 Table 9 summarises the analysis of the two options considered for the draught stopping standard. The summary incorporates the information from the cost benefit analysis, other quantitative and qualitative research, and the high level comments from public consultation.

Table 9: Summary of options for draught stopping standards

Options	Advantages[55]	Disadvantages
Option One (status quo) Landlords are responsible for maintaining the rental home in a good or reasonable state of repair, sheathed to the satisfaction of the local authority, and floors are kept in a good or reasonable state of repair, and free from crevices, holes and depressions	• No additional cost to landlords , tenants and government if no change to the existing requirements	• Rental homes are less likely to be warmer • Tenants may continue to live in cold homes, and be exposed to associated health risks • Tenants will experience high energy costs

[55] Estimates and costings based on NZIER (2018) cost benefit analysis of proposed healthy homes standards.

Option Two Require landlords to stop any unnecessary gaps or holes that cause noticeable draughts and a colder rental home, and are 3mm or greater in and around windows, doors, walls, ceilings, floors and access hatches, and block any decommissioned chimneys and fireplaces	• An estimated 172,200 homes that receive draught stopping would receive benefits per affected household of $782. Cost benefit ratio of 3.37[56] • Tenants in homes where draught stopping has occurred may gain health benefits and energy saving benefits • Landlords and government will have clear, modern and simple standard to comply with • Homes that use less heating can lead to fewer carbon emissions • Many draught stopping measures are easy for the landlord or tenant to undertake • Government and taxpayers likely to benefit from less demand on publicly funded services	• Landlords would incur costs to draught stop an estimated 172,200 homes, of approximately $124-250 incl GST per household[57] • Landlords may misunderstand the requirements and seal drainage and ventilation openings, causing the house to not be adequately ventilated • Government as a higher administrative cost to educate landlords and tenants
Modified Option Two (recommended) Landlords to stop any unreasonable gaps or holes in walls, ceilings, windows, floors, and doors that cause noticeable draughts, and block unused fireplaces and chimneys	• Removes the notion of a 3mm gaps, which is potentially difficult to measure and difficult to enforce if it is not causing unreasonable drafts	• Needs to be supported with very clear guidance and examples to assist landlords and tenants in determining what is an 'unreasonable' gap or hole

102 I propose the standard be a **modified Option Two** that recognises the challenges with prescribing a 3mm gap. Therefore, the standard would be **to stop any unreasonable gaps or holes in walls, ceilings, windows, floors, and doors that cause noticeable draughts, and block unused fireplaces and chimneys**. The standard would be supported with clear guidance and examples to assist landlords and tenants to determine and address what is considered an unnecessary gap or hole.

Exceptions in the draught stopping standard

103 Some exceptions to aspects of the draught stopping standard will need to be considered, such as where:

103.1 the landlord intends to demolish or substantially rebuild the home within 12 months and applied for any necessary resource consent or building consent s 9(2)(f)(iv)

[56] NZIER (2018) Healthy Homes Standards cost benefit analysis: results are based on 30% of houses requiring draught stopping measures, and a 1°C gain. The cost benefit ratio is positive is 30% of houses require draught stopping measures and there is a 0.28°C gain

[57] As a present value this cost would be $232 GST exclusive per affected household

103.2 for 12 months from the date the tenancy commences, if the tenant is the former owner of the home, e.g. compulsorily acquired properties by the New Zealand Transport Agency in areas designated for roading projects

Date of compliance with the standards

104 The Healthy Homes Guarantee Act 2017 allows for a phased implementation of the healthy homes standards between 1 July 2019 and 31 June 2024.

105 The timeframe needs to balance the needs of tenants, landlords, industry, and government, so that:

105.1 tenants see the benefits of a warmer, drier home as soon as possible

105.2 landlords and property managers have sufficient time and support to understand and comply with the changes, and procure and install necessary requirements

105.3 industry capacity is able to respond to the changes, particularly if impacted by other government initiatives such as KiwiBuild

105.4 government has sufficient time to provide advice through information campaigns, develop necessary guidance, and expand enforcement capacity where necessary

105.5 the timeframe does not restrict flexibility and innovation to meet a higher quality of rental home

106 Feedback was sought on three options:

- Option One: comply within 90 days at the start of a new or renewed tenancy
- Option Two: a single compliance date
- Option Three: staggered compliance dates over five years, either by the standard or by the location of the rental home

107 I recommend the date to comply with the standards be **Option One,** where **landlords must comply with the standards within 90 days of a new or renewed tenancy.** This compliance timeframe could take effect from two different dates**.** My officials recommend **Option One take effect from 1 July 2022 (Option One A).** The alternative date would make **Option 1 effective from 1 July 2021 (Option One B). Both options would require all rental homes to be compliant by 30 June 2024.** The respective rationale for each date is provided in Table 10 below.

108 Table 10 summarises the analysis of the three options considered for the compliance and implementation timeframes. The summary incorporates the information from the cost benefit analysis, other quantitative and qualitative research, and the high level comments from public consultation.

Table 10: Summary of options for compliance timeframes

Options	Advantages[58]	Disadvantages
Option One (generally) Landlords must comply with the standards within 90 days of a new or renewed tenancy	• Landlords have time to ensure their rental home complies with the standard when they know the tenancy is ending • The obligation is clear and simply to understand • Industry is likely to have sufficient time to build capacity to meet demand, as there will not be a surge in demand closer to a fixed deadline • Government could find some enforcement straight forward as it can use existing databases, such as the bond database, to identify new or renewed tenancies	• Landlords do not have the certainty of a single compliance date to plan the improvements • Landlords may find it difficult to comply if faced with unplanned costs from an unexpected new tenancy or change to the tenancy • Landlords with large portfolios will not be as easily able to plan and undertake an upgrade to minimise cost and ensure suppliers and installers are available • Tenants who are on an existing periodic tenancy may have to wait longer to benefit from improvements to their rental home • Industry may experience peak demand when many tenancies start in February
Option One A Landlords must comply with the standards within 90 days of a new or renewed tenancy, starting 1 July 2022, with all homes compliant by 30 June 2024	• Landlords have more time to plan and upgrade their properties • Government has adequate time to implement the standards and make landlords aware of their new obligations • Industry is more likely to have the sufficient capacity to accommodate compliance	• Tenants, particularly those who are vulnerable, are disadvantaged by having to wait longer to benefit from a warmer and drier home
Option One B Landlords must comply with the standards within 90 days of a new or renewed tenancy, starting after 1 July 2021, with all homes complaint by 30 June 2024	• Tenants, particularly those who are vulnerable, benefit from warmer drier homes at an earlier date, improving health and wellbeing. • May encourage earlier compliance. Indicative data that measures to February this year indicates that landlords have been slower than expected to comply with the existing insulation regulations. • Allows additional time for Government to implement other housing initiatives e.g. KiwiBuild, Housing New Zealand retrofit programme, s 9(2)(f)(iv)	• Landlords will have less time to plan for the improvements. • Landlords may not fully understand their new obligations, and tenants may not adequately understand their rights, if Government does not have adequate time to prepare guidance materials to support the regulations (including the online tool). • Industry capacity may struggle to accommodate an earlier compliance date

[58] Estimates and costings based on NZIER (2018) cost benefit analysis of proposed healthy homes standards.

Options	Advantages[58]	Disadvantages
Option Two A single compliance date	• All rental homes will be warmer and drier by a single date, which is likely to be earlier than Options One and Three in some cases • Landlords have a clear and certain date to plan upgrades, spread costs, and meet their obligations • Tenants can easily understand one set compliance date and ensure compliance • Government can easily inform and educate one set date	• Landlords may defer compliance until close to the compliance deadline, and may then not be able to source material or installers due to high demand • Some tenants may not benefit from improvements until close to the compliance deadline • Tenants may not have their leases extended if some landlords wish to complete the work in a vacant home, which may put pressure on a tight rental market • Industry may suffer strained capacity if landlords defer compliance until close to the deadline • Installations may be of poor quality or cause safety issues if unqualified installers are relied upon due to insufficient industry capacity
Option Three Staggered compliance dates over five years	• Implementation date could be tailored to consider the integrated nature of the home (e.g. insulating a home before heating it) • Landlords can spread the costs • Industry capacity is potentially able to meet demand • Tenants may benefit from early implementation of the standards in key areas (such as heating) or locations	• More difficult for landlords and tenants to understand multiple compliance dates • Landlords may decide to defer compliance for each standard until close to the compliance deadline • Tenants in some rental homes may not gain the full benefit of all the standards until 2024 in some cases • Tenants may experience repeated disruption as more work is undertaken over the five years • Government may incur greater cost from advising, informing, and enforcing a more complex approach of staggered implementation dates

109 The majority of individual tenant and landlord submissions supported Options One or Three for implementation. Submissions by landlord and industry organisations supported Option One, notably:

- New Zealand Property Investors Association
- Independent Property Managers Association
- Real Estate Institute of New Zealand
- Community Housing Aotearoa
- Insulation Association of New Zealand
- Tasman Insulation (PinkBatts)
- Community Energy Network (modified option one)
- He Kainga Oranga University of Otago (modified option one)

110 I propose **Option One B,** where **landlords must comply with the standards within 90 days of a new or renewed tenancy, from 1 July 2021, with all rental homes compliant by 30 June 2024**. I recommend this compliance date would achieve the key objective of the healthy homes standards by making rental homes warm and dry, in a way that balances benefiting vulnerable tenants in the near future, with the impacts of the standards on landlords, industry, and government. A compliance date from 1 July 2021 also recognises the impact on industry capacity caused by the backlog of those who have not complied with the 2016 insulation requirements.

111 Officials prefer **Option One A**, where **compliance within 90 days of a new or renewed tenancy would come into effect from one year later, 1 July 2022**. Officials prefer this option for a number of reasons.

112 Officials note Option One A is more realistic to ensure a higher level of compliance with the standards. Industry providers would have more time to meet the increased demand, landlords would have more time to plan and finance compliance with their obligations, and Government would have more time to operationalise the regulations. Officials advise it would be difficult to ensure landlords are adequately informed and ready to comply with their new obligations earlier than 1 July 2022, in particular because the online tool to help implement the heating standard is unlikely to go live until October 2019. Though officials are making best efforts to bring this date forward, it is important to make sure the tool is enduring and fit for purpose in the long term.

113 Officials also note landlords are a disparate hard to reach market with a significant portion of the market made up of small scale landlords, and adequate time is necessary to thoroughly inform landlords of their new obligations. Officials have furthermore raised concerns an earlier date could disengage landlords who would otherwise comply with the standards.

114 Officials also prefer Option One A, because it recognises Government capacity and the many other housing initiatives which call on trades and industry capacity currently underway. These include: KiwiBuild, the Housing New Zealand retrofit programme, improvements to public housing supply, and s 9(2)(f)(iv)

115 I propose setting a **single compliance date that aligns with either Option One A or B above (i.e. 1 July 2021 or 1 July 2022) for boarding houses**, which have tenancies that turn over regularly. A single compliance date will avoid confusion for boarding houses to comply. My officials note that boarding houses have a high turnover of individual tenancies which may create unique challenges when determining when compliance is required. Consequently, a set compliance date would be appropriate to ensure boarding houses understand their obligations and timeframe to comply.

116 I propose setting a **single compliance date of 1 July 2023** for Housing New Zealand Corporation rental homes and Community Housing Providers. This date takes into account other mandatory requirements, such as those arising from the new Income Related Rent Subsidy contract, and the RTA No 2 Bill, balanced with the availability of contractors nationally to undertake this work and the wider retrofit programme underway.

Factors to consider in considering the standards

Exceeding the Building Code

117 Three recommended standards exceed Building Code requirements for existing houses:

117.1 Heating – heating requirements in the Building Code are only specified for childcare facilities and retirement homes

117.2 Ventilation – both openable windows or mechanical ventilation are acceptable solutions under the Building Code, but neither are currently requirements

117.3 Moisture ingress and drainage – the Building Code only requires a ground moisture barrier where a subfloor cannot meet subfloor ventilation requirements

118 The Ministry of Business, Innovation and Employment is currently considering reviewing and revising aspects of the Building Code that do not align with the proposed healthy homes standards.

119 There is a risk that new builds would not meet the healthy homes standards. Based on current building practices, officials advise that this scenario would be uncommon. The majority of new homes are built on concrete slabs and therefore do not require ground moisture barriers. Further, anecdotal evidence suggests mechanical extractor ventilation in bathrooms and kitchens is included in the majority of new builds. However, heating remains a feature that may not be installed in new homes.

Industry capacity

120 The standards will require a significant portion of the rental housing stock to undertake retrofit work to meet the standards. Given the current skills shortages in the construction sector, there is a risk that industry capacity could limit the ability for landlords to meet their obligations. Industry capacity has been considered when setting the compliance approach to mitigate this risk.

Maintaining supply in the market

121 It is anticipated that the standards would likely have a moderate effect on landlords overall. While owners of high quality rental stock would incur minimal costs (as they likely already meet or exceed the standards), many owners of low-quality stock would need more substantial repairs to meet the standards, which may lead to the sale of some properties.

122 NZIER estimates in the cost benefit analysis that it would cost in the region of $8,625 to $11,500 including GST to outfit a house to comply with the standards (assuming a house is deficient in all of the standards to begin with). NZIER noted that it is unlikely that landlords would pass these costs through to tenants in full. Many private landlords hold property in hope of capital gain, as much as for rental income, and will likely be reluctant to incur the opportunity cost of vacancy and expense of recruiting new tenants by raising rents, when other properties may not be doing so.

Related government initiatives

123 There are a number of other government initiatives underway that impact on the rental sector and rental housing quality:

123.1 **Residential Tenancies Act (RTA) reform:** consultation recently closed on the RTA reform proposals, which focus on such areas as improving a tenant's

security and stability of tenure, modernising the law to appropriately balance the rights and responsibilities of tenants and landlords, and implementing a more efficient and proportionate enforcement regime.

123.2 **Tier one statistics:** Statistics New Zealand, in partnership with MBIE, will undertake a public consultation on the definition of housing quality later this year to support the development of a tier one statistic.

123.3 **Winter Energy Payment:** introduced on 1 July 2018 to help New Zealanders receiving New Zealand Superannuation or a Veterans' Pension and beneficiaries, to heat their homes by increasing the amount of money available to them over the winter months.

123.4 **"Warmer Kiwi Homes":** a new four year government programme offering grants from 1 July 2018 to cover two thirds of the cost of ceiling and underfloor insulation and ground moisture barriers to low income home owners. Heating grants will be added from 1 July 2019.

123.5 **Healthy Homes Initiative (HHI):** the Ministry of Health's HHI was established in December 2013. The HHI identifies at-risk families and undertakes housing assessments and facilitates access to interventions to create warmer, drier homes. Interventions include insulation, curtains, beds/bedding, floor coverings, heating sources and relocation. The Ministry of Housing and Urban Development and Housing New Zealand Corporation have agreed to a comprehensive evaluation of the programme, led by the Ministry of Health.

123.6 **Te Puni Kōkiri community-led housing repair projects:** supports community led housing repair projects aimed at whanau-owned homes in serious disrepair or without basic utilities. Whānau report these projects enable them to stay in their homes and contribute to immediate improvements in their health, including fewer GP visits and lower use of asthma medication, improved self-esteem and stronger connections to whakapapa, whanau and whenua.

Next steps

124 On 1 July 2019 the standards enabled by the Healthy Homes Guarantee Act 2017 will come into force. Existing insulation requirements will be replaced with the healthy homes standards. To prevent a legislative gap the healthy homes standards must be gazetted prior to 1 July 2019.

125 If final policy decisions are not made in December 2018, this will place pressure on the drafting of complex regulations. Temporary provisions will need to be made if the regulations are unable to be implemented from 1 July 2019.

126 Further, sufficient time is needed to develop a suitable information and education campaign and commence building a robust online tool to support the standards.

127 I propose the timeline set out in the table below to develop the healthy homes standards.

Deliverable	Date
Cabinet Social Wellbeing Committee Consideration	12 December 2018
LEG considers draft regulations	March 2019
Regulations are made	April 2019
Regulations come into force	1 July 2019

Compliance with the healthy homes standards

128 As part of the HHGA four year budget allocation, MBIE's Compliance and Investigations team will undertake 2,000 risk-based interventions every year. The interventions will be based on those properties, individuals or organisations that pose the highest risk of non-compliance through risk profiling. The degree of risk will determine the approach as well as any enforcement response.

129 To give effect to the standards, the regulations may include methods for compliance with the standards. For example, with the heating standard, landlords may be required to provide confirmation that the heating assessment tool has been used to provide the correct sized heater, or a certificate has been issued by a suitably qualified heating engineer.

130 To empower tenants to make decisions about their home, the regulations will require landlords to include the tenancy agreement information on how the property complies with the healthy home standard. For example, in the ventilation standard, the tenancy agreement may require the landlord to specify the size of the extractor fan in the bathroom and kitchen, or explain why the premises are exempt from supplying mechanical ventilation.

Transitional provisions

131 My officials are preparing advice on the transitional issues regarding the development and implementation of the standards. I propose that Cabinet delegate to me power to make minor and technical decisions on transitional and implementation issues.

Consultation

132 In determining the proposed standards, significant consultation has taken place with government agencies, through public consultation, and with key industry stakeholders and building and health researchers. Further clarification on technical matters was sought from BRANZ where necessary.

133 The public consultation process was supplemented with workshops with targeted groups of stakeholders, such as the New Zealand Property Investors Federation, tenant advocacy groups, researchers, the Real Estate Institute of New Zealand, the Independent Property Managers Association, registered community housing providers, key building industry representatives, and iwi housing providers and health advocates.

134 The proposed standards were considered with the Energy Efficiency and Conservation Authority, the Ministry of Health, the Ministry of Social Development, Housing New Zealand Corporation, The Ministry for the Environment, Te Puni Kōkiri, Heritage New Zealand, the Treasury, and the Department of the Prime Minister and Cabinet. The Inland

Revenue Department was also consulted in the development of the options for the proposed standards.

135 The Ministry of Health has expressed a dissenting view on the option of heating living areas only because of the health risks associated with existing very low winter bedroom temperatures and existing infectious disease risks associated with functional crowding. The Ministry of Health recommends Option Two, to heat bedrooms as well as in living areas. This view is shared by Te Puni Kōkiri.

136 Ministry of Housing and Urban Development officials have also consulted with relevant agencies on the potential impact of the healthy homes standards on their housing stock, including Housing New Zealand Corporation, the Ministry of Social Development, the New Zealand Defence Force, the Ministry of Education, Land Information New Zealand, the Department of Corrections, and Te Puni Kōkiri. Detailed information on the impact on these departments, where it has been possible to determine, is set out in the 'Financial Implications' section below.

Financial Implications

137 The healthy homes standards are likely to have financial implications on private and public landlords and tenants.

138 I asked my officials to consider what financial impact the healthy homes standards could have on the private rental market. They have advised that, while the standards will increase benefits for tenants, in the short term, it is possible that landlords may pass on their costs by increasing the rent of their rental properties.

139 The costs of implementing the healthy homes standards will be largely borne by landlords, with limited benefits accruing to them. However, it should be recognised that some upgrades may reduce damage to property and be mutually beneficial to both tenants and landlords. These costs will vary based on the condition of the property and the work required to meet the standards:

139.1 owners of high quality houses that already meet the standards will incur minimal costs

139.2 owners of medium quality houses that require moderate improvements will incur some costs but it is likely they will stay in the rental market

139.3 many owners of low quality houses that would need more substantial repairs to meet the standards are likely to face larger costs, and may considering selling their property, either to another landlord with more capital available, or to an owner occupier.

140 A property is more likely to be sold where the costs of retrofitting are large, or if the requirement to comply with the standard applies earlier.

141 Tenants may face higher costs to run an increased number of heating devices. However, more efficient devices will be encouraged through the standards, the use of which could reduce energy bills (as well as atmospheric carbon emissions) compared with using less efficient devices. Most of the quantifiable benefits of the standards accrue to tenants through improved health and potential energy savings, as well as the unquantifiable benefit of comfort.

142 Tenants may be eligible for hardship assistance to meet the cost of heating their homes through the Winter Energy Payment and recoverable assistance from the Ministry of Social Development (e.g. through an Advance Payment of Benefit). Tenants may also become entitled to a greater level of Accommodation Supplement where costs of upgrades are passed on in the form of rent increases.

143 The proposed standards will likely have financial implications for Crown agencies. While these impacts are subject to change, depending on industry capacity and further clarity on the stock and quality of property, potentially affected agencies have advised the following impacts are possible.

Public Housing Supply (MHUD)

144 s 9(2)(f)(iv)

145

146

147

Housing New Zealand Corporation (HNZC)

148 Housing New Zealand Corporation has the largest rental stock on the country, with a portfolio of approximately 64,000 properties used for State Housing or Community Group Housing, and predominately subject to the RTA.

149 HNZC estimates additional costs of $113M to 144M for known interventions, over and above existing planned programmes, plus a potential additional sum of $77-99M for interventions that may or may not be required to meet the proposed temperature standard.

150 Until such time as the model is finalised for the temperature standard, it is not possible to assess with certainty whether existing measures installed in HNZC properties, such as 2.2kW panel heaters (29,000 across the portfolio) will meet the proposed temperature standard across all climactic zones. In light of the need to begin market sounding and contracting for the new programme of work imminently in order to meet a 2023 deadline, replacement of heaters has been included on a precautionary basis. Market soundings will also include a work programme to replace underfloor foil insulation in up to 20,000 properties at an estimated cost of $43-53M.

151 This estimate does not include the cost of installing bathroom and kitchen extractor fans, which have already been costed and are currently being installed across the HNZC stock as part of the “Warm and Dry” programme. Properties that were not included in the “Warm and Dry” programme and still require these interventions have been included in the revised estimates.

152 Allowance has also been made for Community Group Housing, Transitional Housing, and state housing units located in complexes. These costs are unclear, as these properties are more likely to require bespoke solutions.

153 HNZC considers it can fund the required upgrades from its baseline, although the effects of this work on other existing planned programmes of work has yet to be assessed from a financial and market capacity perspective. Actual costs incurred are likely to be higher because HNZC may need to bring forward long term decisions to retrofit or redevelop properties, rather than incur additional short term cost for an older or unsuitable asset.

New Zealand Defence Force (NZDF)

154 NZDF currently owns and manages approximately 1,900 houses of which approximately 250 are rented to private tenants. The NZDF housing stock is aging and in some areas does not meet modern standards. The overall supply and demand for housing does not reflect current NZDF needs, as NZDF has shifted, or is about to shift its operations, to other locations to support operational effectiveness. Further, some of the land and the houses currently used by NZDF will be transferred to iwi as part the Treaty of Waitangi settlements.

155 As a result, NZDF is currently assessing its housing portfolio as part of the Defence Estate Regeneration Programme. The NZDF Housing Programme will conduct assessments of the condition and functionality of the current NZDF houses along with the cost of retrofitting or upgrading existing houses keeping in mind the healthy homes standards. This will be compared with the cost of building new homes for NZDF. Integrating the proposed healthy homes standards into the Housing Programme is expected to have a financial impact of s 9(2)(f)(iv) and s9(2)(g)(i)

Ministry of Education (MoE)

156 MoE owns approximately 482 houses, managed by Land Information New Zealand (LINZ). MoE pays for upgrades to these houses. LINZ considers most have been insulated to a basic standard, with working heat humps or wood burners, but the houses may not meet the proposed ventilation, draught stopping, moisture ingress, and drainage standards.

MoE estimates the cost of upgrading these houses to be up to $4.8 million, and it should be possible to upgrade these houses within the timeframes given.

157 There are also 188 caretaker houses and 929 school houses which Boards of Trustees are responsible for.

Treaty Settlements Landbank and Land Information New Zealand (LINZ)

158 LINZ oversees a total of 430 residential houses in the Treaty Settlements Landbank. LINZ is working to reduce the number of houses as they transfer across to Iwi through the Treaty settlement process. Many of these houses have been held in the portfolio with years of deferred maintenance. LINZ would prefer a longer transition for any new standards to help fund the upgrade of houses in its portfolio and either transfer houses of a fair standard to Iwi through Treaty settlements or look to dispose of houses on the open market if overlapping claims in the area are completed.

159 These houses are predominantly in rural areas with a limited rental market. Most of the 430 residential houses managed by LINZ are insulated to a basic standard with working heat pumps/wood burners but the houses would likely not meet the proposed ventilation, draught stopping, moisture ingress and drainage standards. LINZ may need to seek additional government funding to help meet the healthy homes standards.

Department of Corrections (Corrections)

160 The Department of Corrections is responsible for 97 tenanted houses in the Auckland Prison Village of Paremoremo. Most of these houses are tenanted by non-Corrections staff, and around eight houses are vacant and available for rent at any one time. The Auckland Prison Village estate is managed by Colliers, under a contract with LINZ, and Colliers undertakes an inspection of this estate each year. The houses were built around 1960, in the state house style and constructed of wood; there is insulation beneath the floors and ceiling, and smoke alarms have been installed as a standard. Corrections would need approximately s 9(2)(f)(iv) and s9(2)(g)(i) additional government funding to help meet the healthy homes standards.

Te Puni Kōkiri

161 s 9(2)(f)(iv)

Human Rights

162 The proposals contained in this paper appear to be consistent with *the New Zealand Bill of Rights Act 1990* and the *Human Rights Act 1993*. A final view as to whether the proposals will be consistent with the *Bill of Rights Act* will be made when the regulations are drafted.

Legislative Implications

163 I seek Cabinet's authorisation to issue drafting instructions to the Parliamentary Counsel Office to give effect to the recommendations in this paper that will create the new regulations.

Regulatory Impact Analysis

164 The Treasury Regulatory Quality Team has reviewed the Regulatory Impact Assessment (RIA) "Healthy Home Standards" prepared by the Ministry of Housing and Urban Development and considers that that information and analysis meets the Quality Assurance criteria.

165 The proposal has been well consulted with key stakeholders. The proposal is supported by Cost Benefit Analyses prepared by the NZIER and the Ministry of Housing and Urban Development, which is summarised in the RIA. The RIA identifies the key risks, such as the tenant and landlord behavioural assumptions underlying the analysis. The analysis is constrained to the powers enabled under the Healthy Homes Guarantee Act, and is set out in the context of a wider number of related government initiatives

Gender Implications

166 The proposals contained in this Cabinet paper have no gender implications.

Disability perspective

167 People with disabilities, and their families, including children, have a critical need for housing which is safe and healthy. They are also more likely to live in rental housing, including boarding houses, due to low incomes. Tenants with disabilities, including people with age-related disabilities and those who spend longer indoors because they are house-bound, are more likely to experience illnesses in unhealthy rental housing. The healthy homes standards proposed in this paper will help to ensure that the needs of people with disabilities are better met for accessing healthy housing.

Publicity

168 The Office of the Minister for Housing and Urban Development, in consultation with the Prime Minister's Office, will manage any publicity.

169 The MBIE intends to undertake research in 2018/19 to identify the channels, collateral and timing of campaigns. This research will help determine the most effective way to communicate the standards to the diverse landlord/tenant markets.

Recommendations

I recommend that the Committee:

1 **Note** that regulatory changes are required to support the *Healthy Homes Guarantee Act 2017*;

2 **Note** that the *Healthy Homes Guarantee Act* was passed in 2017 and that regulations (made under section 138B of the *Residential Tenancies Act*) to establish new standards will be required to be implemented between 1 July 2019 and 30 June 2024;

Proposed healthy homes standards

3 **Agree** on the proposed standards for the healthy homes regulations as follows:

Heating standard

a. **agree** that landlords are required to provide fixed heating devices:

i. in the <u>living room only</u> (including open plan areas)

ii. that are capable of achieving an indoor temperature of 18°C;

iii. in accordance with the heating tool (which takes into account factors such as room size, climate zone, external wall and window areas and insulation levels) with a minimum capacity of no less than 1.5 kilowatts with thermostat for electric heaters;

b. **agree** the following should not meet the requirements regarding heating devices, and set standards to reflect this: inefficient, unaffordable or unhealthy heating devices, for example unflued gas heaters, open fires, electric heaters (except heat pumps) with a heating capacity of greater than 2.4 kilowatts, using multiple portable electric heaters in one room;

c. **agree** that exceptions be included in the standard for:

i. certified passive houses, which are usually designed to maintain an indoor temperature of 20°C, and so a fixed heating device is not required to maintain a comfortable indoor temperature throughout the year

ii. rental properties that are part of a Body Corporate under the *Unit Titles Act*, where the body corporate rules do not allow a heating device above 2.4 kilowatt to be installed;

iii. s 9(2)(f)(iv)

iv. the landlord intends to demolish or substantially rebuild the home within 12 months and applied for any necessary resource consent or building consent s 9(2)(f)(iv) This exception applies for the relevant 12-month period or until any necessary resource consent or building consent lapses or is otherwise terminated;

v. for 12 months from the date the tenancy commences, if the tenant is the former owner of the home, e.g. compulsorily acquired properties by the New Zealand Transport Agency in areas designated for roading projects

Insulation standard

d. **agree** the minimum level of ceiling and underfloor insulation for both existing and new insulation provided by landlords is based on the 2008 Building Code or a minimum thickness for existing ceiling insulation of 120mm;

e. **agree** to amend or replace the *Residential Tenancies (Smoke Alarms and Insulation) Regulations 2016* to ensure:

i. the requirements in relation to smoke alarms will continue to apply beyond 1 July 2019;

ii. the requirements in relation to insulation will continue to apply beyond 1 July 2019 until they are replaced by insulation standards under the *Healthy Homes Guarantee Act 2017;*

f. **agree** that the following exceptions in the insulation standard (consistent with exemptions from the 2016 regulations[59]), if;

i. it is not reasonably practicable to install insulation, e.g. inaccessible roof or underfloor cavity space;

ii. the landlord intends to demolish or substantially rebuild the home within 12 months and applied for any necessary resource consent or building consent s 9(2)(f)(iv) This exception applies for the relevant 12-month period or until any necessary resource consent or building consent lapses or is otherwise terminated;

iii. for 12 months from the date the tenancy commences, if the tenant is the former owner of the home, e.g. compulsorily acquired properties by the New Zealand Transport Agency in areas designated for roading projects

Ventilation standard

g. **agree** the method of ventilation provided by landlords must be openable windows in the living room, dining room, kitchen, and bedrooms, unless an exception applies, and appropriately sized extractor fans in rooms with bath or shower, or indoor cooktop;

h. **agree** the following exceptions to the ventilation standard should be included in the regulations;

i. if, at the time the home was built, it received building consent even though it did not have an openable window(s) in the relevant location;

ii. s 9(2)(f)(iv)

iii. it is not reasonably practicable to install extractor fan(s);

iv. where the landlord intends to demolish or substantially rebuild the home within 12 months and applied for any necessary resource consent or building consent s 9(2)(f)(iv) This exception applies for the relevant 12-month period or until any necessary resource consent or building consent lapses or is otherwise terminated;

v. for 12 months from the date the tenancy commences, if the tenant is the former owner of the home, e.g. compulsorily acquired properties by the New Zealand Transport Agency in areas designated for roading projects;

[59] Regulations 18 to 21 of the *Residential Tenancies (Smoke Alarms and Insulation) Regulations 2016*

Moisture ingress and drainage standard

i. **agree** that landlords must ensure efficient drainage and guttering, downpipes and drains at their rental home, and wherever practicable ensure the subfloor, if enclosed, has a ground moisture barrier;

j. **agree** that the following exceptions to the moisture ingress and drainage standard should be included in the regulations ;

i. where it is not reasonably practicable to install a ground moisture barrier, e.g. inaccessible subfloor cavity space

ii. where the landlord intends to demolish or substantially rebuild the home within 12 months and applied for any necessary resource consent or building consent s 9(2)(f)(iv) This exception applies for the relevant 12-month period or until any necessary resource consent or building consent lapses or is otherwise terminated;

iii. for 12 months from the date the tenancy commences, if the tenant is the former owner of the home, e.g. compulsorily acquired properties by the New Zealand Transport Agency in areas designated for roading projects

Draught stopping standard

k. **agree** that landlords must stop any unreasonable gaps or holes in walls, ceilings, windows, floors, and doors that cause noticeable draughts, and block unused fireplaces and chimneys except where;

i. the landlord intends to demolish or substantially rebuild the home within 12 months and applied for any necessary resource consent or building consent s 9(2)(f)(iv)

ii. for 12 months from the date the tenancy commences, if the tenant is the former owner of the home, e.g. compulsorily acquired properties by the New Zealand Transport Agency in areas designated for roading projects

Date to comply with the standards

l. **agree either:**

i) that landlords must comply with the standards within 90 days of a new or renewed tenancy, starting after 1 July 2022, with all homes compliant by 30 June 2024 (Option One A);

or

ii) that landlords must comply with the standards within 90 days of a new or renewed tenancy, starting after 1 July 2021, with all homes compliant by 30 June 2024 (Option One B)

m. **agree** a single compliance date that aligns with the start date in recommendation 3l (i.e. 1 July 2021 or 1 July 2022) for all boarding houses;

n. **agree** a single compliance date of 1 July 2023 for all Housing New Zealand Corporation rental homes and Community Housing Providers;

4 **Note** that the condition of any devices and appliances and products used must be safe and well maintained, and consistent with other expectations in the Residential Tenancies Act 1986;

Implementation

5 **Note** that it is expected that the regulations will be submitted to Cabinet Legislation Committee for approval by 31 March 2019;

6 **Invite** the Minister of Housing and Urban Development to issue drafting instructions to the Parliamentary Counsel Office to give effect to the recommendations in this paper;

7 **Authorise** the Minister of Housing and Urban Development to make any further minor policy, transitional and technical decisions (including records required for compliance) necessary to bring regulations into effect by 1 July 2019;

8 **Note** that, subject to Cabinet's decisions, the Minister for Housing and Urban Development intends to publicly announce the healthy homes regulations in February 2019 and then Gazette the regulations in April 2019, to provide sufficient time for the Ministry of Business, Innovation and Employment to support the proposed Healthy Homes Standards through a public education and information campaign that will communicate the changes to landlords, tenants and building industry professionals to inform them of their new obligations, as well as issuing industry guidelines that will advise them of compliance and installation requirements, prior to the standards coming into effect on 1 July 2019;

9 **Authorise** the Ministry of Housing and Urban Development to place a copy of this paper and the minute of the Cabinet decision on its website;

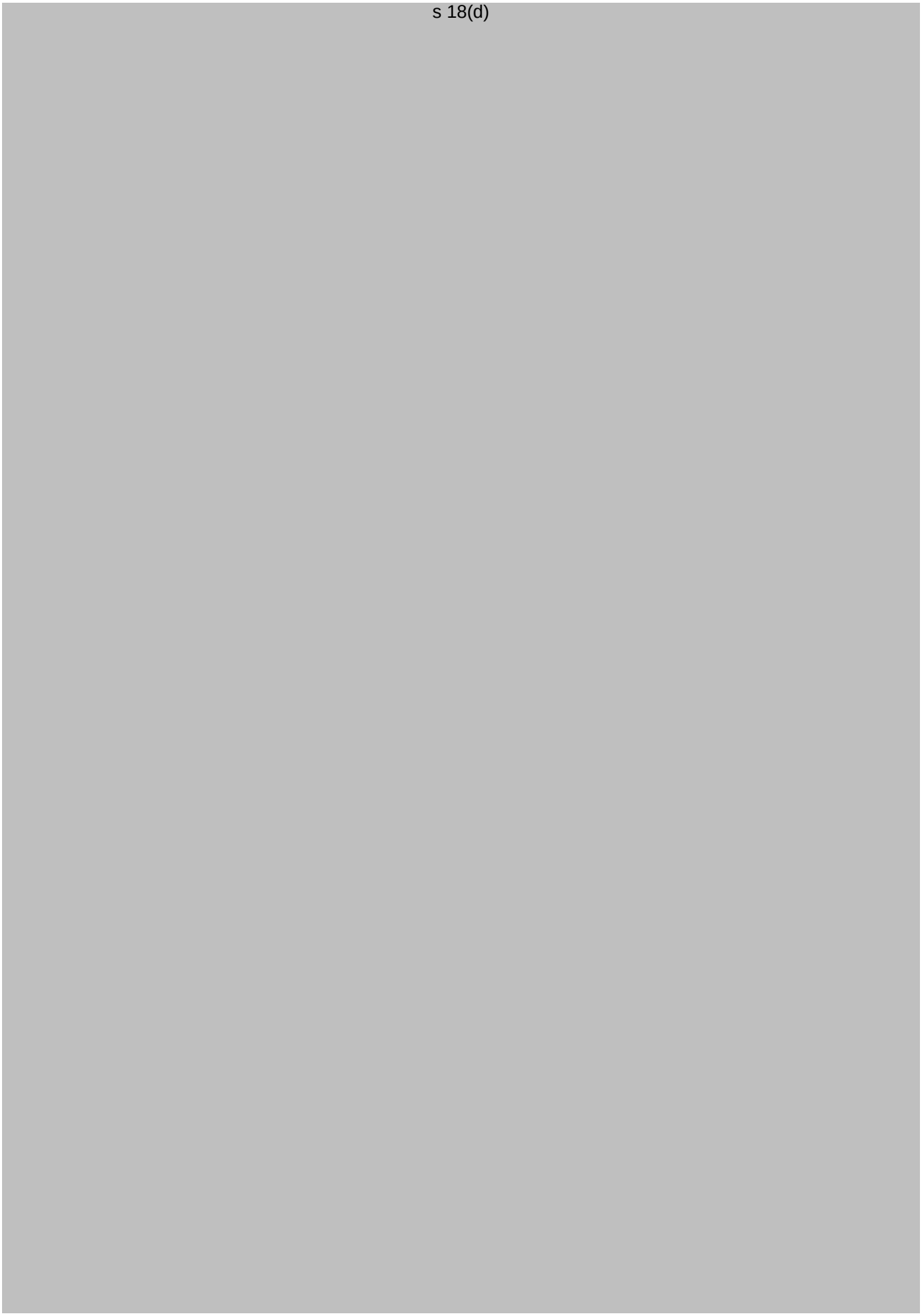
10 **Note** the healthy homes standards are likely to have financial implications for Housing New Zealand Corporation, the Ministry of Social Development, the Ministry of Education and Land Information New Zealand, Corrections and the New Zealand Defence Force.

11 **Agree** the Ministry of Housing and Urban Development, consulting with impacted agencies as required, will report back to the Minister of Finance and the Minister of Housing and Urban Development on the fiscal implications to the Crown of the Healthy Homes Standards, and how they will be managed, ahead of announcing the standards.

The following annexes are attached to this paper:

- Annex One: Summary of submissions analysis following public consultation on the healthy homes standards
- Annex Two: Further comments considered during consultation
- Annex Three: Regulatory Impact Statement

s 18(d)



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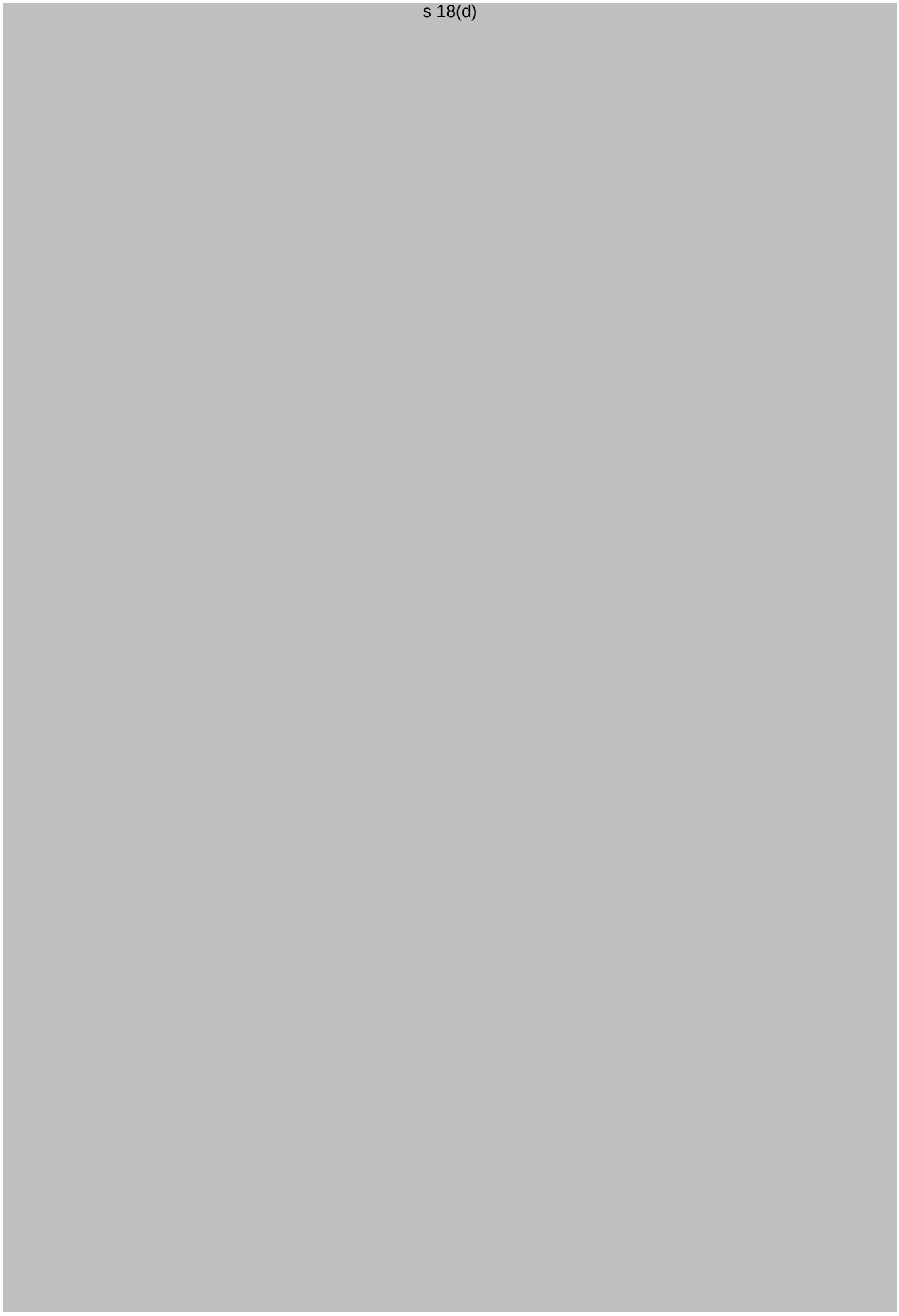

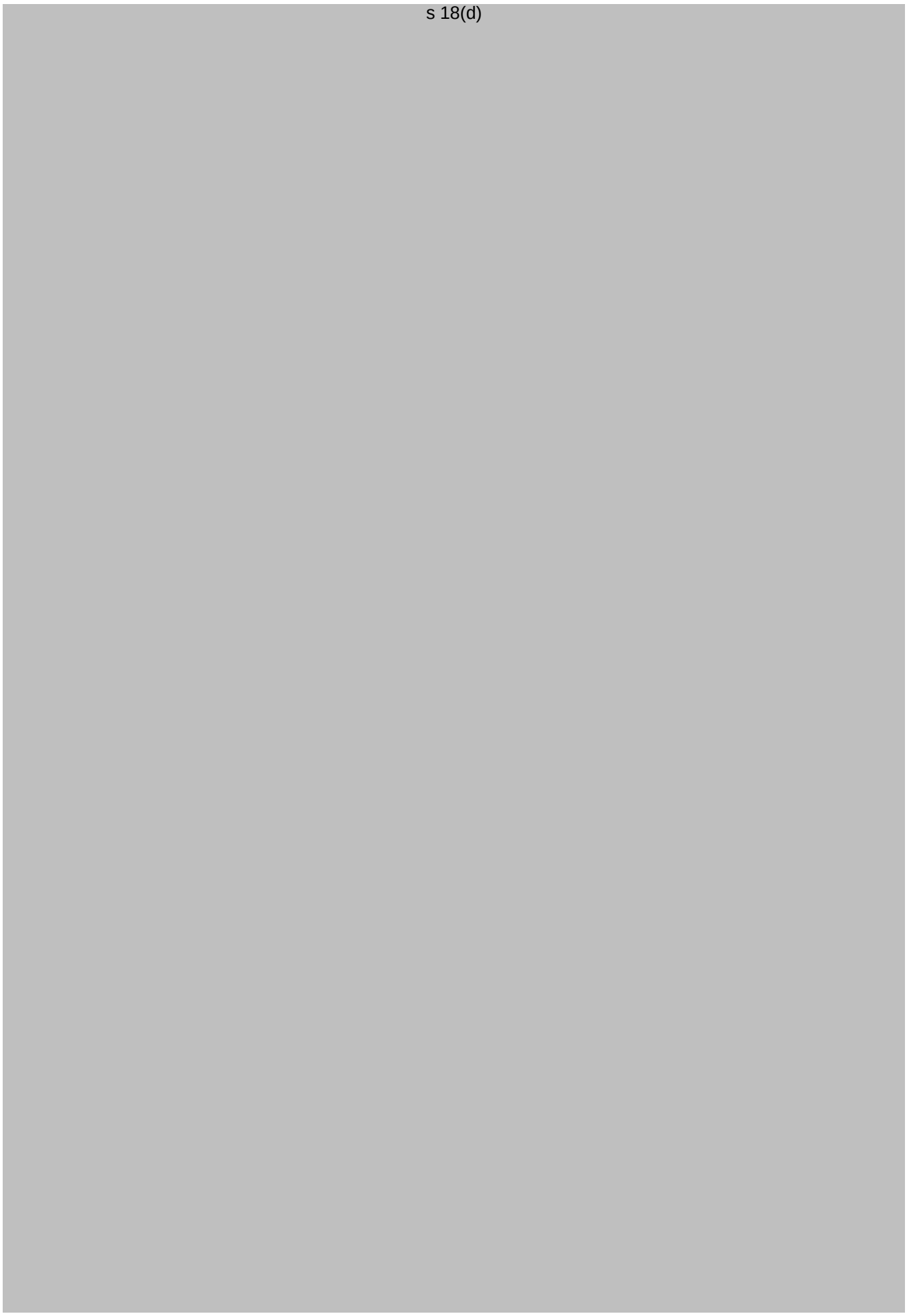
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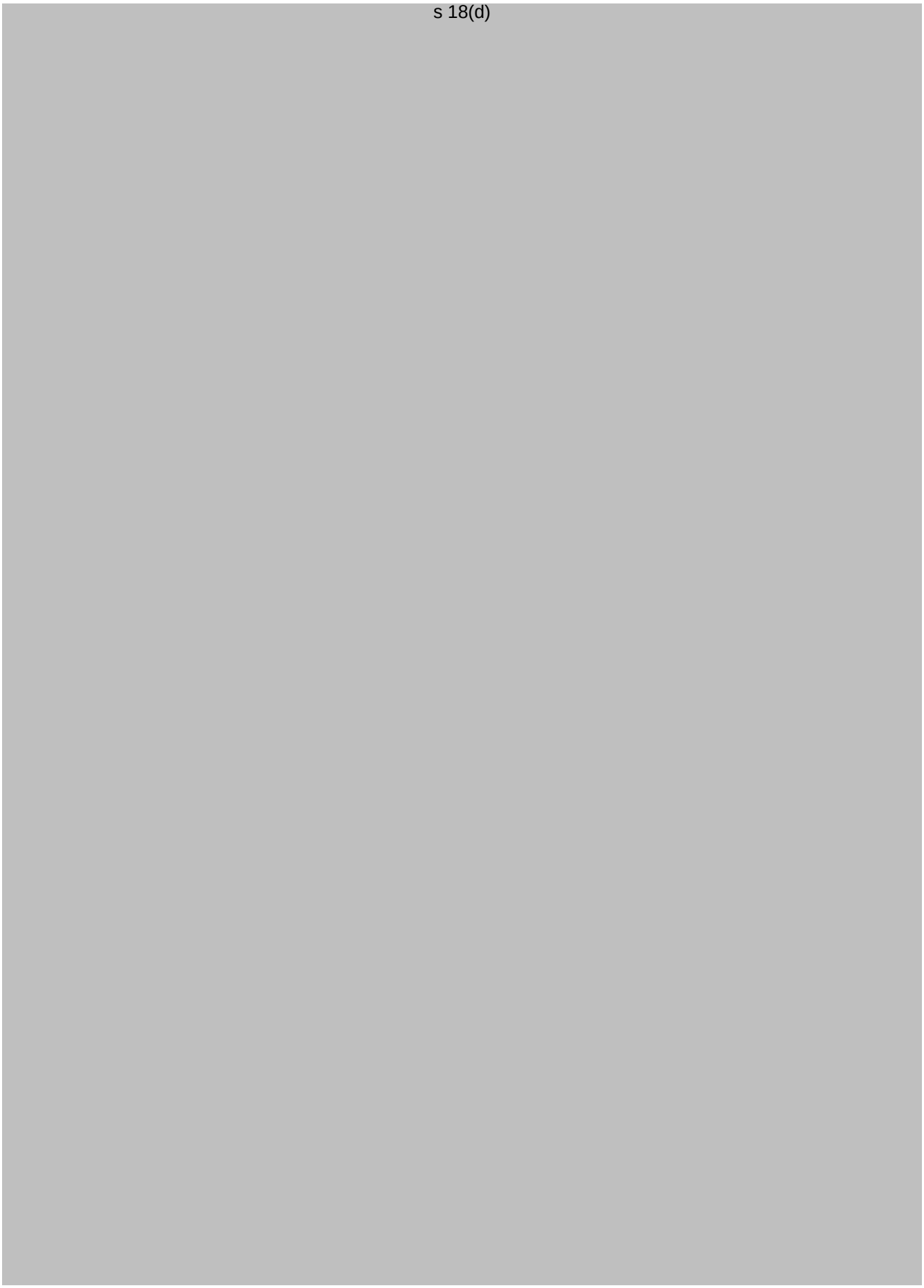

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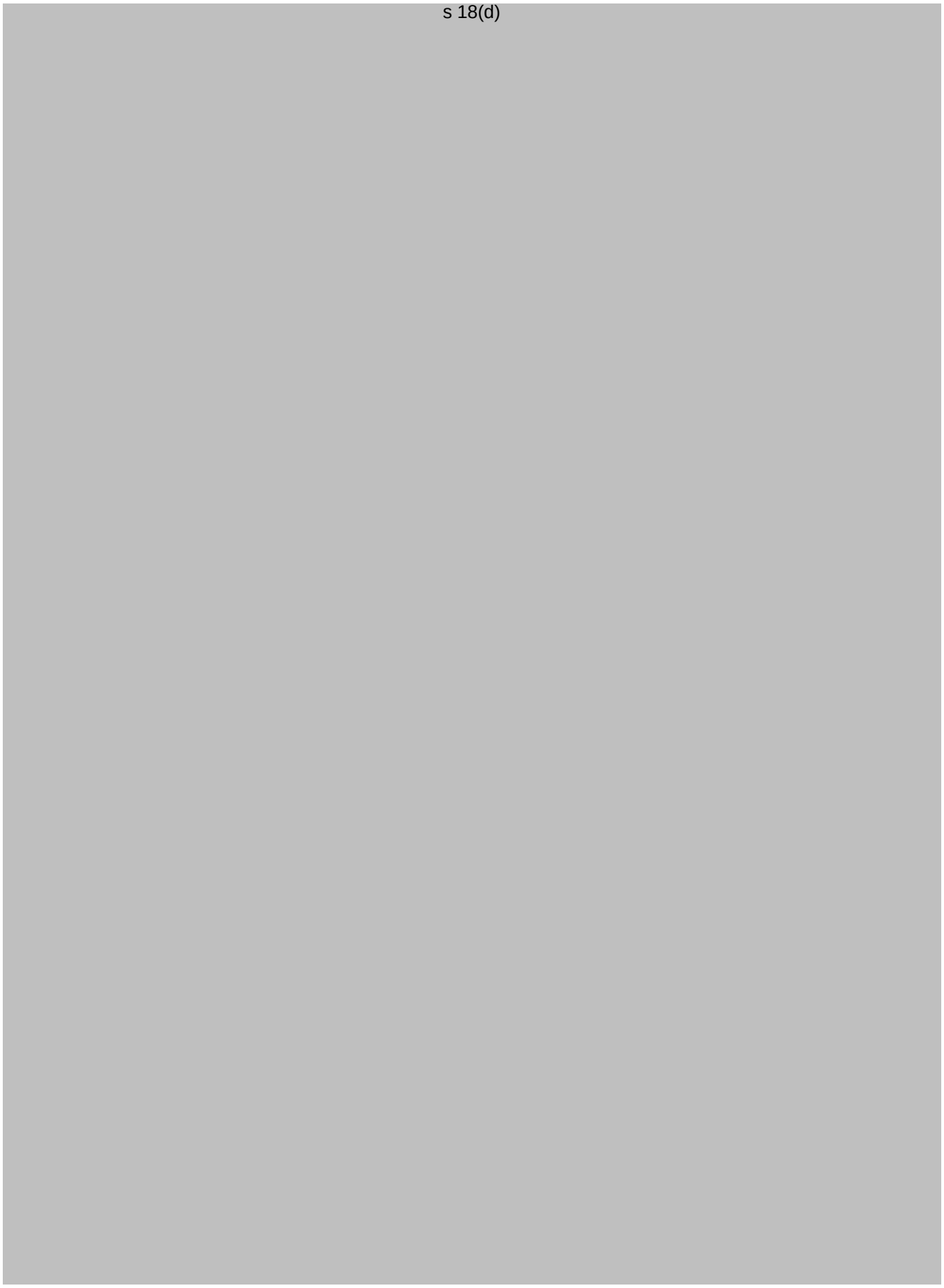

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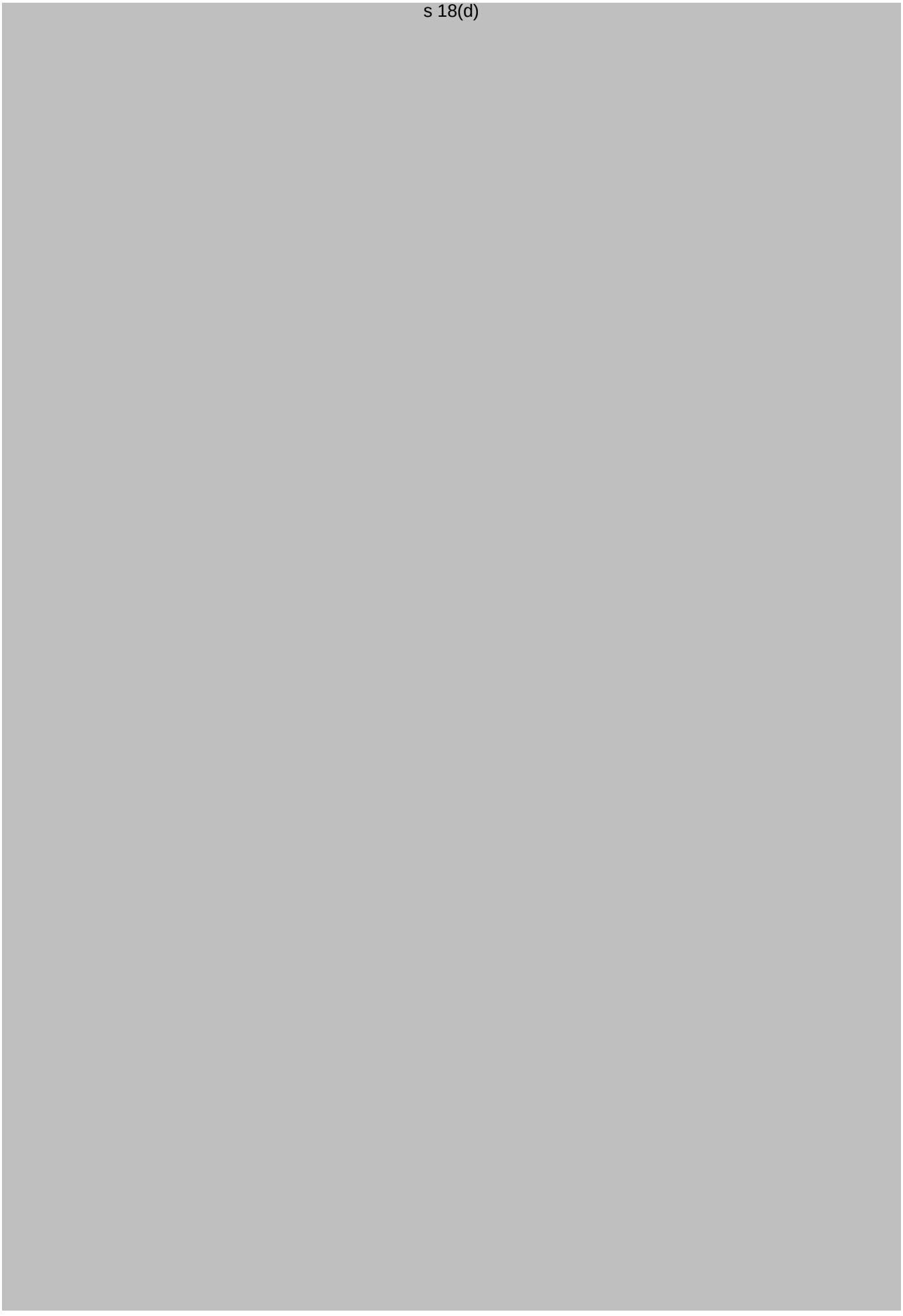

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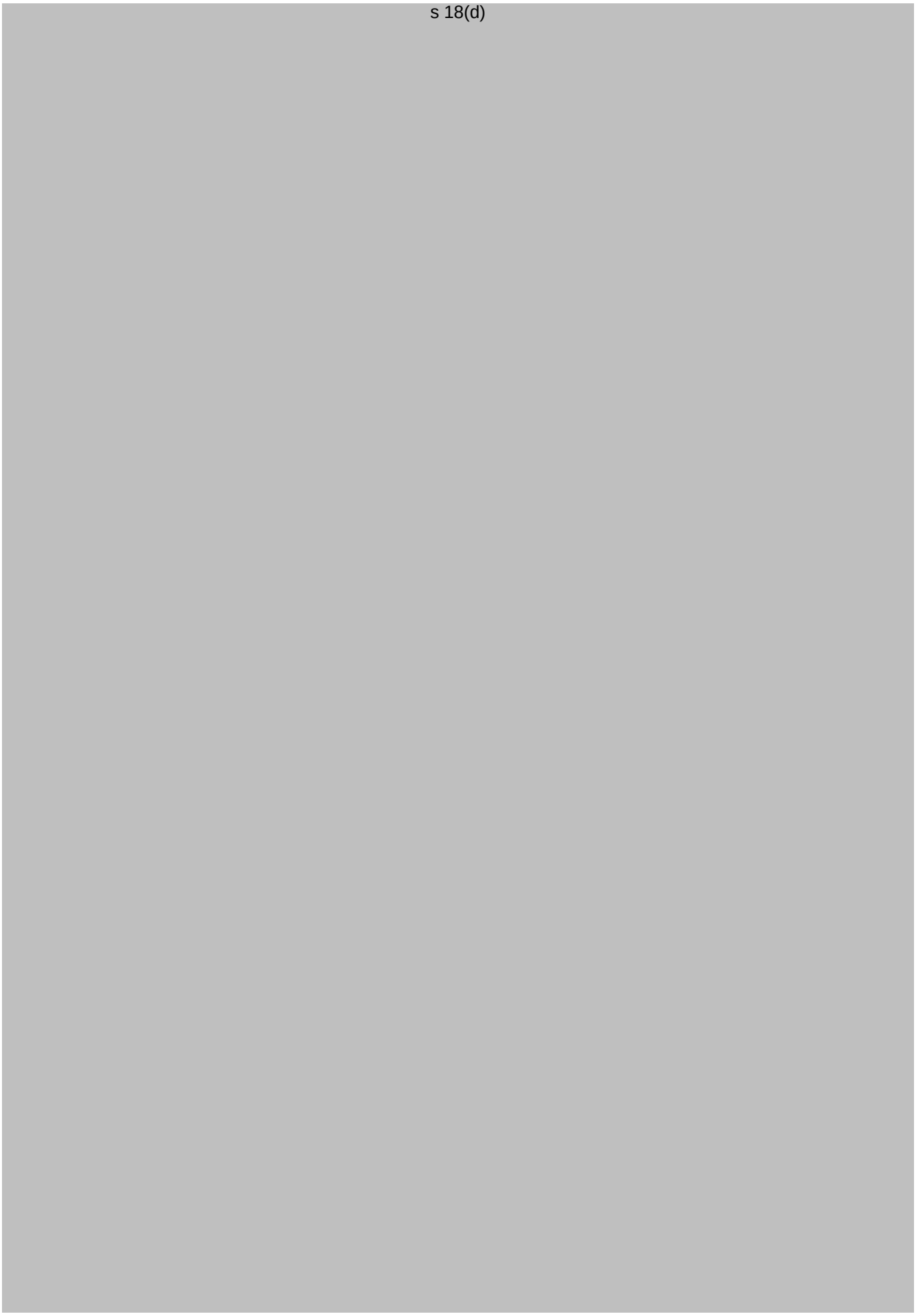

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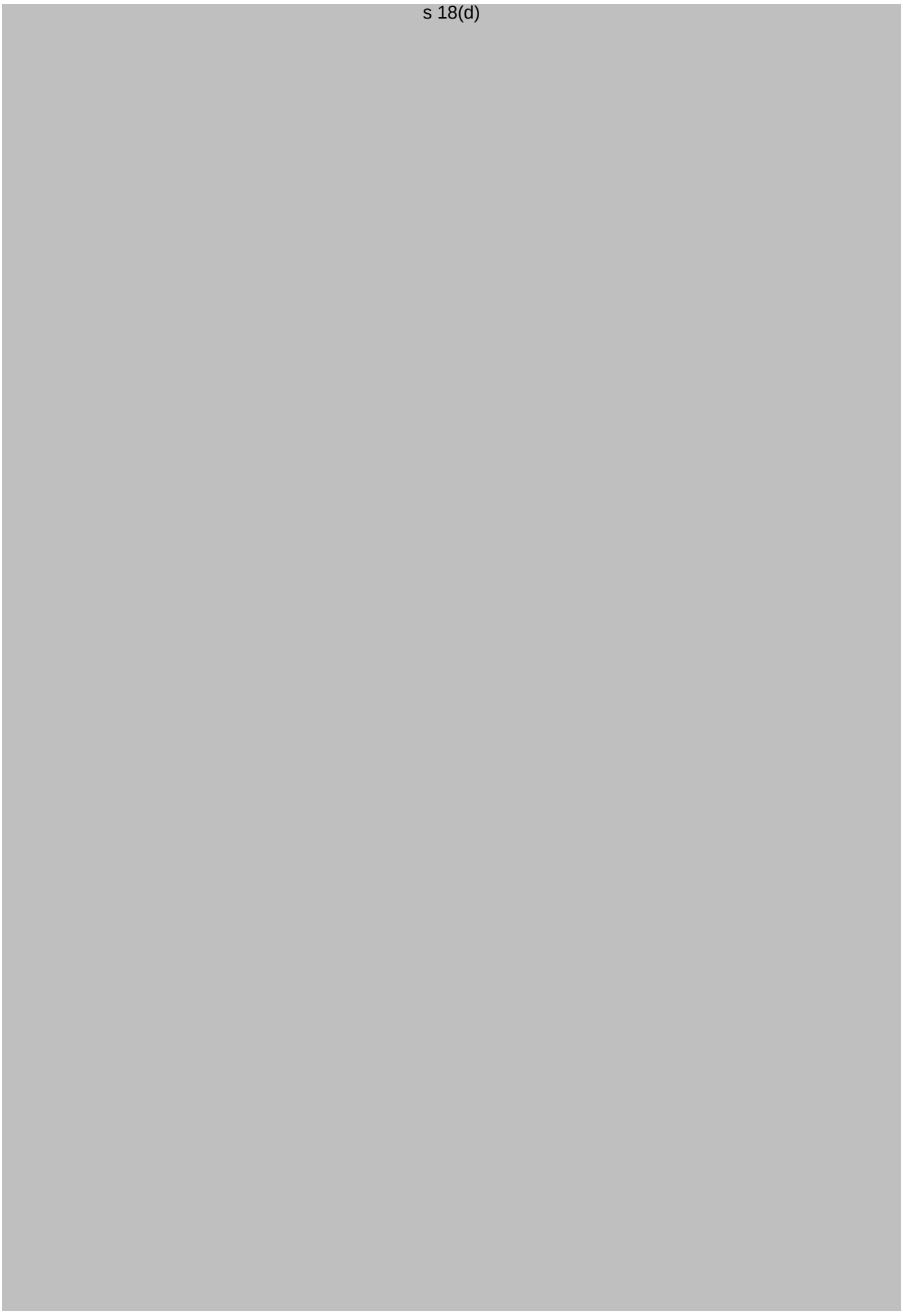

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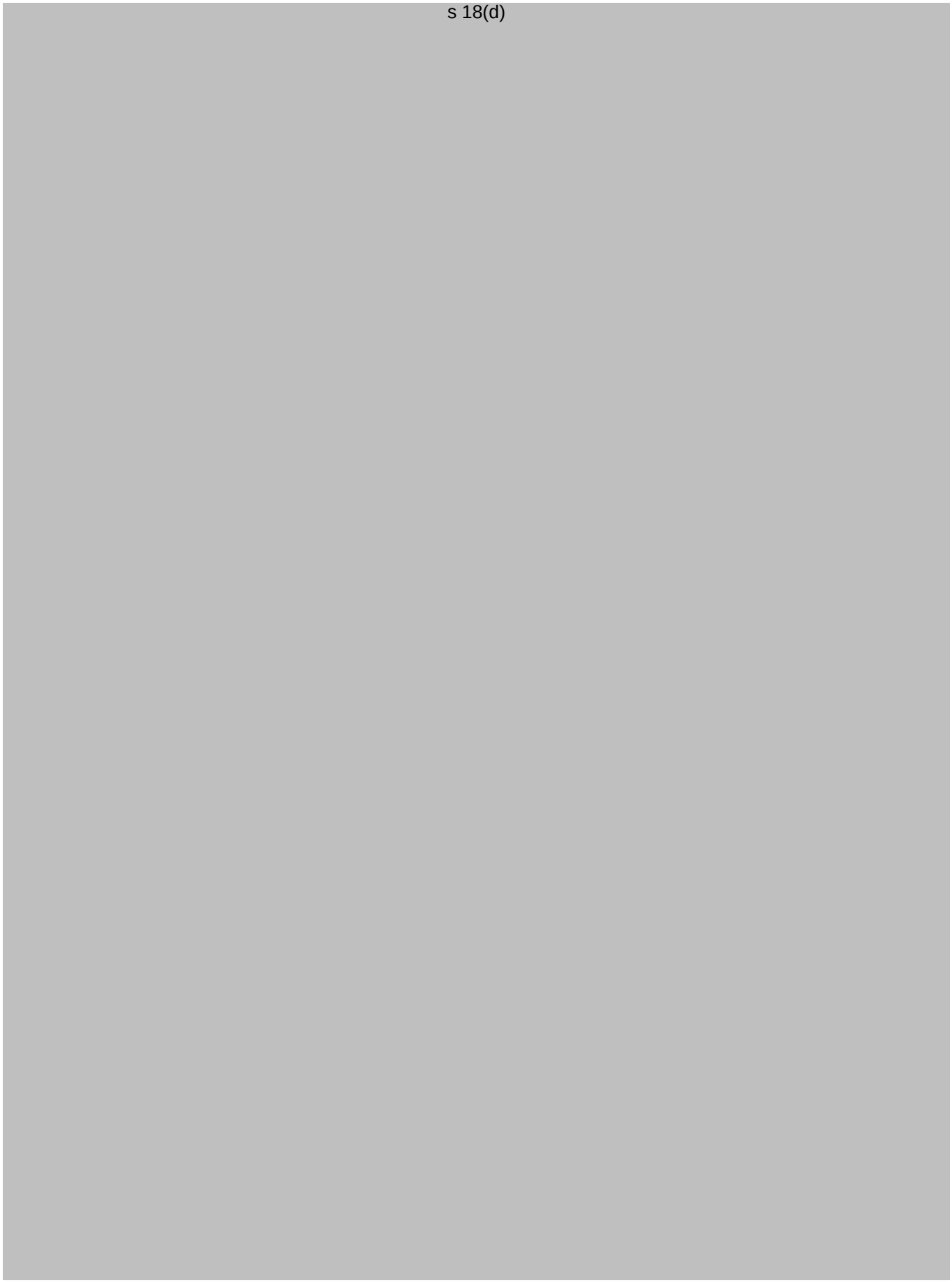

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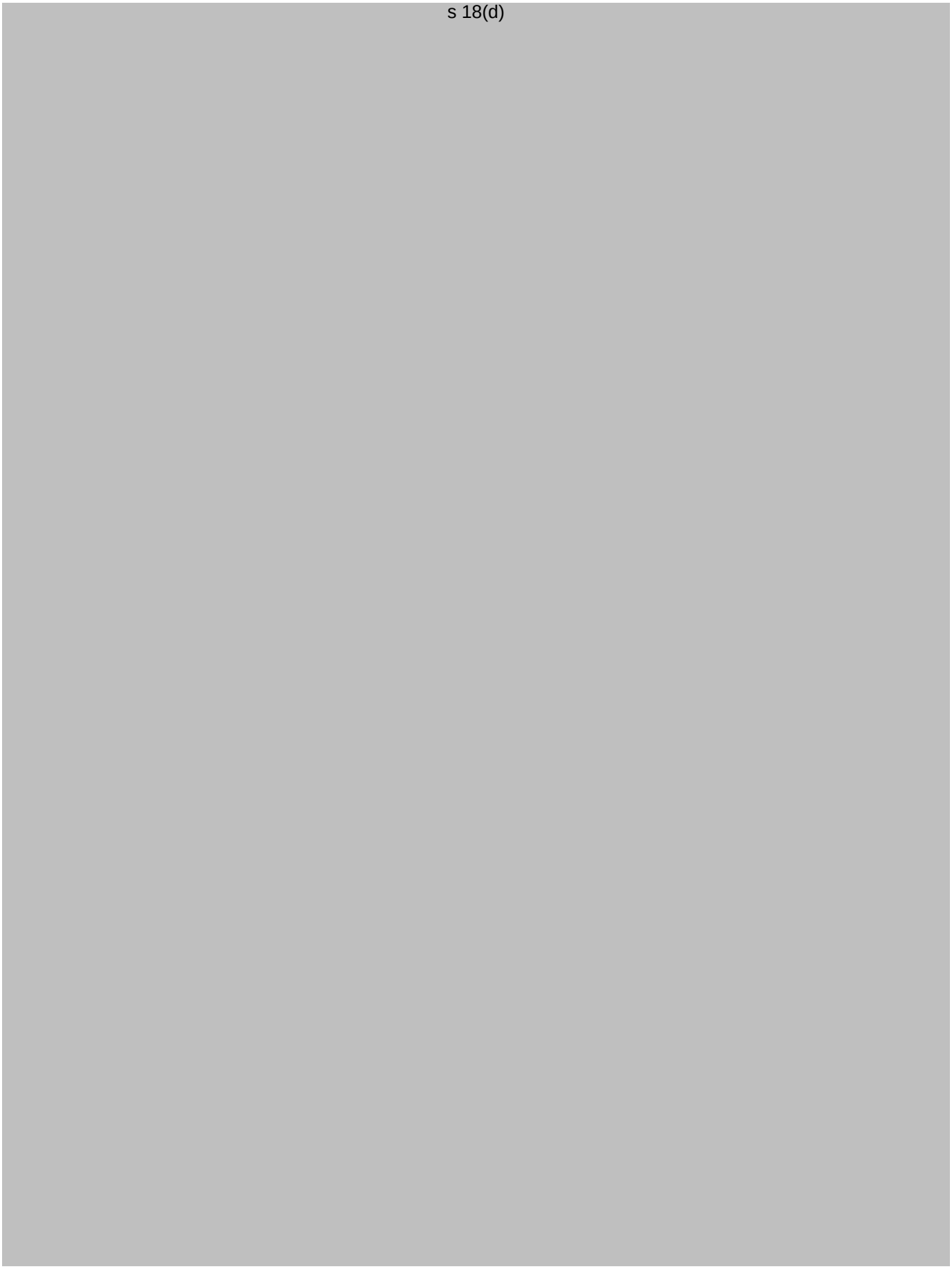

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