

<b>Title:</b> The National Minimum Wage (Amendment) Regulations 2023 <b>IA No:</b> BEIS079(F)-22-LM <b>RPC Reference No:</b> RPC-BEIS-5253(1) <b>Lead department or agency:</b> Department for Business and Trade (DBT) <b>Other departments or agencies:</b> N/A	<b>Impact Assessment (IA)</b>			
	<b>Date:</b> 06/01/2023			
	<b>Stage:</b> Final			
	<b>Source of intervention:</b> Domestic			
	<b>Type of measure:</b> Secondary legislation			
	<b>Contact for enquiries:</b> Hamish.Proctor3@beis.gov.uk			
<b>RPC Opinion: GREEN</b>				
<b>Summary: Intervention and Options</b>				

Cost of Preferred (or more likely) Option (in 2019 prices)			
Total Net Present Social Value	Business Net Present Value	Net cost to business per year	Business Impact Target Status
-2.6m	-1,867.1m	280.8m	Qualifying Provision

**What is the problem under consideration? Why is government intervention necessary?**

The National Minimum Wage (NMW) was introduced in 1999, with the aim of increasing the wages of the lowest paid without damaging their employment prospects. The National Living Wage (NLW) was introduced in 2016 and is centred on equity, primarily around reducing wage inequality, with an aim to reach two-thirds of median earnings by 2024. The Low Pay Commission (LPC) has made recommendations to Government on the NLW and NMW rates that should apply from April 2023.

**What are the policy objectives and the intended effects?**

The objective of the NMW is to maximise the wages of low paid workers under the age of 23 without damaging their employment prospects by setting it too high. The aim of the NLW, which currently applies to workers aged 23 and over, is to reach two-thirds of median earnings by 2024 subject to economic conditions. The NMW/NLW sets a wage floor below which pay cannot fall ensuring protection for low-paid workers, while also providing incentives to work.

**What policy options have been considered, including any alternatives to regulation? Please justify preferred option (further details in Evidence Base)**

This impact assessment considers changes to the NLW and NMW that should apply from April 2023. The independent LPC makes recommendations on the NMW/NLW to Government, consulting extensively and undertaking substantial analysis. Details are contained within in their 2022 report.

This assessment considers two options:

0. Do nothing - maintain current NMW/NLW rates and system
1. Implement the LPC recommended rate increases (preferred option)

The Government's preferred option is to implement the LPC's recommended rate increases. This is to ensure that the NMW continues to achieve its objective of maximising the wages of the low paid younger workers without damaging their employment prospects, and the NLW achieves the target of two thirds of median earnings by 2024.

<b>Will the policy be reviewed?</b> The LPC review the policy annually <b>If applicable, set review date:</b> 10/2023				
Does implementation go beyond minimum EU requirements?		N/A		
Is this measure likely to impact on trade and investment?		No		
Does this measure comply with our international trade and investment obligations, including those arising under WTO agreements, UK free trade agreements, and UK Investment Treaties?		N/A		
Are any of these organisations in scope?	<b>Micro</b> Yes	<b>Small</b> Yes	<b>Medium</b> Yes	<b>Large</b> Yes
What is the CO <sub>2</sub> equivalent change in greenhouse gas emissions? (Million tonnes CO <sub>2</sub> equivalent)		<b>Traded:</b> n/a	<b>Non-traded:</b> n/a	

**I have read the Impact Assessment and I am satisfied that, given the available evidence, it represents a reasonable view of the likely costs, benefits and impact of the leading options.**

Signed by the responsible Minister: Kevin Hollinrake Date: 30/01/2023

# Summary: Analysis & Evidence

# Policy Option 1

## Description:

### FULL ECONOMIC ASSESSMENT

Price Base	PV Base	Time Period	Net Benefit (Present Value (PV)) (£m)		
2022	2023	4	Low: -1.6	High: -3.2	Central Estimate: -3.2

COSTS (£m)	Total Transition (Constant Price) Years		Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	1.6	1	324.2	1,293.1
High	3.2	1	1,148.0	4,490.0
Best Estimate	3.2	1	631.3	2,488.8

#### Description and scale of key monetised costs by 'main affected groups'

Our central estimate of the cost of accepting the LPC's NMW/NLW rate recommendations is £2,528M. This includes transition costs (£3.2m) and an increased labour cost to employers of £2,525M (not discounted costs of £1431M direct impacts and £1,094M indirect impacts). This is a transfer with a largely neutral net economic impact. It is made up of £2,142M (not discounted) of increased wages for employees, and £383m (not discounted) of increased non-wage labour costs, which are mainly employer pensions and National Insurance contributions.

#### Other key non-monetised costs by 'main affected groups'

The evidence from the LPC report suggests that the NMW rates recommended by the LPC will not have any additional negative impact on employment prospects. The NLW may have macroeconomic impacts in the long run. These are not formally quantified here as they are highly uncertain but could include negative employment impacts (previous estimates by the OBR of fewer people in employment due to NLW never materialised).

BENEFITS (£m)	Total Transition (Constant Price) Years		Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low	0	-	324.2	1,293.1
High	0	-	1,148.0	4,490.0
Best Estimate	0	-	631.3	2,488.8

#### Description and scale of key monetised benefits by 'main affected groups'

Our central estimate of the overall benefits is for a total benefit to employees and the Exchequer of £2,485m. This is a transfer from employers with a largely neutral net impact. Employees benefit from £2,142m (not discounted) of increased wages, while employees and the Exchequer benefit from £383m (not discounted) of non-wage labour benefits, predominantly consisting of pension and National Insurance contributions. Applying HMT Green Book methodology for distributional analysis, the total benefit to workers could increase up to £2,300M.

#### Other key non-monetised benefits by 'main affected groups'

Employers who provide accommodation are expected to benefit from an increased amount that can be offset against NMW/NLW pay. Workers can also benefit as these are often mutually beneficial arrangements. Take up of this is likely to be low. As above, there could also be macroeconomic benefits in the long-run (e.g. improved productivity, increased consumption, multiplier effects or marginal propensity to consume).

#### Key assumptions/sensitivities/risks

Discount rate 3.50%

The key assumption is on the counterfactual for how wages would change in the absence of minimum wage rises. We use a methodology recommended by independent experts (NIESR) and approved by labour market experts. For the value of the counterfactual, we believe that the academic literature's majority view of spillovers reaching the 25<sup>th</sup> percentile to be the most appropriate. This is the lowest point in the distribution where we find workers to no longer be impacted by the minimum wage (directly or indirectly).

#### BUSINESS ASSESSMENT (Option 1)

Direct impact on business (Equivalent Annual) £m:			Score for Business Impact Target (qualifying provisions only) £m:
Costs: 340.5	Benefits: 0	Net: 340.5	1,123.1

# Contents

Impact Assessment Scope	5
Background to the Impact Assessment	5
Policy Context and Objectives	5
Rationale for continued intervention	7
The Economic Context	8
Consultation	10
Options Identification	11
Option 0: Do nothing	12
Option 1: Implement the LPC recommended rate recommendations	12
Approach to the Appraisal	14
Counterfactual	14
Non-wage labour costs	20
Appraisal period	20
Spillovers	21
Direct and indirect effects	21
Factoring in potential unemployment	22
Appraisal of Impacts: Monetised Impacts	23
Central estimate: labour costs	23
Low-cost estimate: labour costs	23
High-cost estimate: Labour costs	23
Difference in estimates compared to the 2022 Uprating	23
Sensitivity analyses	24
Non-Wage Bill Impacts	26
Transition costs	26
Net cost to business	29
Monetised benefits to workers	29
Net Present Value	30
Appraisal of Impacts: Non-monetised Impacts	30
Macroeconomic Impacts	30
Fiscal impacts	35
Enforcement	36
Coverage	36
Regional Impacts	39
Sectoral impact	39

Small and Micro Business Assessment (SaMBA)	40
Specific Impact Tests	43
Equalities impact and Family Test	43
International trade	43
Implementation	44
Monitoring and evaluation	44
Annex A: Further modelling results	45
Annex B: Literature Review	50
Annex C: Previous cost estimates from minimum wage upratings	52
Annex D: Public/Private/Voluntary sector cost breakdown	55
Annex E: Specific Impact tests	56

# Impact Assessment Scope

1. The Low Pay Commission (LPC) has recommended increases in the National Living Wage (for those aged 23 and over), the National Minimum Wage rates (for those aged under 18, 18-20, 21-22, the Apprentice rate for those aged under 19 or in the first year of an apprenticeship) and the accommodation offset. The Government has accepted these recommendations<sup>1</sup> in full and they will come into force on 1<sup>st</sup> April 2023, subject to parliamentary approval.
2. Almost all workers in the UK are eligible to be paid at least the minimum wage. Eligibility for specific rates is determined by a worker's age and, if they are an apprentice, when they started their apprenticeship.
3. This Impact Assessment (IA) appraises the impacts of uprating the current National Living Wage (NLW) and National Minimum Wage (NMW) rates to the LPC's recommendations. This IA is a marginal appraisal, whereby we consider the impact of workers' wages increasing from the existing NMW/NLW to the proposed future NMW/NLW. This IA does not consider a scenario where the NMW/NLW is completely removed as, in the hypothetical absence of an NMW/NLW uprating, the current minimum wage rates would remain legally binding.
4. The LPC continuously monitors and evaluates the impact of the NMW/NLW, as summarised in their annual reports. Their assessment of the impact of the rates, and the state of the wider economy, are factored into the rates that they then propose for the following year. The LPC will undertake an assessment of the impact of the proposed 2023 minimum wage rates in Autumn 2024, which we welcome as a key contribution to the evidence base, and we will consider any relevant findings from their assessment in future IAs.

## Background to the Impact Assessment

### Policy Context and Objectives

5. The NMW and NLW set a legal minimum wage floor below which pay should not fall. This ensures protection for low-paid workers, whilst also providing incentives to work and reducing reliance on the state topping up wages through the benefits system.
6. The NLW was introduced in April 2016 and had a specific target to reach 60% of median earnings by 2020, subject to sustained economic growth and based on annual recommendations to Government by the LPC. The Government values the rate recommendations and advice provided by the LPC. The NMW and NLW policy depends on their yearly advice to inform the uprating recommendation. For example, it was by taking into consideration their advice provided in October 2019, that the target for the NLW was reached through the April 2020 increase.
7. Upon reaching this target, the Government set a new target for the NLW to reach two-thirds of median earnings (taking economic conditions into account) and for the NLW to apply to workers aged 21 and over by 2024. By doing this, the NLW seeks to ensure low paid workers aged over 21 are fairly rewarded for their contribution to the economy. Because the wage target is a proportion of median earnings rather than a pound value, there is flexibility as the target moves in line with the state of the economy, i.e. if forecast average earnings fall then so will the pound value of the NLW. Additionally, as set out in the LPC's remit, the Government asks the LPC to monitor the labour market, to advise on any emerging risks

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<sup>1</sup>Minimum wage rates for 2023, <https://www.gov.uk/government/publications/minimum-wage-rates-for-2023>

and – if the economic evidence warrants it – recommend that the Government reviews its target or timeframe.

8. The NMW was introduced in 1999 to protect low-paid workers from ‘extreme low pay’<sup>2</sup> whereby certain employers in the absence of government intervention may pay unacceptably low wages. Extreme low pay has now been stamped out, but the NMW continues to provide this protection for workers, and it also helps to provide a level playing field for firms, preventing them from undercutting competitors with exploitative levels of pay. When uprating the NMW, the LPC is asked to recommend the rates such that they do not damage the employment prospects of younger workers.
9. The youth labour market is much more sensitive to economic shocks and young people can be exposed to longer-term scarring effects<sup>3</sup> from prolonged spells of worklessness, as well as facing a comparative disadvantage when entering the labour market due to a lack of work experience and less knowledge. As raised in the LPC’s Youth Rates report<sup>4</sup>, ‘young people enter the labour market with relatively limited experience and few skills, and so have lower productivity while they learn the job. In addition, employers may need to provide additional training. Any minimum wage structure needs to recognise the lower productivity and higher training costs of less experienced workers. Failure to do so could mean that some employers are unwilling to give young people those critical first opportunities.’ Consequently, the Government asks the LPC to recommend separate NMW rates by age band (under 18, 18–20-year-olds, and 21–22-year-olds). In practice, as workers must be at least school leaving age to receive the NMW, the under 18 wage band applies primarily to 16–17-year-olds, although some school leavers will still be 15 when they start work.
10. The Apprentice National Minimum Wage (ANMW) was introduced in 2010 to ensure apprentices, previously exempt from the NMW, received the legal protection of the NMW. It applies to those apprentices who are aged under 19, or aged 19 or over and in the first year of their apprenticeship. The LPC recommends this rate so that the level of the ANMW provides a fair deal for apprentices, protecting them from exploitation whilst at the same time not deterring businesses from taking them on and providing good quality training.
11. The LPC also makes a recommendation for the value of the accommodation offset. The accommodation offset was introduced in 1999 and provides a mechanism to offset the cost of providing accommodation for workers against the NMW/NLW. The offset is deducted from wages without reducing pay for NMW/NLW purposes. Accommodation is the only benefit-in-kind that can count towards either the NLW or NMW as there are scenarios when the provision of accommodation can be mutually beneficial for both employer and worker. The offset arrangements provide protection to workers and give some recognition of the value of the benefit but are not intended to reflect the actual costs of provision. As part of their remit for 2022, the LPC have reaffirmed their support for the existence of the Accommodation Offset<sup>5</sup>. Critical to this decision were two principles. Firstly, restrictions on deductions from the NMW are an important measure to protect workers and prevent exploitation. Secondly, accommodation charges – capped by the offset – should be the only permitted deductions which can take a worker’s pay below the NMW. Their report also considered wider factors, such as the need to not add complexity to the NMW framework, that the offset does not meet employers’ costs, and that rate of adoption of the offset is different across sectors.
12. As the decision on the appropriate rates is both empirical and based on extensive stakeholder engagement, the LPC report contains a large body of evidence and analysis on the impact to date of the NMW and NLW. The LPC considers the prospects for the UK economy by considering the latest available

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<sup>2</sup> Prior to the introduction of the NMW in 1999, a third of low-paid workers were in extreme low pay: [More than a Minimum \(2014\)](#)

<sup>3</sup> Bell D & Blanchflower D, 2011, Young people and the great recession, *Oxford Review of Economic Policy*, 27 (2), pp. 241-267

<sup>4</sup> <https://www.gov.uk/government/publications/a-review-of-the-youth-rates-of-the-national-minimum-wage>

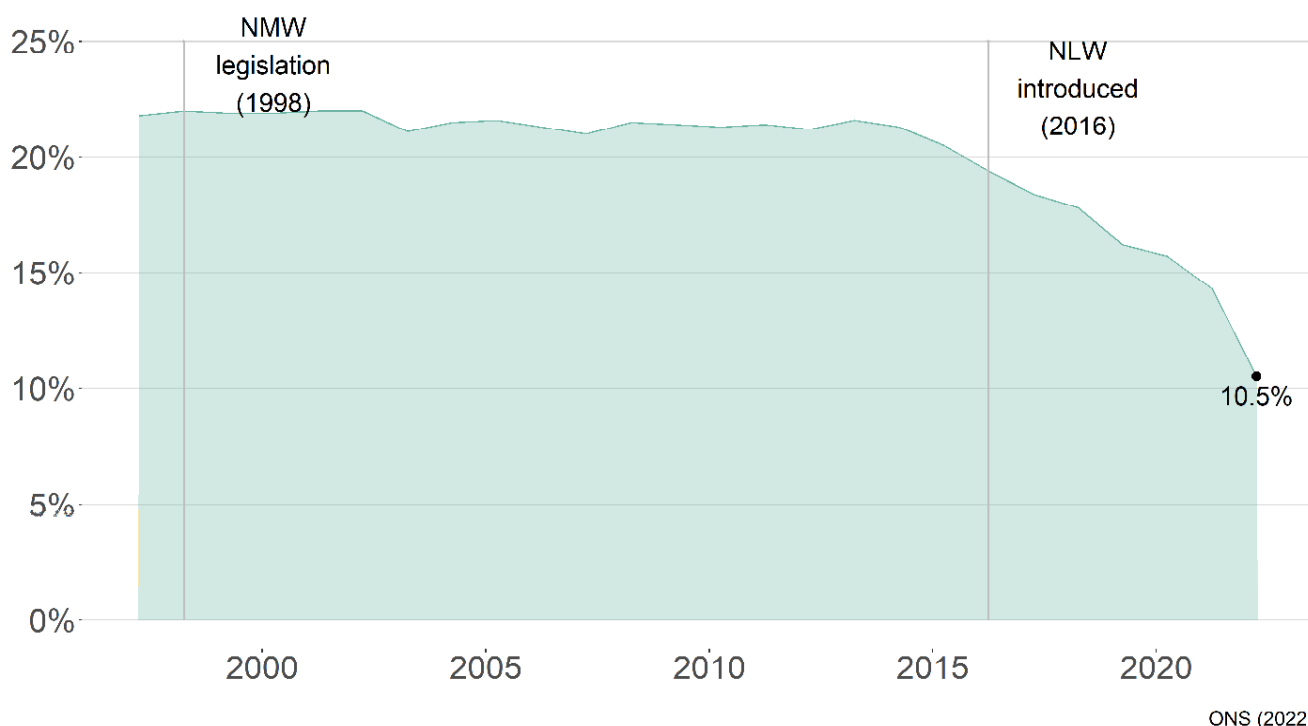
<sup>5</sup> LPC Long report, page 171, paragraph 8.74

forecasts for growth, average earnings, inflation, employment and unemployment from the Office for Budget Responsibility, Bank of England and HM Treasury’s panel of independent forecasters. They also have an extensive consultation period to collect the views and analysis of interested stakeholders. The LPC also commission external research to better inform them of the impacts of minimum wage policy. The evidence, research and data collected and produced by the LPC have been used to inform this IA.

### Rationale for continued intervention

13. The economic rationale for a statutory wage floor is to address the welfare loss caused by unequal bargaining power in the labour market. In a perfectly competitive labour market, equilibrium arises when the wage rate equates the demand for labour – based on the marginal revenue product of labour – with the supply of labour. However, when employers have market power, a socially sub-optimal market outcome can occur with lower wages and lower employment<sup>6</sup>.
14. The labour market today is markedly different to that of the late 90’s when the NMW was first introduced: it has a higher participation rate, higher employment rates, lower unionisation (from 30% of employees in unions in 1999 to 23.1% in 2021)<sup>7</sup>; the demographics of workers have evolved with more diversity in the workplace (for example, employment rate for women and disabled people are at near record highs), and rates of extreme low pay have essentially fallen to zero<sup>8</sup>. Analysis from the ONS shows that the number of people in low pay in the UK (defined as the number of people earning below two-thirds of median hourly pay) fell for the ninth consecutive year in 2022 – to 10.5% (Figure 1). These changes to the labour market have occurred in parallel with annual upratings of the NMW and the introduction of the NLW.

Figure 1 - Proportion of low paid jobs (hourly pay)



<sup>6</sup> Annex A in the 2022 IA further describes the theoretical rationale for intervention: <https://www.legislation.gov.uk/ukdsi/2022/9780348231601/impacts>

<sup>7</sup> Trade Union membership UK 1995-2021 statistical bulletin: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1077904/Trade\\_Union\\_Membership\\_UK\\_1995-2021\\_statistical\\_bulletin.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1077904/Trade_Union_Membership_UK_1995-2021_statistical_bulletin.pdf)

<sup>8</sup> Resolution Foundation’s Low Pay Britain 2016 report (p16). As a result, the Resolution Foundation have stopped calculating this measure for their latest reports: <http://www.resolutionfoundation.org/app/uploads/2016/10/Low-Pay-Britain-2016.pdf>

15. The economic rationale for continued intervention via the NMW is based on maintaining a wage rate for younger workers that is close to the competitive market equilibrium. The Government seeks to achieve this by giving the LPC a remit to recommend an NMW rate that does not damage the employment prospects of low paid workers.
16. The economic rationale for the NLW is broader, with its purpose centred on equity, primarily around reducing wage inequality, and ensuring that low paid workers enjoy the benefits of economic growth. The two-thirds of the median target for the NLW for 2024 means that wages of the lowest paid will rise relative to the middle of the wage distribution. This will be the eighth annual uprating of the NLW.
17. The economic rationale for continued intervention for both the NLW and the NMW in the context of the high inflation still stands, but the LPC also highlight that the rises this year should protect living standards against the anticipated increases in the cost of living<sup>9</sup>.

## The Economic Context

### The macroeconomy

18. The state of the economy plays an important role in the LPC's minimum wage rate recommendations and in the Government's decision to accept them.
19. After a period of economic recovery following the pandemic, underlying UK GDP growth has slowed, and the UK economy is forecast to enter recession in late 2022. The Bank of England (BoE) estimates that quarterly UK GDP growth slowed from 0.9% in 2022 Q1 to 0.5% in Q2 before turning negative, with declines of 0.2% GDP in Q3<sup>10</sup>. The OBR has published forecasts of a decline in GDP of 1.4% in 2023, before returning to growth in 2024<sup>11</sup>.
20. Significant economic headwinds account for these forecasts. Most significant of which are the near-term inflationary pressures, initially caused by post-pandemic supply-chain pressures, but then exacerbated by a near doubling of wholesale gas prices due to Russia's invasion of Ukraine in 2022.
21. As a result, CPI inflation reached a 41 year high of 11.1% in October 2022<sup>12</sup>, producer input and output prices have also reached their highest growth rates over a similar period. From these rises, business margins are likely to come under strain in turn impacting business investment, which is already well below pre-pandemic levels<sup>13</sup>. For households, inflation and higher interest rates are squeezing real incomes, with the OBR forecasting that real household disposable incomes are set to fall 7.2% over the next two years.
22. There is evidence that businesses are passing on costs to consumers to protect margins. Manufacturing output prices continued to rise sharply as a result of higher input costs, while consumer services firms were similarly raising prices in response to higher input, energy and labour costs. Business services firms continue to report significant cost pressure, especially higher wages, and report being able to increase

<sup>9</sup> LPC long report 2022, page 190, paragraph 9.22: <https://www.gov.uk/government/publications/low-pay-commission-report-2022>

<sup>10</sup>ONS, GDP first quarterly estimate, UK GDP first quarterly estimate, UK: July to September 2022:

<https://www.ons.gov.uk/economy/grossdomesticproductgdp/bulletins/gdpfirstquarterlyestimateuk/julytoseptember2022>

<sup>11</sup> OBR, November 2022 Economic and fiscal outlook: <https://obr.uk/efo/economic-and-fiscal-outlook-november-2022/>

<sup>12</sup> CPI inflation, ONS: <https://www.ons.gov.uk/economy/inflationandpriceindices/timeseries/d7g7/mm23>

<sup>13</sup> LPC short report 2022:

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1116992/LPC\\_short\\_report\\_2022\\_FINAL.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1116992/LPC_short_report_2022_FINAL.pdf)



prices by more than normal given strong demand. Retailers also expected to continue passing through costs into consumer prices in coming months.

## The labour market

23. By traditional indicators, the labour market has shown a strong recovery since the pandemic. Since rising to a peak of 5.2% at the end of 2020, unemployment has fallen below its pre-pandemic low to 3.7% over the August to October 2022 period<sup>14</sup>. The number of vacancies in the economy is around 44% higher than it was in the period December-February 2020<sup>15</sup>, and the employment rate, although is 1.0 percentage point lower than the pre-covid period (February 2019 - December 2020)<sup>16</sup>, remains high by historic and international<sup>17</sup> comparisons.
24. Despite this, a significant number of workers have left the labour market, leaving labour supply lower than before the pandemic. The inactivity rate (i.e. those not actively seeking a job) rose by more than a percentage point in the first year of the pandemic, the sharpest 12-month rise on record. It has not recovered since, with inactivity (16-64) up by 1.3 percentage points or 565,000 people compared to before the pandemic<sup>18</sup>.
25. The increase in the economically inactive population has been concentrated amongst older workers aged 50-64 (302,000 of the 565,000), suggesting this in part due to early retirement. In addition, the number of workers (16-64) stating long-term sickness as the main reason for being inactive was 343,000 higher from August to October 2022 compared to before the pandemic. Other reasons for lower labour supply include changes in the composition of migration and the impact of an ageing UK population<sup>19</sup>.
26. Lower labour supply has been met by strong labour demand, and this in turn has led to a 'tight' labour market, characterised by a record level of vacancies. Vacancies have outnumbered the number of unemployed workers, and all sectors and regions of the UK have seen vacancies above their pre-pandemic levels. As a result, some firms have reported recruitment difficulties, some of which is likely to be temporary but also some more enduring due to skills mismatches<sup>20</sup>. Commentators have also suggested that labour hoarding could be a contributor to persistent demand<sup>21</sup>.
27. In part due to the tight labour market but also high inflation, nominal wage growth increased throughout 2022, and it is expected to increase remain relatively high at least in the first half 2023. As of November, the median forecast from HMT's independent panel is for nominal wages to grow by 4.6% in 2023 and 3.2% in 2024<sup>22</sup>.

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<sup>14</sup> ONS, Employment in the UK, December 2022:

<https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/bulletins/employmentintheuk/december2022>

<sup>15</sup> ONS, vacancies and Jobs in the UK, December 2022:

<https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/bulletins/employmentintheuk/december2022>

<sup>16</sup> ONS, Employment in the UK, December 2022:

<https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/bulletins/employmentintheuk/december2022>

<sup>17</sup> ONS, Dataset A10: International comparisons of employment and unemployment rates, December 2022, [\[Link here\]](#)

<sup>18</sup> ONS, Economic Inactivity rate, <https://www.ons.gov.uk/employmentandlabourmarket/peoplenotinwork/economicinactivity>

<sup>19</sup> 'Where have all the workers gone?' House of Lords, Economic Affairs: <https://publications.parliament.uk/pa/ld5803/ldselect/ldeconaf/115/115.pdf>

<sup>20</sup> Monetary Policy Report November 2022, Bank of England, page 92: <https://www.bankofengland.co.uk/-/media/boe/files/monetary-policy-report/2022/november/monetary-policy-report-november-2022.pdf>

<sup>21</sup> Monetary Policy Report November 2022, Bank of England. <https://www.bankofengland.co.uk/-/media/boe/files/monetary-policy-report/2022/november/monetary-policy-report-november-2022.pdf>

<sup>22</sup> Forecasts for the UK economy: November 2022, HMT:

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1118206/forecomp\\_Nov\\_6.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1118206/forecomp_Nov_6.pdf), calculated from independent forecasts made in the months September, October and November 2022

28. As in previous years, pay growth has continued to be strongest at the bottom of the pay distribution<sup>23</sup>. Between April 2019 and April 2022, pay in the lowest decile increased by 16.3% (in nominal terms) while median pay grew by 10.8 % over the same period. In fact, in 2022 many low-paid workers saw their pay grow by more than the NLW, suggesting factors outside of minimum wage rate setting accounted for the increases. This is likely to do with labour shortages; during 2022 many stakeholders in low-paying sectors told the LPC they struggled to hire workers, and this raised pay fasters to attract them. More specifically, the 2022 NLW rate acted as a baseline for firms to compete over, employers offered premiums on top of this baseline in order attract staff <sup>24</sup>.
29. Overall, the BoE believe the main contributor to the tight labour market is the lack of supply and therefore the labour market will remain tight in the short-term. However, as the economy and consumption slow, the tight labour market is likely to begin to unwind with unemployment rising. For example, in response to a fall in consumer demand, firms may reduce labour input intensity through a reduction in the number of hours worked or the reduction in vacancies. Labour supply growth could be affected by how households respond to the fall in their real incomes; households may seek to boost their real incomes through working more, which could involve those currently inactive re-entering the labour market or those already in jobs seeking to work longer hours<sup>25</sup>.
30. However, forecasting when the labour market will reach this ‘turning point’ is difficult. It is plausible that wage growth recedes quickly in the second half of 2023 as the economy slows, in line with the OBR’s November forecast. Nevertheless, it is plausible that high inflation is more persistent and unemployment lower than expectations, which may support higher nominal wage growth for longer. We reflect this uncertainty on wage dynamics in our analytical approach, which is discussed in detail starting on paragraph 57.

Table 1: Forecasts of selected economic variables (November 2022 market rate projections)

	2022			2023		
	OBR	BoE	HMT average	OBR	BoE	HMT average
GDP	4.2	4.3	4.1	-1.4	-1.9	-0.8
Unemployment rate	3.6	3.7	3.8	4.1	4.9	4.4
Average earnings	5.9	5.8	5.8	4.2	4.3	4.7
Inflation (CPI)	9.1	9.1	10.5	7.4	8.1	5.0
Sources	a: OBR EFO, November 2022. <a href="#">Link [here]</a> b: Bank of England November 2022 Monetary Policy Report. Forecasts refer to Q4 of each year. <a href="#">Link here</a> c: HMT, Average of Independent Forecasts, November 2022 release <a href="#">Link here</a>					

## Consultation

31. The NLW and NMW rates are underpinned by extensive consultation, analysis, and evidence-gathering carried out by the LPC. On top of its own expertise and analysis, the LPC consults with a wide range of stakeholders from across civil society through its annual evidence programme. This year the LPC received 52 responses to their written consultation, with representatives from 101 various organisations attending their oral evidence sessions. Appendix 1 of their 2022 report provides a list of contributors to

<sup>23</sup> LPC short report 2022:

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1116992/LPC\\_short\\_report\\_2022\\_FINAL.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1116992/LPC_short_report_2022_FINAL.pdf)

<sup>24</sup> LPC Long report, page 75, paragraph 4.11, 4.12: <https://www.gov.uk/government/publications/low-pay-commission-report-2022>

<sup>25</sup> Monetary Policy Report November 2022, Bank of England, page 21: <https://www.bankofengland.co.uk/-/media/boe/files/monetary-policy-report/2022/november/monetary-policy-report-november-2022.pdf>

their consultation. The LPC makes recommendations on the future rates but the final decision on whether to accept them is made by the Government.

32. The LPC's work and the wider economic context, enable us to understand how the proposed rates may impact businesses and are summarised below:

- Many respondents commented on the post-pandemic economic and business conditions, with employers across several sectors reporting that they expected a multi-year recovery. Covid measures have increased costs across a range of businesses, including loans that are now beginning to be repaid.
- Many businesses expressed concern about rising business costs, though while they were concerned about the forthcoming rise in the NLW, they were more concerned about other cost pressures – primarily unpredictably high energy and input costs. The majority thought pay would need to rise because of the tight labour market and because low-paid workers needed a response to the increase in inflation. The majority of businesses consulted by the LPC cited energy costs as their number one concern.
- Despite economic conditions, it was still rare for businesses to state that they reduced employment because of the NLW increasing, this is in accordance with what has been reported in previous years. There were more responses that employers were absorbing the costs than in previous years.
- The leading responses from employers to the rising minimum wage, year upon year, have been to absorb the cost increases through reduced profits; or to pass increases onto customers via price rises. This year saw an upturn in the share of businesses reporting price increases. While large shares of businesses still reported taking reduced profits, surveys by employer groups suggested that a growing proportion of their members were planning to or had already raised prices as part of their response to the rising NLW. A survey by the CIPD found that 39% of employers in wholesale and retail reported raising prices, compared with 19% in 2021 and 23% in 2019
- The tightness of the labour market was a near-universal theme in this year's evidence, with several sectors reporting shortages of staff, and evidence in some sectors that this was driving up pay. There were several factors driving shortages, including a lack of EU workers and furloughed staff who had taken jobs elsewhere in the economy, hence not returning to their previous jobs. Shortages have had a knock-on impact across the economy and employers were acutely aware of competition for staff within and between sectors.
- Both the pandemic and NLW have had a mixed effect on productivity and investment. A consistent theme is that of work intensification; productivity has increased but because of the pandemic employers have been forced to do more with less. Some employers noted that they were investing in automation in response to the NLW and other cost pressures.
- At the time of LPC's consultation, many worker representatives called for a rise that would keep the NLW on track to meet two-thirds of median earnings by 2024, with many going further suggesting a NLW target of £15 an hour, arguing a real-terms increase was critical for low-paid workers. Employer views were more mixed, many accepted the 2024 target but were worried about rising costs elsewhere.

## Options Identification

33. This IA considers two options which will be assessed against the policy objectives set out above:

- Option 0) Do nothing – maintain the existing NLW and NMW rates
- Option 1) Implement the LPC recommended rates from April 2023.

### Option 0: Do nothing

34. If the LPC’s rate recommendations are not implemented, then the status quo will prevail and the current NLW and NMW rates would continue to be the statutory pay floor that workers are legally entitled to.
35. The “do nothing” option would not achieve the policy objectives of the NMW and NLW rates. We believe that many minimum wage workers would likely not see consistent and substantial pay increases relative to the middle of the pay distribution and therefore low pay in hourly terms would persist. Despite this, current tightness in the labour market would mean that many if not all workers would still see some wage growth.

### Option 1: Implement the LPC recommended rate recommendations

36. The LPC rate recommendations for April 2023, as outlined in their report, are as follows:

Table 2: Low Pay Commission NMW/NLW rate recommendations for April 2023

	LPC recommendation	Current rate	Annual percent increase
National Living Wage rate (23+)	£10.42	£9.50	9.7%
21-22-year-old rate	£10.18	£9.18	10.9%
18-20-year-old rate	£7.49	£6.83	9.7%
16-17-year-old rate	£5.28	£4.81	9.7%
Apprentice rate	£5.28	£4.81	9.7%
Accommodation offset (day rate)	£9.10	£8.70	4.6%

37. The LPC has extensively outlined in their 2022 report the analysis, consultation and subsequent rationale behind its recommendations for the NLW and NMW rates which should apply from April 2023. The Government has considered this and subject to parliamentary approval will implement the LPC’s recommendations in full. Below is a brief summary of the rationale for this. Further detail is available in the LPC’s report.

#### The National Living Wage

38. With the 2024 target and economic conditions in mind, the LPC has advised that the NLW should rise to £10.42, an increase of 9.7%. This increase will keep the Government on track to meet the manifesto target for the NLW to reach two-thirds of average earnings. The proposed increases in the 2023 NLW rates are higher than those seen last year and would be the highest ever single increase in pence and percent terms. A full-time worker on the NLW will see their pre-tax pay increase by over £1,700 to almost £19,000.
39. The LPC continue to use stakeholder evidence to inform their decisions. This year employer stakeholders told the LPC that while they were concerned about the forthcoming rise in the NLW, they were more concerned about other cost pressures. The majority thought pay would need to rise because of the tight labour market and because low-paid workers needed a response to the increase in inflation. Many employers have already significantly raised pay in order to help with recruitment and retention. At the same time, worker representatives highlighted that a real-terms increase was critical to protect the living standards of the lowest-paid at a time of crisis.

40. The LPC currently forecast that an NLW increase of 6.3% will be required in 2024 (when average wage growth is expected to have slowed) to achieve the manifesto target. They judge this balance, with a higher increase in 2023 than 2024, to be appropriate given prevailing economic conditions, with it being sensible to have a larger increase while the labour market is relatively stronger. A strong labour market is likely to mitigate against any potential adverse consequences from significant NMW/NLW increases since demand for work is higher as are wage pressures to retain and recruit. The LPC note that the labour market is expected to soften over the course of 2023, meaning a lower increase may be more appropriate in 2024.

### **National Minimum Wage (s)**

41. Last year employment prospects for young workers continued to recover from the pandemic thanks to strong employment demand in low paying sectors, especially hospitality and retail. The tight labour market for young workers has been reflected in substantial rises in hourly pay. Between 2019 and 2022 average hourly pay grew by 25% for 16-17 year olds, 18% for 18-20s and 16% for 21-22s compared to 11% for those 23+<sup>26</sup>.

42. Because of the strength of the labour market for 16-17 and 18-20 year olds, the LPC recommended increases of 9.7% for both groups in line with the NLW, taking them to £7.49 and £5.28 respectively. These rates balance the aim to stay in line with underlying wage growth and inflation whilst recognising the higher risk of unemployment for this group.

43. The intention for 21- and 22-year-olds is to move them onto the NLW in 2024 and the majority of LPC stakeholders continue to agree this is the right move. To avoid a large step change in the year they become eligible, and factoring in the improved situation facing younger workers, the LPC deem it sensible to continue to reduce the gap between the 21–22 year-old rate and the NLW next year. This has resulted in a significant increase in the 21-22 rate of 10.9% (or £1) to £10.18, which the Government intends to implement.

### **The Apprentice NMW**

44. Last year the LPC recommended aligning the Apprentice Rate and the 16–17-Year-Old Rate and they continue to support this position as no evidence has been seen of negative effects stemming from this change. Therefore, the Apprentice Rate is increasing by 9.7% from £4.81 to £5.28.

45. The LPC are considering if there is a need for a separate Apprentice Rate long term. Next year the LPC plan to use the next wave of the Apprenticeship Evaluation Survey to evidence whether a separate rate for apprentices is still justified<sup>27</sup>.

### **Accommodation offset**

46. This year the LPC have judged it best to increase the Accommodation Offset rate in line with forecast average earnings growth – increasing the offset by 4.6% (40p) to £9.10. The rationale for recent increases in the rate has been to encourage the provision of higher-quality accommodation. However there continues to be limited data available on how many employers use the accommodation offset and therefore both we and the LPC use stakeholder engagement to understand the impact of recent increases. The sectors most likely to use it are agriculture and horticulture, and to a lesser degree, the hotel sector, particularly in rural locations.

47. The LPC also undertook a fuller review of the Accommodation Offset as part of their 2022 remit and reported their findings in their long report<sup>28</sup>. They reaffirmed their support for the existence of the offset

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<sup>26</sup> Comparisons are made between 2019 and 2022 due to data comparability issues for ASHE data in 2020 and 2021 owing to the pandemic and in particular the furloughing of workers.

<sup>27</sup> See page 20 of the LPC report, paragraph 37.

<sup>28</sup> LPC long report 2022, page 171, paragraph 8.74 onwards: <https://www.gov.uk/government/publications/low-pay-commission-report-2022>

but made recommendations about the enforcement of minimum standards for the quality of accommodation quality, a minimum hours requirement, and the interaction with the seasonal workers scheme. The Government will respond to these recommendations in due course.

## Approach to the Appraisal

48. This section explains the approach to estimating additional wage costs and non-wage costs resulting from the uprating in the NMW/NLW rates. The results of this approach are given in paragraph 90 onwards.

### Counterfactual

#### Background to the choice of counterfactual

49. The core assumption in our analysis is the counterfactual: the profile of the counterfactual is both a function of i) the wage level low paid workers would receive in the absence of the policy; and ii) the wage growth they would have experienced over the course of the minimum wage uprating. The true counterfactual is unobservable and given the NLW and NMW are universally applicable across the UK, there is no pure control group to compare the policy intervention against.

50. Multiple approaches have previously been considered to estimate the counterfactual. Due to its unobservable nature, none can be proven, i.e., we rely on making normative economic statements. Moreover, the actual cost to business/benefit to workers can vary between zero and infinity depending on the wage growth assumption. If the NMW/NLW grows at an equal or higher rate to the size of the uprating this results in no cost. However, if workers affected experience zero wage growth forever then the cost would also be infinite.

51. In response to previous IAs, the RPC has commented on the suitability of the counterfactual we have used to estimate the cost to business/benefit to workers because of NMW/NLW upratings. Detailed discussion of this can be found in 2022's IA<sup>29</sup>, but two key points to highlight are:

- In 2017, we commissioned the National Institute of Economic and Social Research (NIESR) to research the most appropriate counterfactual for us to employ in this and future IAs<sup>30</sup>.
- In 2018, following some comments from the RPC regarding NIESR's findings, we undertook further engagement with labour market academics to scrutinise our counterfactual methodology further. We once more found broad consensus for our approach, providing us with validation to proceed this year. In particular, the 'catch-up' concept (whereby we estimate the cost of the uprating by considering the point at which our counterfactual catches up to the minimum wage rate) was agreed to be the most appropriate method to assess the impact of the uprating. Additionally, most respondents disagreed that wage growth at the bottom of the pay distribution would be at or close to zero, in the absence of a minimum wage uprating. There was agreement that an average uniform growth rate for all minimum wage workers should be used.

52. This is discussed in more depth in previous IAs, but simply, the NIESR recommended approach is to (i) use the current wage distribution as the starting point for the counterfactual and (ii) apply a wage growth assumption based on judgement about the state of the economy and labour market.

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<sup>29</sup> [Amendment to the NMW regulations 2022 Impact Assessment](#) , Annex H

<sup>30</sup> National Minimum Wage And National Living Wage Impact Assessment Counterfactual Research A Report By The National Institute Of Economic And Social Research: <https://www.niesr.ac.uk/publications/national-minimum-wage-and-national-living-wage-impact-assessment-counterfactual>

53. Our choice of counterfactual wage growth has varied slightly in previous years and the RPC has often commented on the evidence to support our chosen method. However, this broad approach, as suggested by NIESR's research, has now received seven 'green' fit-for-purpose ratings by the RPC, though we continue to check its validity each year with leading labour market academics.
54. In practise, to implement NIESR's recommendation we estimate the cost to business/benefit to workers by calculating how long it takes for the counterfactual growth trajectory to 'catch up' with the proposed NMW and NLW rates. Further detail of the arithmetic calculations on how the 'catch up' is estimated can be found in 2017's IA<sup>31</sup>.
55. Where alternative proposals have been put forward, we have traditionally made efforts to consider this. For example, by estimating an alternative counterfactual (specifically a 'shadow wage distribution') – this is described in greater detail in Annex D of the 2022 IA<sup>32</sup>. We continue to undertake an extensive exercise of sensitivity analysis to understand the impact of our assumptions, with this reflecting the uncertainties posed in this year's analysis.
56. Finally, we continue to consult with labour market academics on the key assumptions. This, in addition to our own desk-based research and previous analysis, leads us to conclude that our current approach is the most appropriate one. As always, we will continue to monitor this going forwards.

#### Counterfactual for this IA

57. We continue to use our core NIESR-suggested methodology<sup>33</sup>, with changes in assumptions made in line with their recommendations, specifically on the rate of wage growth in the counterfactual.

Table 3: Example assumption options for quarterly nominal wage growth

Period covered in	Average growth rate			
	Quarterly growth, 25 <sup>th</sup> percentile	Annualised growth, 25 <sup>th</sup> percentile	Quarterly	Annualised
<b>2016-2019</b> (Short-term average, excluding COVID)	1.09%	4.43%	-	-
<b>2008-2010</b> (Great Recession period)	0.48%	1.92%	-	-
<b>2022-2026</b> (OBR Oct forecast)	Not published at the 25 <sup>th</sup> percentile		0.65% <sup>34</sup>	3.10%
<b>2022-2026</b> (Median forecast from each year, range of forecasters)			0.94%	3.80%
<b>2022-2026</b> (Highest forecast from each year, range of forecasters)			1.56%	6.38%

<sup>31</sup> [Amendment to the NMW regulations 2017 Impact Assessment, page 50.](#)

<sup>32</sup> [Amendment to the NMW regulations 2022 Impact Assessment](#)

<sup>33</sup> <https://www.niesr.ac.uk/sites/default/files/publications/national-minimum-wage-counterfactual-research.pdf>

<sup>34</sup> In our counterfactual, the growth rate varies over time in accordance with the OBR forecast. It is presented here as a quarterly average for ease of comparison.

2022-2026 (Lowest forecast from each year, range of forecasters)		0.72%	2.90%
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58. The most suitable growth rate to use depends on how the economy is expected to perform over the appraisal period. As suggested by NIESR, our IAs before the 2022 IA had used historic wage growth at the part of the wage distribution unaffected by the NLW/NMW uprating as a proxy for counterfactual wage growth. That is using average nominal wage growth at the 25<sup>th</sup> percentile of the wage distribution from a historically analogous period. NIESR recommended this approach, stating among things, asymmetries in forecasting errors and lack of representation of the underlying labour market trends in the alternative methods, such as using advanced econometric models.
59. However, where the economic environment is largely unprecedented since the introduction of the minimum wage, there may not be an appropriate proxy period to use. In such a situation, we believe using a range of independent forecasts as a gauge for future years may form a better proxy since they will capture the best information about the current economic environment and what that means for wage growth. Although this is a slight departure from the previous approach, we believe it is still consistent with the NIESR's 2017 report, which state that '[the counterfactual] choice will inevitably involve judgement on the current state of the business cycle, informed by independent forecasts of key institutions'<sup>35</sup>.
60. In addition, with larger increases the NLW/NMW in recent years, the counterfactual wage takes longer to 'catch up' with the actual rates, resulting in a longer appraisal period. Between 2016 and 2021 the counterfactual wage caught up with the rate within 2 years, however this was 3+ years in 2022 (and again for this year - see page 20 for discussion of appraisal period for this IA). A longer appraisal period makes it less suitable to make a linear assumption about counterfactual wage growth since this period may cover more than one stage of the business cycle, and therefore picking simply a 'recessionary' or 'expansionary' period would be inappropriate. On the other hand, a forecast of wages is more likely to capture these changing dynamics over time.
61. Because of this, last year's IA departed from using a historical period of wage growth at the 25<sup>th</sup> percentile as our counterfactual assumption and instead used the OBR median growth forecast from their October 2021 Economic and Fiscal Outlook. We believed this best reflected the economic cycle experienced by the UK, including the unique situation of recovering from the pandemic which was unlikely to be well represented by other recent historical periods. Sensitivities on counterfactual wage growth were a low scenario of 0.48% (the 2008 – 10 Great Recession growth rate), and a high scenario of 1.23% (2016 – 19 growth rate). In practice, the labour market has been far tighter and wage growth higher in 2022 than the OBR predicted, so it is likely that counterfactual wage growth would have been higher than the 0.78% used in last year's IA. This means our estimates were almost certainly an overestimate<sup>36</sup>.
62. As previously stated, the UK economy is currently experiencing high inflation with CPI reaching 10.7% in November 2022<sup>37</sup>, high nominal annual wage growth of 6.1% October 2022<sup>38</sup> and GDP is estimated to have fallen by 0.2% in the third quarter 2022. There is consensus among forecasters that the UK will

<sup>35</sup> National Minimum Wage and National Living Wage Impact Assessment. Counterfactual research. NIESR.  
<https://www.niesr.ac.uk/publications/national-minimum-wage-and-national-living-wage-impact-assessment-counterfactual> P74

<sup>36</sup> The fact wages grew significantly faster than prediction is also clear from our projection of coverage in the 2022 IA being significantly more than the data showed ex post. The LPC 2022 report shows NLW coverage in April 2022 was just 1.4m compared to our prediction in the IA of 2.1m.

<sup>37</sup> ONS, Consumer price inflation, UK: November 2022:  
<https://www.ons.gov.uk/economy/inflationandpriceindices/bulletins/consumerpriceinflation/october2022>

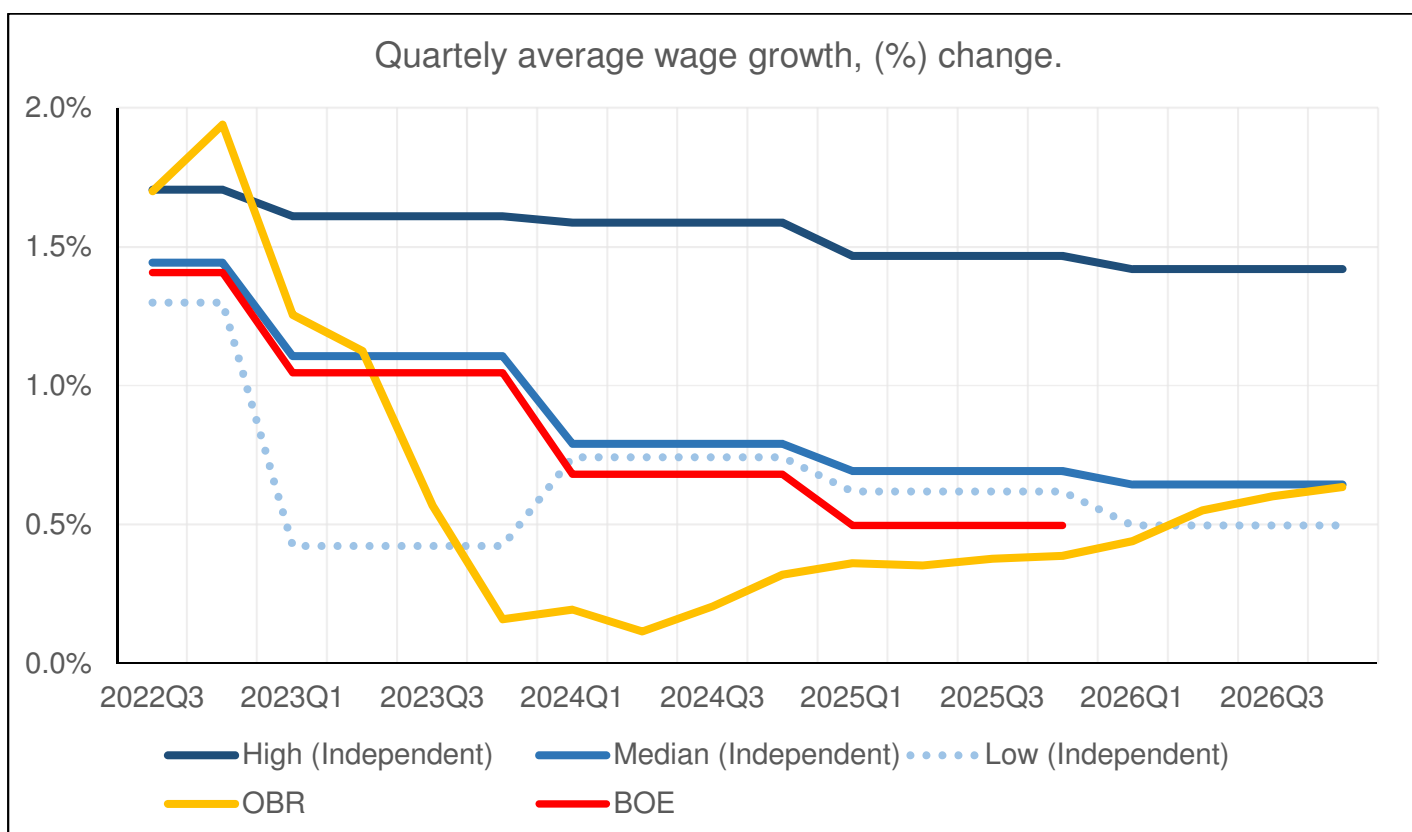
<sup>38</sup> ONS, Average weekly earnings in Great Britain: November 2022:  
<https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/bulletins/averageweeklyearningsingreatbritain/november2022>



enter a recession in the final quarter 2023. In HMT’s comparison of independent forecasts, the median forecasted decline in GDP is 0.7%<sup>39</sup> in 2023, while the OBR forecasts a fall of 1.4%. There is also consensus that the tight labour market will loosen, with the median forecast for earnings growth falling from 5.9% in 2022 to 4.6% in 2023 and unemployment rising slowing from 3.8% 2022 to 4.4% in 2023.

63. However, there is a significant range in the forecasted intensity, timing, and profile of the slowdown in wage growth (see Figure 2). Calculating from a range of independent forecasts published by HMT and including the BOE and OBR forecasts, the median of forecasted quarterly wage growth from 2022 – to 2026 is 0.94%. Across the highest forecasts for each year the average rises to 1.56%, while the average across the lowest forecasts from the forecasters falls to 0.72%. The OBR has forecast median quarterly wage growth of 0.47% from 2022 to 2026, which is analogous to the wage growth of the 25<sup>th</sup> percentile of workers after the 2008 recession used in last year’s low growth, high-cost sensitivity.

Figure 2: Range of quarterly wage growth forecasts



64. This range of forecasts reflects uncertainty in the lasting impact of changes in the labour market that have impacted the supply of labour, the length of the forecasted recession, and the ‘turning point’ in the tight labour market. For example, the BoE discuss possible factors<sup>40</sup> which would lead to the labour market remaining tighter for longer including post pandemic structural changes to the labour market being more persistent, meaning the labour market participation rate, and labour supply, stays lower for longer. Alternatively, the tightness may unravel rapidly with labour supply increasing as workers supplement falling real incomes with longer working hours or second jobs and hiring slows with the economic slowdown.

<sup>39</sup> OBR, November 2022 Economic and fiscal outlook – charts and tables: <https://obr.uk/download/november-2022-economic-and-fiscal-outlook-charts-and-tables/>

<sup>40</sup> Monetary Policy Report November 2022, Bank of England, page 80: <https://www.bankofengland.co.uk/-/media/boe/files/monetary-policy-report/2022/november/monetary-policy-report-november-2022.pdf>

65. Based on this uncertain outlook, finding a single historical period that well reflects the current UK economic climate is difficult. Therefore, in this year's IA we have again judged that using a forecast of average wage growth as our counterfactual to be the correct approach (although in paragraph 100 we illustrate the results that the previous approach would yield). This approach is in fact consistent with how the LPC have previously forecasted future coverage<sup>41</sup>.
66. The forecasts we use are from HMT's panel of independent forecasts of wages<sup>42</sup>, which includes the OBR. This panel does not include the Bank of England, but we do add their forecasts to our range of forecasts. We remove forecasts made prior to September 2022 to remove outdated predictions. We believe this set of forecasts will capture all current available information about the state and direction of the economy, and therefore best incorporate the range of scenarios that could incur.
67. From this range of average wage growth forecasts, we take the median, high and low forecast from each individual year (2022 – 2026) and use this to form a wage growth profile for our range of cost estimates. This serves to illustrate sensitivities around the median forecast and reflects a faster loosening of the labour market in the low scenario, and a steadier decline in the wage growth in the high scenario, possibly due to declines in labour supply being more persistent. Using higher growth rates results in lower overall costs and using lower growth rates results in higher overall costs. This is because the higher the growth rate, the quicker counterfactual wage rates would match the increased NMW/NLW rates, and vice versa for slower growth rates.
68. While we judge that median in a panel of independent forecasts provides the best available central wage growth profile, we also undertake a sensitivity analysis that utilises the OBRs and BOEs wage growth forecasts (see paragraph 97 onwards). We model the OBRs forecast, which averages 0.47% between 2022-2026, as a comparator to our central scenario. This provides a scenario in which wage growth is notably lower than other forecasters.
69. The BoE's wage growth forecast published alongside their November MPC report is a slightly different scenario to the OBR that accounts for steeper rises in unemployment in 2023 and 2024, but with more optimistic wage growth assumptions compared to the OBR over the long run. While the OBR assumes that quarterly wage growth falls to just above 0.1% in the first quarter for 2023, the BoEs wage growth forecast is more linear, and does fall below 0.5% until the beginning of 2025. Overall, the BoEs forecast could reflect a scenario in which unemployment begins to rise due to falls in demand but demands for wages to keep pace with inflation are maintained.
70. Following extensive work done internally within the Department for Business and Trade (DBT) and engagement with academics, we do not consider a counterfactual scenario in which there is zero wage growth for low-paid workers to be likely. Comparisons of international evidence (see Box 1 below), analysis of the wage growth forecasts mentioned above, and to the tightness in the labour market, all suggest low paid workers would still see some level of wage growth in the absence of the NLW/NMW increases. We therefore rule out modelling a such a counterfactual scenario.

#### **Box 1: The USA as a comparative example**

The United States is an example of a rich and industrialised nation covered by a variety of minimum wage regulations. The Federal minimum wage rate has been \$7.25 an hour since 2010, with no increases seen since. Twenty U.S. states, representing 131 million Americans, have chosen to use this Federal minimum wage while the other thirty U.S. states, representing 198 million Americans, have chosen to implement

<sup>41</sup> See Chapter 10, page 202 of the LPC 2022 Report, where they use forecasted median wage growth to estimate counterfactual.

<sup>42</sup> HMT Forecasts for the UK economy: November 2022: <https://www.gov.uk/government/statistics/forecasts-for-the-uk-economy-november-2022>

their own minimum wages, with various increases in these rates having been experienced over the past decade. The median annual growth rate of the minimum wage among these thirty States is 3.8%.

Following the Dube Review, which summarises the literature on US minimum wages, we have also observed the US to identify what had happened to wage growth if a minimum wage rise had not increased (as has been seen in the federal minimum wage), to identify any trends that could be applied to our own counterfactual.

Individuals in the bottom quartile (e.g. 25<sup>th</sup> percentile) of earnings in states reliant solely on the Federal minimum wage (i.e. which did not experience a minimum wage increase) saw average annual wage increases of 2.9%. The bottom quartile of earners in states which did raise their minimum wage experienced average annual wage growth of 3.7%, slightly below the median increase annual growth rate among the thirty states

While this exercise loosely identifies correlation (without specific controls for causation), it does suggest that if the minimum wage did not increase, the bottom quartile of workers would not experience wage growth. However, they would experience a lower growth rate relative to the scenario where minimum wages did rise.

There are always constraints in applying findings across countries, however there are also strong similarities between the US and UK labour markets in the period 2010-2019. Both countries experienced strong labour market recoveries post financial crises, with unemployment rates falling below pre-recession levels by 2019. Furthermore, both countries' wage growth has been relatively weak over this period and both nations are considered to have relatively 'liberal' labour market policy regimes compared to other developed economies.

This comparison can also be expanded into the post-pandemic recovery period. In both countries, the demand and supply of labour has been relatively imbalanced since 2019 leading to tight labour markets. For both countries this imbalance is due to a number of different factors including matching efficiency, declining participation rates and increases in the long-term sick.

Conversely, there are relevant differences between the two countries, the UK has higher overall labour participation rates and higher trade union density, which have not been controlled for and likely affect wage growth. Some differences can be observed however between how much this tightness has translated into broadening wage pressure, visible in the US but to a lesser degree in the UK.

Nevertheless, there are sufficient similarities between these two economies to support the basic finding that incomes among the bottom quartile of workers experience some wage growth in the absence of rising minimum wages, but less than would be expected if an ambitious minimum wage policy is in effect.

## Summary

71. The counterfactual is, by its very nature, unobservable. Previous findings from NIESR, where they have deployed advanced econometric techniques to attempt to estimate the counterfactual growth rate, found these models to have low predictive power. Since we are in a world of normative economics rather than positive economics, NIESR recommend an approach where we make a judgement of what the available evidence dictates is the most suitable counterfactual, and it is one that we have continued to follow here.
72. Of the growth rates presented in Table 3, we have used the median growth rate of yearly forecasts from a range of independent institutions as our best-case estimate. This reflects the uncertainty represented in several forecasts, while also capturing the latest available information on the state of the economy, and

the dynamics of moving from a period of high wage growth to lower wage growth. We nevertheless provide sensitivities to evaluate the impact of alternative counterfactual growth rates.

73. Based on the available evidence, NIESR believe this approach of utilising a uniform growth rate across the wage distribution is unbiased and representative of the typical minimum wage worker. There is no positive evidence that the counterfactual wage level is different to the existing minimum wage, nor is it falsifiable. Similarly, evidence does not support an argument that counterfactual wage growth would be zero for a period, due to 'base raising' effects as discussed in previous attempts to look at a 'shadow wage curve' approach.
74. Annex C lists all the previous work we have done on the counterfactual and as was done last year, we have implemented the recommendations of independent experts, due to the possible contentious nature of this counterfactual. We acknowledge that alternative approaches may exist (indeed, previous NMW IAs have used slight variations in the counterfactual), but all of these will be beset with similar issues previously outlined; and none have been shown to be more appropriate than the approach used in this impact assessment.

### **Non-wage labour costs**

75. The second source of direct cost associated with the NMW/NLW upratings is associated with non-wage labour costs, such as pensions and employer National Insurance contributions. Therefore, we have uprated the employer wage bill impacts by 17.9% to account for these additional costs. This figure comes from ONS analysis for 2019-2020<sup>43</sup>. In IAs prior to 2022, we used the Eurostat figure of 21.8% was used. However, since exiting the European Union, Eurostat no longer publish this value for the UK, and therefore the more recent ONS figure is preferred.
76. Previously, NIESR voiced concerns that the Eurostat (and therefore the ONS) figure 'is likely to be an overestimate because it does not account for the fact that some workers do not meet the National Insurance contribution (NIC) threshold'<sup>44</sup>. Moreover, recent evidence from the LPC suggests that nearly a third of minimum wage workers do not meet the NI or income tax threshold<sup>45</sup>. Conversely, they do note that future auto-enrolment of pensions won't be included in this uplift. We continue to use the full 17.9% uplift here, as we conservatively assume that any overestimates are likely to be balanced against potential underestimates.

### **Appraisal period**

77. The length of our appraisal period is how long it takes the counterfactual, on average, to catch up with the LPC rate recommendations. As we have a uniform counterfactual growth rate for all rates, which is what NIESR recommend in their report, and the percentage increase in the rates varies across the age bands, the appraisal period differs for each of the NLW and NMW rates.
78. In our central scenario, we estimate that it will take our counterfactual 12 quarters to 'catch up' with the NLW/NMW increases.

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<sup>43</sup>Index of Labour Costs per Hour, UK: July to September 2020 , ONS , <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/earningsandworkinghours/bulletins/indexoflabourcostsperhourilch/julytoseptember2020>

<sup>44</sup> National Minimum Wage and National Living Wage Impact Assessment. Counterfactual research. NIESR. <https://www.niesr.ac.uk/publications/national-minimum-wage-and-national-living-wage-impact-assessment-counterfactual> p. 50

<sup>45</sup> LPC Report 2021. This figure is for the £8.91 NLW so may decrease once the NLW increases to £9.50. Conversely, the ASHE data for 2021 is distorted so proportions may change in 2022 due to furlough effects, this bias is likely to be in the opposite direction.

## Spillovers

79. As discussed in previous IAs, we make an assumption that the increase in the minimum wage has an impact on other parts of the wage distribution, not directly impacted by the increase in the NLW and NMW. The rationale for this is that, as a higher wage floor is implemented, some employers will choose to either i) give pay rises to those paid above but near the new minimum wage; and/or ii) increase the pay of some workers previously paid below the new minimum to a greater level than just bringing pay into line with the new statutory minimum. Employers do this out of a desire to maintain wage differentials between their employees to recognise different roles and responsibilities, maintaining a high employee morale.
80. In the past we have used evidence from NIESR and LPC to assume that spillovers last between the 20<sup>th</sup> and the 30<sup>th</sup> percentile of the earnings distribution, with the effect dissipating towards the upper end of that range.
81. There has been considerable research in this area, including Avram and Harkness (2019)<sup>46</sup> and Georgiadis & Manning (2020)<sup>47</sup>, examining the effects of previous NLW increases on wage spillovers. The authors find significant spillovers up to the 30<sup>th</sup> percentile and 25<sup>th</sup> percentile respectively. Overall, these findings are encouraging as they are consistent with the assumptions made in our previous IAs.
82. During a tight labour market, we would expect businesses to be more likely to maintain differentials to retain and recruit staff. However, this is likely to be constrained by their profit margins and/or their ability to pass on costs to consumers, especially since firms are currently facing many other costs pressures (e.g., energy prices).
83. Feedback received during the LPC consultation suggests that spillovers continued to persist beyond the NMW rate. However, stakeholders have also previously suggested that some employers were reducing pay differentials as a result of the minimum wage. Some companies have reported to changing pay structures or removing some differentials/roles. The combination of NMW/NLW pressures, challenging economic circumstances, but a tight labour market means that the impact on differentials is uncertain.
84. Due to the uncertainty in finding the point in the wage distribution where spillovers end, we have decided to use a mixture of theoretical understanding, quantitative data and academic engagement to estimate that the spillovers from the 2023 NMW/NLW increases will extend to the 25<sup>th</sup> percentile. This is in keeping with the approach that was agreed by the RPC last year. Previously, we have based sensitivities to this assumption on a +/- 5 percentage points range (i.e. spillovers between 20<sup>th</sup> – 30<sup>th</sup> percentile). However, due to increased uncertainty we assess a wider range of spillover assumption, namely +/- 10 percentage points or spillovers reaching for the 15<sup>th</sup> and 35<sup>th</sup> percentiles.

## Direct and indirect effects

85. We have classified the increase in labour costs caused by the spillover effect up the earnings distribution as an indirect impact. This distinction is appropriate because the only regulatory requirement on employers is to meet the new pay floor. The decision to raise wages of those earning above the new rates in order to maintain pay differentials is at the discretion of employers and not required by the regulation – in fact, some employers may choose to use the squeeze in wage differentials as a way of mitigating the overall labour cost impact of an increase in the NMW/NLW.

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<sup>46</sup> Harkness, S. E., & Avram, S. (2019). The impact of minimum wage upratings on wage growth and the wage distribution. A report prepared for the Low Pay Commission.  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/852505/The\\_impact\\_of\\_minimum\\_wage\\_upratings\\_on\\_wage\\_growth\\_and\\_the\\_wage\\_distribution.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/852505/The_impact_of_minimum_wage_upratings_on_wage_growth_and_the_wage_distribution.pdf)

<sup>47</sup> Georgiadis, Andreas and Manning, Alan, The Impact of the UK Minimum Wage: Evidence from High-Frequency Firm-Level Data (March 25, 2020). Available at SSRN: <https://ssrn.com/abstract=3560897> or <http://dx.doi.org/10.2139/ssrn.3560897>

86. Previously, the RPC have commented that our classification did not capture the possibility that some of the ripple effect may be non-discretionary because pay differentials are written into contracts. As argued in previous IAs, evidence from XpertHR and the LPC found that while the minimum wage has an impact on wider wage-setting behaviour, employers tend not to set wages at X% above the rates, indicating that increases in pay differentials between employees is an indirect business response to the change in legislation. This is supported by qualitative evidence gathered by NIESR in 2017 which found that the overall wage budget in large firms is often set at senior/board level, which includes considerations about percentage increases in the NMW/NLW. Decisions about allocation to groups of employees and individuals are then made after this. This was further corroborated in conversations with payroll experts.

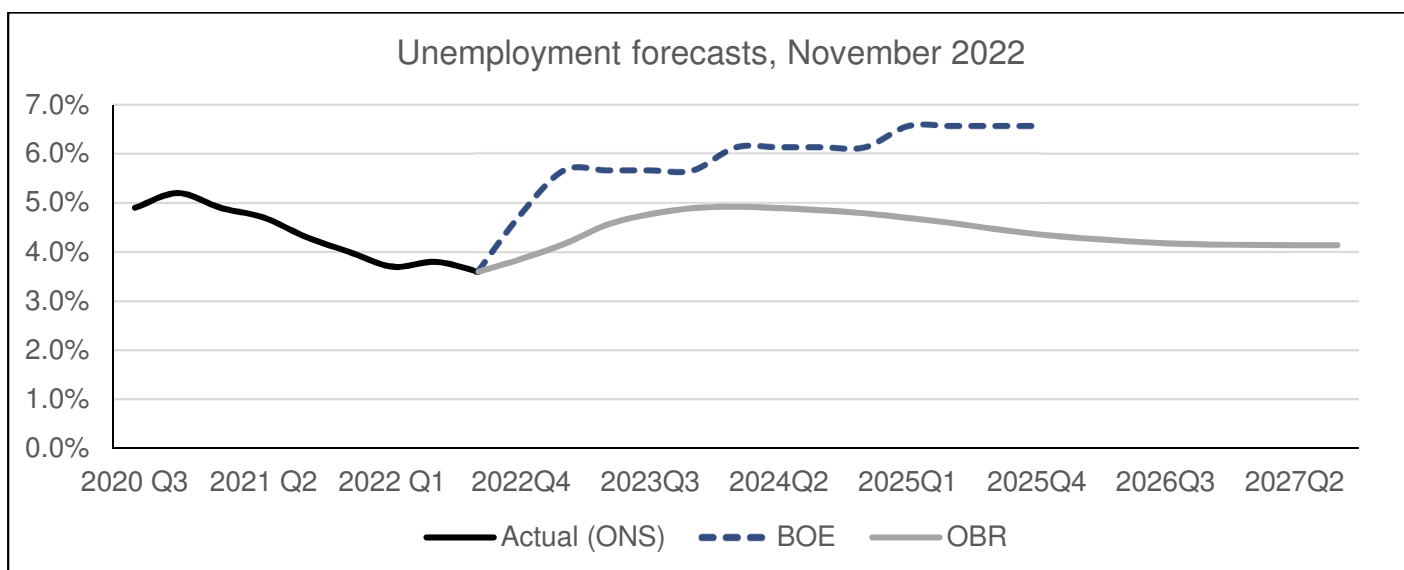
### Factoring in potential unemployment

87. Theoretically, the employment rate has an impact on the costs of the NMW/NLW uplift. If the unemployment rate is lower, then there are more workers who benefit from uplift and the cost of the policy is higher. Conversely, if the unemployment rate is higher there are less workers and therefore lower costs.

88. In this IA we continue to use that approach. Given uncertainty around the path of unemployment, in our central scenario we take a conservative approach and assume the employment rate remains constant. We then explore the impact of higher unemployment on our estimates

89. For this sensitivity, we use the unemployment rate from the OBR November 2022 forecast<sup>48</sup> in line with previous IAs. This forecasts sees unemployment steadily rise from 3.6% Q4 2022 to 4.9% in Q4 2024. For comparison the BoE have forecasted larger rises in unemployment, 3.75% by the end 2022, and 5.75% by the end of 2024.

Figure 3: Range of quarterly unemployment growth forecasts



<sup>48</sup> Economic and fiscal outlook – November 2022 Link [\[here\]](#)

# Appraisal of Impacts: Monetised Impacts

## Central estimate: labour costs

90. As discussed in the counterfactual section above, we make a range of assumption on counterfactual wage growth to produce a range of cost estimates. In our central scenario, we assume counterfactual wages grow by on average, 0.85% per quarter from Q4 2022 to Q4 2026. This growth rate is in line with the long – run quarterly growth rate at the 25<sup>th</sup> percentile of workers from 2001-2019 used as a sensitivity in last year’s IA. It is constructed from the median forecast, made by independent forecasters from September to November 2022, for each year 2022 – 2026.

91. Our central cost estimate of the total labour costs is **£2,530M** (undiscounted). This is split into wage bill impacts of **£2,140M** and non-wage impacts of **£380M** (numbers may not sum due to rounding). Tables 10, 11 and 12 in Annex A provide a further breakdown in constant prices.

## Low-cost estimate: labour costs

92. As discussed previously, our low-cost estimate is based on a quarterly counterfactual growth rate of 1.56% and is constructed from the highest yearly forecasts made over the 2022 – 2026 period from a range of independent forecasters. This is the most optimistic scenario covered in the assessment, and assumed that wage growth slows, but to a level that indicates continuation of the tight labour market.

93. In this scenario the total cost to employers from implementing the LPC rate recommendations, and thus complying with the incoming legislation, is **£1,300M**. It is made up of **£1,100M** in increased wages and **£200M** in additional employer non-wage costs. Tables 13, 14 and 15 in Annex A provide a further breakdown in constant prices.

## High-cost estimate: Labour costs

94. We reproduce the analysis using a different counterfactual growth rate for our high-cost scenario. This growth counterfactual is constructed from the lowest forecasts made in each year from 2022 – 2026 by independent forecasters. From 2022 Q4 to 2026 Q4 it assumes an average quarterly growth rate of 0.65%, one of the lowest growth sensitivities we have modelled.

95. Overall, our high-cost estimate of the total labour costs is **£4,590M**. This is split into wage bill impacts of **£3,300 million** and non-wage impacts of **£1,300M** (numbers may not sum due to rounding). Tables 16, 17 and 18 in Annex A provide a further breakdown in constant prices.

## Difference in estimates compared to the 2022 Uprating

96. This year the central estimate of costs for the NMW/NLW (£2,530M) uplift is substantially higher than the costs of the last uplift (£1,600M). This increase in costs is due to the increases to the NLW/NMW rates being larger than last year’s across the board (e.g. the 2022 increase to the NLW was 6.6% compared to 9.7% this year). This leads to a commensurate increase in costs to business.

97. Counterbalancing this increase in the size of the uprating is a higher counterfactual wage assumption (a quarterly growth rate of 0.94% this year compared to 0.78% last year). This reflects the states of the labour market as discussed in paragraph 57 onwards. A higher growth rate means it is relatively quicker for the counterfactual rate to catch up to the new NMW/NLW rate and thus decreases the estimated costs of the policy.

## Sensitivity analyses

98. Due to uncertainty around a number of key variables involved in our analysis, we have performed extensive sensitivity analyses to try and isolate the impact of each assumption. These sensitivities are discussed in each relevant section but for ease of comparison, we have presented our full list of sensitivities and key results in Table 4 below.
99. The table shows that both the costs are most sensitive to the wage growth assumption. Using the high counterfactual (average quarterly wage growth of 1.56%), the total cost falls to £1,300M, while using the low counterfactual (average quarterly wage growth of 0.72%) causes the cost to increase to £4,600M. We also run sensitivities using the OBR's and BoE's median wage growth forecasts as further sensitivities. These lead to costs to business estimates of £4,740M and £3,020M respectively.



Table 4: Sensitivity analysis results

Scenario title	Counterfactual Wage Growth Scenario (mean growth)	Spillovers Percentile	Employment modifier	Total Cost (£millions)
1) Central	2022- 2026 Index of median independent forecast (0.94%)	25	Off	£2,530M
2) 'High Cost'	2022- 2026 Index of lowest independent forecast (0.72%)	25	Off	£4,600M
3) 'Low Cost'	2022- 2026 Index of highest independent forecast (1.56%)	25	Off	£1,300M
4) 'BOE'	2022 – 25 BOE forecast (0.78%)	25	Off	£3,020M
5) 'OBR'	2022-24 OBR (0.65%)	25	Off	£4,740M
6) 'Spillover Low'	2022- 2026 Index of median independent forecast (0.94%)	15	Off	£1,830M
7) 'Spillover High'	2022- 2026 Index of median independent forecast (0.94%)	35	Off	£3,500M
8) 'Employment modifier'	2022- 2026 Index of median independent forecast (0.94%)	25	On	£2,520M

100. Whilst we have not explicitly modelled counterfactual scenarios based on historical wage growth at the 25<sup>th</sup> percentile (as per the approach taken in some previous IAs), we can illustrate the likely result based on the relationship between the assumed counterfactual wage growth profile and the overall cost of the uplift. One such scenario is quarterly wage growth at the 25<sup>th</sup> percentile from 2008-2010 of 0.48%, which was modelled in last year's IA<sup>49</sup>. If we were to model such a scenario using the 2023 NLW/NMW rates, the cost would likely be similar to the OBR's profile that was modelled in this year's IA, with approximate costs of £4.7BN. Another un-modelled wage growth profile could be the long-run (2001 – 2019) average of quarterly wage growth at the 25<sup>th</sup> percentile of 0.81%. This would likely lower the overall cost of the programme and would produce a total programme cost approximately between our central and high costs scenarios, or approximately £3.0BN.

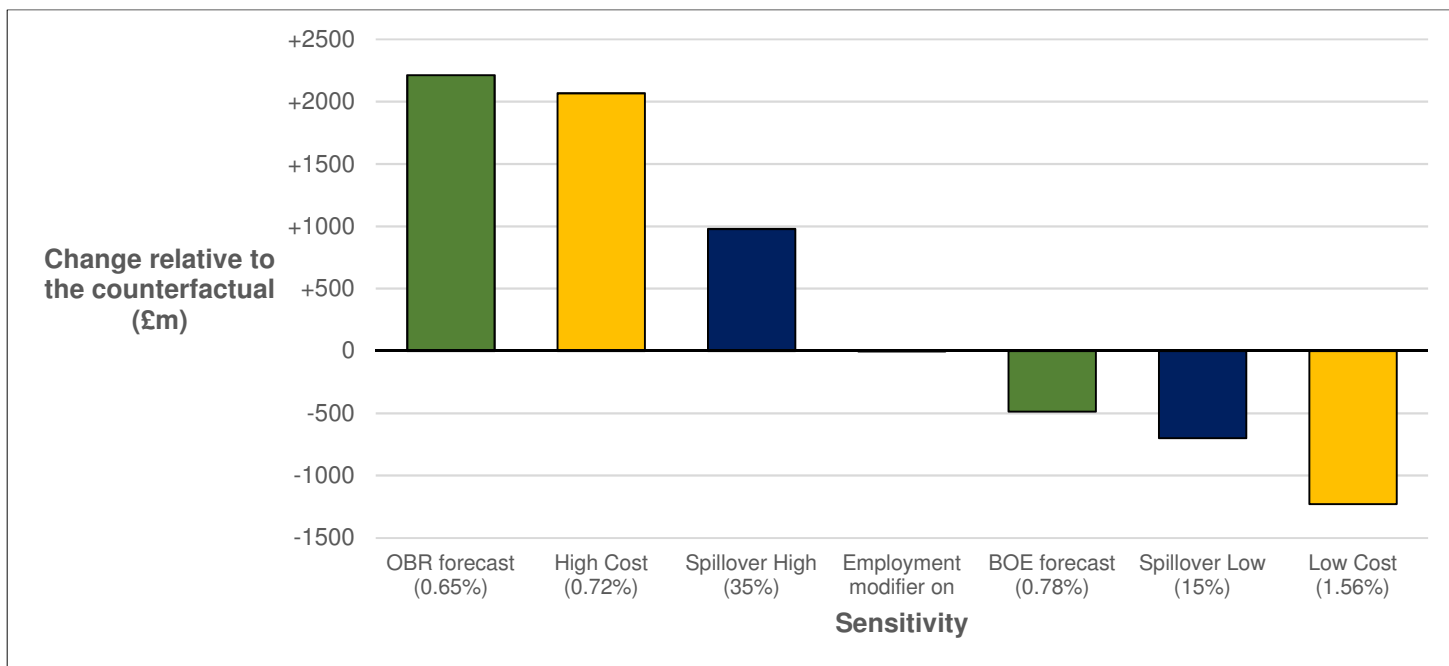
101. Incorporating the OBR's forecasted rise in unemployment, marginally decreases the cost of the policy by £2M compared to our central estimate. This small change in total cost reflects the relatively minor impact that changing the employment forecast has on our monetised costs. This is in part because unemployment recovers towards the end of our appraisal period, meaning that the reduction in costs due to lower employment levels is tapered. This adjustment may be considered crude, as the employment rate forecast is economy-wide and not specific to low-paid sectors. In absence of detailed employment

<sup>49</sup> The National Minimum Wage (Amendment) Regulations 2021, page 34, [\[Link here\]](#)

forecasts by low-paying sectors, in addition to the uncertainty about the nature of the economic recovery (including the level of the peak unemployment rate, and indeed when that materialises), we believe that our simplifying assumption is suitable for this analysis, with any further adjustments likely to lead to spurious accuracy. In the instance that job losses are concentrated in low-paid sectors, these cost figures would be slight over-estimates.

102. Assuming that spillovers only reach the 15<sup>th</sup> percentile, causes costs to fall to £1,830M. Conversely if spillovers reach the 35<sup>th</sup> percentiles, we find that costs rise to £3,500M.

Figure 4: How costs change relative to the central scenario as assumptions change (unemployment sensitivities are not shown due to low impact)



## Non-Wage Bill Impacts

### Transition costs

#### Familiarisation costs

103. The concept of annual minimum wage increases is fully embedded in the UK labour market; they have occurred regularly for the last 20 years. Employers, especially those in low paid sectors, will generally expect the minimum wage to increase<sup>50</sup>. This awareness is, in part, thanks to extensive information on the Gov.uk webpages, targeted HMRC 'Promote' awareness-raising activity, and an extensive communications campaign in the lead up to past NMW/NLW upratings, which will run again for the April 2023's rates.

104. However, businesses may need to take some time to familiarise themselves with the new rates to ensure they are compliant with this incoming legislation. Therefore, we estimate the opportunity cost of businesses familiarising themselves with the legislation.

105. There are no official statistics that provide estimates of the number of businesses which are covered by the NMW and NLW increases examined in this IA. However, a number of surveys run by stakeholders provide some evidence. A CIPD survey of its members found that 53% are affected by the NMW/NLW.

<sup>50</sup> Low Pay Commission, 2020 Report, Summary of Findings, November 2020

This is similar to that found by the Federation of Small Businesses, who found that half of micro businesses and all small and medium-sized businesses had been affected by what it classed as ‘social policy-related costs’, which include the NMW/NLW. Moreover, the Small Business Survey 2016<sup>51</sup> found that 54% of SME employers to be unaffected by the NLW, meaning 46% are affected (=100% minus 54%).

106. Naturally coverage will vary across sectors, and some representative organisations representing employers in specific low paid sectors found higher proportions. Other recent surveys are in line with estimates used in last year’s IA <sup>52</sup>.

107. Consequently, in this IA we take a range between 46% and 53% of employers who are affected by the proposed increase in the NMW/NLW. Using the 2022 Business Population Estimates (BPE)<sup>53</sup>, we estimate that between 670,000 and 770,000 employers will be affected by the changes to the minimum wage.

108. As the IA is assessing only the marginal costs of implementing new NLW and NMW rates, it is relatively straightforward for an employer to familiarise themselves with this change. It will involve either checking Gov.uk or calling the Acas helpline – traffic through these routes tend to increase around the implementation of new rates, as supported by evidence in the 2017 IA<sup>54</sup>. Additionally, employers may also hear about the rates via official Government communications or through third party channels, such as the news. After the Government’s communications campaign for the introduction of the NLW, 48% of those aware of the NLW reported that the source of their awareness was a TV programme or news, 22% cited TV advertising, 13% mentioned their accountant and 13% mentioned national newspaper advertisements.

109. We have previously assumed it will take employers 5 minutes to establish what the new rates are – which includes some time finding the right place to look for information. This assumption is based on the average duration of visits to the National Minimum Wage landing page on Gov.uk (~ 4 minutes) and the length of calls that Acas received regarding NMW/NLW issues (~ 5 minutes).

110. However, following engagement with the payroll industry it was highlighted that companies who already have employees on the NMW are more likely to respond to surveys on the matter. In this instance, the views of companies who may newly be affected by the NMW are not collated. It is possible that it would take these companies longer than 5 minutes to establish what the new rates are as they may previously be unfamiliar with the process.

111. The Government has responded to numerous correspondence cases on the matter and aimed to keep businesses sighted of developments as much as possible. Comprehensive guidance on the minimum wage is available to businesses on Gov.uk to help them check they are paying their workers correctly. The Government also recently undertook a comprehensive review of minimum wage guidance, drawing on the expertise of a readership panel comprising employer and worker representatives, as well as technical and legal experts. The guidance was published on 1 March 2021. This year we will further be undertaking an extensive communications campaign to ensure businesses are appropriately ready for the April 2023 upratings.

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<sup>51</sup> Longitudinal Small Business Survey Year 2 (2016) SME employers – cross-sectional report. 2017. – p. 105

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/624580/small-business-survey-2016-sme-employers.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/624580/small-business-survey-2016-sme-employers.pdf)

<sup>52</sup> IA for the National Minimum Wage (Amendment) Regulations 2021: [https://www.legislation.gov.uk/ukia/2021/3/pdfs/ukia\\_20210003\\_en.pdf](https://www.legislation.gov.uk/ukia/2021/3/pdfs/ukia_20210003_en.pdf)

<sup>53</sup> <https://www.gov.uk/government/statistics/business-population-estimates-2022>; Number of businesses with employees.

<sup>54</sup> See page 33, IA for the National Minimum Wage (Amendment) Regulations 2017:

[https://www.legislation.gov.uk/ukia/2017/87/pdfs/ukia\\_20170087\\_en.pdf](https://www.legislation.gov.uk/ukia/2017/87/pdfs/ukia_20170087_en.pdf)

112. Despite this activity, we have taken a conservative approach to increase the familiarisation time in our best and high-cost estimates (doubling the time taken to 10 minutes), to account for this adjustment. We continue to use 5 minutes in our low-cost estimate. This increase in the length of familiarisation time aims to capture instances where employers are affected by the changes in NMW/NLW for the first time and would spend more time establishing the appropriate rates consequently

113. To calculate the burden, we estimate the opportunity cost of a HR Manager/Director's<sup>55</sup> time by using the median hourly pay from ASHE 2022 of £24.62, uplifted for non-wage labour costs of 17.9%. Applying this to our estimate of businesses affected equates to a one-off familiarisation cost of between £1.6M and £3.2M. The former is our low-cost estimate, whilst the latter is our conservative best estimate. This estimate has not been adjusted to take into account the familiarisation cost to the public sector, which would be negligible considering that there are only 12,365 enterprises in this sector in the UK (according to the latest update of the BPE), and it constitutes a small proportion of total costs incurred by businesses.

### Implementation costs

114. The NMW and NLW continue to follow the same cycle as last year. Using qualitative evidence from NIESR's 2017 report, we found that 'adjustments to comply with these rates had minimal implications for administrative resources because pay was adjusted annually in any case' (p.37). Consequently, we believe that there is a negligible, if any, additional burden as a result of the changes to this legislation.

115. We have also previously engaged with payroll representatives on the possible costs of changing employee contracts or tax codes but were again informed that these costs were likely to be minimal or negligible. Employee contracts often have NMW/NLW clauses embedded into them which would not be affected by an uprating. Changing of tax codes is also unlikely to be a significant cost as most employees affected by an uprating would not be earning enough to warrant a change in tax codes.

116. In light of this evidence, we do not monetise implementation costs as a result of uprating the NMW/NLW as we expect them to be either equal to or near zero for businesses.

### Non-compliance

117. In line with previous Better Regulation guidance<sup>56</sup>, 100% compliance with the policy is assumed unless there is evidence to the contrary. Whilst ASHE data is able to estimate the number of jobs paid on hourly pay rates below the age applicable NMW and NLW, both the ONS and DBT make clear that this should not be considered as a direct measure of NMW/NLW non-compliance as there are legitimate reasons for a job to be paid below the NMW (e.g., a deduction can be made for accommodation).

118. In light of not having a reliable basis on which to make a robust estimate of the true level of non-compliance for future upratings, we assume full compliance with the NMW and NLW. This is a conservative approach because including cases of potential non-compliance in our cost estimate will increase the total estimated direct cost to business as we assume non-compliant employers will increase wages to the new rates to comply with the law. To give a sense of scale of this assumption; if we assumed that the number of employees registering pay below minimum wage rates in ASHE 2022 (estimated 507,000 workers) were excluded from our estimates, this would reduce the total cost to £1.7BN a 32% reduction from our central scenario.

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<sup>55</sup><https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/earningsandworkinghours/datasets/occupation4digitsoc2010ashtable14> (Table 14.5a), SOC code: 1136

<sup>56</sup> Guidance, Better regulation framework. <https://www.gov.uk/government/publications/better-regulation-framework>

## Net cost to business

119. We separate the impact on the private, public, and voluntary sectors in order to calculate the EANDCB for our central estimate. We do this by calculating what proportion of workers eligible for each rate are in the private and voluntary sectors, and then we multiply this by the overall cost and coverage estimates above. A full breakdown is provided in Annex E.

120. Using the IA Calculator, we estimate that the equivalent annual net direct cost to business is £340.5M (over maximum appraisal period of four years). These are based on our central case scenario. Spillover costs are not included in this calculation as they are an indirect cost to business.

## Monetised benefits to workers

121. The monetised benefits of the NMW/NLW increase are higher wages and non-wage benefits (e.g. employers' pension contributions) received by workers. In our central scenario, the additional wage benefits to workers are estimated at £2,080M across four years, covering both the direct increase in minimum wage and spillover effects. In this way the NMW/NLW increases represent a transfer from employers to low-paid workers.

122. In addition, workers benefit from the non-wage impacts, which are also a transfer from business. These are estimated to be £450M in our central scenario; however, this includes both benefits to workers (e.g. higher employer pension other employee benefit contributions) and benefits to the exchequer (e.g. National Insurance contributions). As it is not possible to determine the split of employee benefits vs taxation, we cannot calculate the total benefit to workers. However, we know that total benefits to workers and the Exchequer are £2,530M.

123. Given that these benefits predominately accrue to the lowest-paid workers, we can undertake equality weighting to illustrate the social benefit from the NMW/NLW increases. The HMT Green Book states that 'when assessing costs and benefits of different options, it may be necessary or desirable to "weight" these costs and benefits, depending on which groups in society they fall on'. This is based on the principle of the diminishing marginal utility of income, whereby the value on an additional pound of income is higher for a low-income recipient and lower for a high-income recipient.

124. The method included in the Green Book is to use an estimate of the elasticity of the marginal utility of income to calculate the redistributive effect of the policy<sup>57</sup>; in the Green Book this value is 1.3. To calculate the distributive effect, you divide the point on the distribution of the earner that you are taking the money from by the point on the distribution of the earner that you are giving to, and raise it to the power of the elasticity of the marginal utility of income. In this way, someone at the median (i.e. 50) values an extra pound 2.45<sup>58</sup> times more than someone at the 100<sup>th</sup> percentile. The formula therefore weights the benefit more the lower down the income distribution the worker is.

125. For our analysis we assume that workers covered by the NMW/NLW are at 61% of the median wage (i.e. the 'bite')<sup>59</sup>. This means that they value the direct additional wages at 1.9 times<sup>60</sup> more than those at the median. The total direct wage transfer of £1,210m therefore gives an equity-weighted benefit to the recipients of £2,300M.

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<sup>57</sup> HMT Green Book 2020 – P97

<sup>58</sup>  $\left(\frac{100}{50}\right)^{1.3}$

<sup>59</sup> This is calculated as 2022 NLW rate divided by the median wage in Q2 2023 based on the OBR's November 2022 EFO forecasts – £9.50/£15.68 = 61%. In practice, workers on the other NMW rates would be further down the wage distribution, meaning this is a conservative approach.

<sup>60</sup>  $\left(\frac{100}{61}\right)^{1.3}$

126. Throughout the IA, we have assumed that indirect (spillover) benefits accrue up to the 25<sup>th</sup> percentile of the wage distribution, which is equivalent to 71% of the median wage. Following the same calculation as above, the indirect wage transfer of £930M gives an equity-weighted benefit to workers of £1,450m. The total benefit due to distributive effects of the wage transfer is therefore £3,750M.

127. This approach is only illustrative for three reasons. The first is that we are proxying an individual's position on the income distribution by their wage rate. These two measures may not align because total income is determined by working hours as well as hourly wage (i.e. you could have a high paid individual not working many hours). Furthermore, a worker's position on the wage distribution does not necessarily reflect their position on the household income distribution. It is plausible that an individual could be working a minimum wage job whilst their household income is relatively high, due to the contributions of other earners to the household (e.g. young workers living with their parents). In line with this, the IFS found that only 22% of minimum wage earners are in the lowest fifth of working households<sup>61</sup>.

128. Secondly, we assume that the NMW/NLW represents a transfer from those at the median to those on low pay. However, who ultimately pays for the increases in the NMW/NLW is not always clear. For example, it is frequently reported that costs associated with increases to the minimum wage are absorbed by companies through reduced profits, implying costs are borne by shareholders who are likely to be beyond the median income. This would suggest our approach for distributional effects produces an underestimate because costs imposed on individuals beyond the median should be equity-weighted downwards. However, some businesses also suggest that they pass NMW/NLW increase onto consumers in the form of higher prices. Again, consumers will be spread amongst the income distribution rather than exactly at the median, which would change our equity-weighting.

129. Finally, we cannot equity weight the indirect benefits as some of these accrue to the Exchequer and it would not be right to equity weight the benefits to Government. Nevertheless, we include the distributive analysis to indicate that, with equity weighting, the Net Present Value of the uprating would be significantly positive.

## Net Present Value

130. As the wage costs of the policy represent a transfer to workers, and the non-wage costs of the policy are largely a transfer to either workers (sick leave, pensions, etc.) or the Government (NICs), in net, unequity-weighted terms, these cancel out. As a result, the NPV of the policy is almost neutral (i.e. close to zero). The costs of the policy that are not a transfer are the transition costs associated with the policy as detailed in paragraph 113. The NPV of the policy is therefore a, relatively small, negative £3.2M.

## Appraisal of Impacts: Non-monetised Impacts

131. Thus far we have monetised the direct and indirect impacts caused by an increase in the NMW/NLW. These have been a cost to business/benefit to workers as a result of an increase in employers' wage bill. However, there are non-monetised impacts that may arise as a result of accepting the LPC's rate recommendations, such as broader impacts on the macroeconomy and potential fiscal implications.

## Macroeconomic Impacts

132. As part of their evaluation of the impact of the NMW/NLW, the LPC examine the impact of the most recent uprating (primarily chapters 1 and 2)<sup>62</sup>. In addition, the LPC have recently published a review of

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<sup>61</sup> <https://www.ifs.org.uk/uploads/BN260-the-future-path-of-minimum-wages.pdf>

<sup>62</sup> LPC long report 2022, <https://www.gov.uk/government/publications/low-pay-commission-report-2022>

NLW from its introduction in 2016 up to the start of the Covid-19 pandemic. Below we summarise the key findings and the supporting evidence from these reports, identifying any broader second- to third-order impacts that the proposed 2023 uprating may have. We have also summarised the most recent academic literature on possible impacts of the minimum wages in Annex C.

## Employment

133. Economic theory predicts mixed effects on employment. Neoclassical theory suggests that the most prominent macroeconomic impact resulting from an increase in the minimum wage is higher unemployment if the minimum wage rate is set above the competitive market equilibrium. On the other hand, empirical evidence from the Dube review suggests that a higher minimum wage could reduce vacancies and employee turnover in an imperfectly competitive labour market.
134. Due to the LPC's remit, we do not expect there to be any significant adverse employment effects as a result of the proposed NMW increases. They fulfil their remit by consulting across a broad range of stakeholders and analysing a thorough body of evidence. Moreover, the LPC's evaluations on the impact of the NMW have found no evidence that it has led to significant impacts on employment. Therefore, we believe our assumption here is justified. The LPC itself is made up of representatives from employer and worker backgrounds who are interested in not harming employment prospects.
135. To date there is no evidence that the NLW uprating's have negatively impacted unemployment. The National Living Wage Review<sup>63</sup> assessed the impacts of the policy between 2016 and 2020 and did not find conclusive evidence of a negative impact on employment or hours. Though a mix of both positive and negative effects on employment were found, the effects are small and only affect certain groups of workers at certain times. For example, in the 2022 LPC report they heard from employers that where the NLW may have affected employment it was more likely to affect the numbers of hours worked rather than hiring behaviour. Overall, it was more common for employers to report they could not hire enough staff than that they were seeking to reduce their workforce. Furthermore, the report highlights that employer organisations did not state that the latest NLW rise had significantly affected employment. UK Hospitality for example told the LPC that 'the 2022 increase in the NLW has not had a detrimental effect on employment levels and hours worked across the hospitality sector'<sup>64</sup>.
136. There is further evidence on the impacts of NMW/NLW on employment in our literature review in Annex B. Butcher & Dickens (2012)<sup>65</sup>, (2022)<sup>66</sup> and Lord (2022)<sup>67</sup> all find that increases in the NLW had a significantly positive impact on median earnings, but causing no significant negative impacts on employment or on hours worked from NLW increases. Georgiadis & Manning (2020)<sup>68</sup> also found the impact of the NMW on employment to be indistinguishable from zero. However, Wilson & Baily (2020)<sup>69</sup> found that firms paying below the incoming minimum wage experience 2-3% lower employment growth. A recent IFS study (2021)<sup>70</sup> used data from ASHE to find that the higher minimum wage decreased the number of jobs just below the minimum wage, and increased the number at, and slightly above, the minimum wage. Overall, it found statistically insignificant effects on employment.

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<sup>63</sup> The National Living Wage Review (2015-2020) A report by the Low Pay Commission 2022: <https://www.gov.uk/government/publications/the-national-living-wage-review-2015-2020>

<sup>64</sup> LPC long report. Page 96, paragraph 4.59: <https://www.gov.uk/government/publications/low-pay-commission-report-2022>

<sup>65</sup> Dickens, Richard, Manning, Alan and Butcher, Tim, (2012), Minimum Wages and Wage Inequality: Some Theory and an Application to the UK, Working Paper Series, Department of Economics, University of Sussex Business School, <https://EconPapers.repec.org/RePEc:sus:susewp:4512>.

<sup>66</sup> Butcher, Tim, and Richard Dickens. 2022. "Impact of the NLW using geographic wage variation." Low Pay Commission in-house research report.

<sup>67</sup> Lord, Anthony. 2022. "The impact of the National Living Wage on wages, employment, and hours." Low Pay Commission in-house research report.

<sup>68</sup> Georgiadis, Andreas and Manning, Alan, The Impact of the UK Minimum Wage: Evidence from High-Frequency Firm-Level Data (March 25, 2020). Available at SSRN: <https://ssrn.com/abstract=3560897> or <http://dx.doi.org/10.2139/ssrn.3560897>

<sup>69</sup> Impact Of National Living Wage On Businesses, Frontier Economics, November 2020

<sup>70</sup> The Distributional And Employment Impacts of Nationwide Minimum Wage changes, IFS Working Paper, 2021

137. Nevertheless, some forecasters have previously suggested that an increase in the NLW in line with the Government's target of two-thirds of median earnings by 2024 may lead to an increase in the unemployment rate. The OBR have previously used a minimum wage employment elasticity of -0.4 which, according to the 2019 Dube review, is considerably higher than most other elasticity figures used in academia. The Dube review considers 439 estimated elasticities of employment or hours for various low-wage groups with respect to the minimum wage, most of which are centred around zero with a median of -0.05. The OBR's use of a stronger elasticity means the potential negative effects of a rise in minimum wages may be overstated in their modelling. On the subject, the Dube review noted: "the authors conclude that it was unlikely that the minimum wage increases under study led to statistically or economically meaningful job losses". Their conclusions, along with various other academic findings (outlined in Annex C), continue to suggest that the employment effects of minimum wages are negligible.

138. The OBR have since revised their elasticity down to -0.3 (equating to the NLW resulting in unemployment of 50,000 by 2024). However, they continue to note that this is higher than that suggested by the literature, reflecting the fact that a higher NLW will increasingly apply to workers in sectors subject to conventional market pressures. We will continue to monitor this potential effect in future years, as the NLW increases more substantially relative to average earnings.

### **Pay differentials**

139. In the LPC's consultation, industry bodies continued to report that narrowing differentials was a common response to the rising NLW, there was some suggestion this was less prevalent than in previous years. For example, the British Retail Consortium's (BRC) survey of employers found that 27 per cent had reduced differentials and 32 per cent had reduced layers of management. This represented a decrease from last year, when 57 per cent reported reduced differentials, although the share reporting reducing layers of management was unchanged. Survey results from the Chartered Institute of Personnel and Development (CIPD) showed a similar share of businesses responding to the increase in the NLW by reducing pay differentials as previous years<sup>71</sup>.

140. It has previously been highlighted by the RPC that shrinking pay differentials between those on the minimum wage and those in more senior roles could result in decreased churn/turnover in the labour market. This may be because staff are no longer incentivised to take on responsibility and look to progress to more senior positions. While in the 2022 LPC consultation this topic remained a common response among responding employers, it is a less frequent topic relative to previous years<sup>72</sup>.

141. However, despite concerns that the erosion of pay differentials are reducing incentives for workers to move into higher pay scales, there is limited evidence outside of surveys that NLW increases are negatively impacting the probability of workers moving out of minimum wage employment. The LPC's analysis suggests that on average progression opportunities did not change much between 2016 and 2020, and Avram and Harkness (2020)<sup>73</sup> find that around half of minimum wage workers transition into employment paying above the wage floor within a year. Despite this, it is possible that progression opportunities have worsened in specific sectors. For instance, the LPC find that between 2011/12 and 2014/15, 49% of call centre workers progressed into higher-paid employment, whereas between 2016/17 and 2018/19 only 41% of call centre workers did.

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<sup>71</sup> LPC long report 2022, page 78, <https://www.gov.uk/government/publications/low-pay-commission-report-2022>

<sup>72</sup> LPC long report 2022, page 19, <https://www.gov.uk/government/publications/low-pay-commission-report-2022>

<sup>73</sup> Avram Silvia, Harkness Susan, 2018, The NMW/NLW and progression out of minimum wage jobs in the UK, Interim report for the Low Pay commission.



142. More evidence is needed on the impact of reduced pay differentials on recruitment and staff turnover, but the claim that NLW increases have an overall negative impact on career progression is not currently supported by evidence.

## Prices

143. The current high-inflation macroeconomic environment has introduced greater uncertainty about the potential for an increase in the minimum wage to push inflation higher.

144. Past evidence from Frontier Economics (2020)<sup>74</sup> suggests that a 10% increase in the minimum wage would be expected to increase prices for goods and services reliant on minimum wage workers by 0.2 to 1.2%. Subsequently, the impact on headline consumer price inflation, which covers a wider subset of goods and services, would be negligible.

145. It is possible that a significant increase in the NLW could also have a 'signalling' effect, whereby it influences pay-setting in the rest of the economy. However, evidence from previous significant rises suggests this is unlikely, especially with momentum behind wage growth increases expected to slow as the labour market loosens.

146. Traditionally business stakeholders report that some firms responded to the increased wage bill by raising prices. This year is no different; responses from The Confederation of British Industry (CBI) told the LPC 2022 Report<sup>75</sup> that fewer companies were able to simply absorb 2021's NLW rate costs. 48 per cent of CBI members said they were passing on increased costs via prices, a large increase from 2019 when 33 per cent of respondents reported this. This survey data does not, however, allow quantification of these impacts. Looking forward, businesses continue to be committed to NLW increases in line with maintaining hourly pay at two-thirds of median earnings beyond 2024, with 70% of respondents to a CBI survey<sup>76</sup> expressing their support, of whom three out of four emphasised the need for productivity growth to be an important contributing mechanism to wage growth.

147. The latest ONS business surveys find that energy costs and economic uncertainty are dominating businesses' current concerns. Likewise, in their consultation the LPC heard from business groups report that energy costs were their number one concern<sup>77</sup>. Some sectors reported more intense pressure. For example, Make UK told the report that inflation was even more acute for manufacturers. The Association of Convenience Stores (ACS) said 'Many retailers perceive the shift in increased energy costs as a structural change in their operating costs that will have to be reflected in their pricing'.

148. However, a large proportion of firms have also reported absorbing costs in response to rising input and labour costs, with the ability to pass on price increases varying significantly by sector. For example, sectors that are subject to international competition or with low market power are unable or unwilling to pass price rises onto consumers. Furthermore, the LPC's consultation found that the increases to the NLW/NMW rates were of secondary importance to other cost concerns.

149. Overall, the current high-inflation environment creates a greater risk for inflation as businesses may be more likely to pass on costs from NMW/NLW and workers may be more likely to push for higher wage rises. However, previous evidence suggests that the direct impact of the NLW/NMW on inflation is likely to be small. Furthermore, since forecasters expect higher inflation to be transitory and inflation

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<sup>74</sup> Estimating The Impact of Minimum Wages on Prices, Frontier Economics, November 2020

<sup>75</sup> LPC long report 2022, page 143: <https://www.gov.uk/government/publications/low-pay-commission-report-2022>

<sup>76</sup> <https://www.cbi.org.uk/media-centre/articles/three-quarters-of-uk-companies-hit-by-labour-shortages-in-last-12-months-cbipertemps/>

<sup>77</sup> LPC long report 2022, page 10: <https://www.gov.uk/government/publications/low-pay-commission-report-2022>

expectations remain anchored, the NMW/NLW uprating is unlikely to influence wider pay setting in the economy. Therefore, the risk of a significant rise in inflation from the NLW increase is deemed to be low.

## **Productivity**

150. Productivity growth is important given the background of rising inflation and costs faced by firms following an NMW / NLW increase. Increasing productivity is a non-inflationary source of economic growth, it allows firms to grow output without increasing inputs and incurring their associated costs. These cost reductions flow through to product prices and help reduce inflation. Productivity growth represents a positive supply shock that lowers inflationary pressures.

151. The increase in the NMW/NLW is universal for all workers of the same age and workers cannot be paid below the pay floor that the NMW/NLW provides. It could be argued that it is unlikely that increases to the NLW would give rise to a widespread increase in labour productivity, as might be predicted by the efficiency wage theory at an individual firm level. Efficiency wage theory is the theory that increasing wages leads to higher efficiency and higher profits consequently, as workers are more motivated at higher wages.

152. Increasing productivity is possible with the NLW (and to an extent NMW) as employers seek to increase the marginal product that each unit of labour produces in order to offset the increased labour cost. Firms could do this by increasing capital investment which often complements labour rather than substitute for it. Alternatively, firms could invest in human capital through training programmes to raise worker's skills, which may also improve motivation, and retention rates which increase labour productivity.

153. The same argument could also be made against such investments. If employers are facing inflationary pressures, they may save costs elsewhere after the NLW/NMW increase. These cuts could come in the form of reducing expenditure on investment and training, which is likely to reduce productivity in the long term.

154. Overall evidence for an increase in productivity is mixed. Through their own analysis, the LPC has found no evidence to date that the introduction of the NLW had a significant effect on productivity at the industry-region level<sup>78</sup>. While wages grew faster between 2015 and 2019 in industry-regions more exposed to the NLW, the same trend does not hold for productivity. This suggests the introduction of the NLW appears to have increased wages, but not productivity, meaning firms absorbed the increased labour costs through other channels than productivity, such as by raising prices or reducing profits. However, positive results can be found in Dustmann et al. (2021) who found that the introduction of a federal minimum wage in Germany in 2015 led workers to move to more productive firms<sup>79</sup>.

## **Other macroeconomic impacts**

155. Other potential macroeconomic impacts include increased consumption as low paid workers have higher levels of disposable income. This will depend on individual household preferences and their marginal propensity to save. In the short term if consumption increases it will lead to increased aggregate demand, whereas in the longer-term output may increase if individuals choose to save their increased income.

156. All of the macroeconomic impacts mentioned here would not be first round effects- in some cases they would be third or fourth round as a result of the direct impact from uprating the NMW/NLW. Therefore, we do not quantify or monetise these impacts in this impact assessment; although, as mentioned above, the OBR have in the past sought to model the impacts of the NLW on employment. Academic literature

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<sup>78</sup> The impact of the National Living Wage on productivity. Edivin Latimer, Low Pay Commission, March 2022

<sup>79</sup> Reallocation Effects of the Minimum Wage, Christian Dustmann, Attila Lindner, Uta Schönberg, Matthias Umkehrer, Philipp vom Berge, The Quarterly Journal of Economics, Volume 137, Issue 1, February 2022, Pages 267–328.

has also attempted to do this, which we summarise in Annex B. Overall, the LPC find the impact of the policy other macroeconomic factors to be benign in almost all cases.

## Fiscal impacts

157. In their March 2020 EFO, the OBR produced forecasts for expected impacts of the NMW/NLW increases on government borrowing. Higher earnings increase tax revenue, reduce government welfare spending, and therefore net borrowing. A counterbalancing impact is that unemployment effects refer to increases in welfare payments, consistent with the OBR's assumption that the NLW will increase unemployment by 50,000 by 2024 (see paragraph 137 for more discussion).

**Table 5: OBR estimates of the fiscal effects of increasing the NLW, March 2020, £Bn (negative figures mark an improvement in the public finances)**

	Forecast			
	2021-22	2022-23	2023-24	2024-25
Welfare spending	-0.1	-0.1	-0.1	0.0
Earnings effects	-0.1	-0.3	-0.4	-0.5
Uprating effects	0.0	0.1	0.3	0.4
Unemployment effects	0.0	0.1	0.1	0.2
Income tax and NICs receipts	-0.4	-0.8	-1.1	-1.5
Corporation tax receipts	0.1	0.1	0.2	0.2
Other receipts	0.0	0.0	0.0	-0.1
Debt interest	0.2	0.2	0.2	0.2
<b>Total effect on net borrowing</b>	<b>-0.3</b>	<b>-0.6</b>	<b>-0.9</b>	<b>-1.2</b>

Source: OBR Economic and Fiscal Outlook March 2020, table C (pp.49)<sup>80</sup>

158. The OBR forecast that the largest effect will be on income tax and NIC receipts, which increase by up to £1.5 billion a year by 2024/25. This is of course predicated by the OBR estimating a path for the NLW, which is inherently uncertain as the Government is advised by the independent LPC (who are guided by our target in their remit) each year for the following year's rate. This is noted by the OBR in their EFO (page 47), and for the purposes of their forecasting, they assume that the NLW will rise smoothly to reach the desired level in 2024.

159. These estimates were published prior to the COVID-19 pandemic taking full effect on the UK and before there was any certainty on the impact of it on UK earnings and the economy. Moreover, the policy responses and policies enacted by the Government since the predictions will have caused substantial changes to those forecasts, for example changes in NICs contributions, tax thresholds, and a change to the universal credit taper rate.

160. The OBR also noted significant modelling uncertainties regarding these estimates. In particular, a series of challenging assumptions were made over how workers and wages react to minimum wages, including judgements over the extent to which firms absorb the costs through changing employment, or prices and profits. As discussed in paragraph 137, we consider the OBR to overestimate their minimum wage employment elasticity.

<sup>80</sup> [http://budgetresponsibility.org.uk/docs/dlm\\_uploads/July-2015-EFO-234224.pdf](http://budgetresponsibility.org.uk/docs/dlm_uploads/July-2015-EFO-234224.pdf)

161. We have not estimated the net fiscal impacts in more detail than this because of the uncertainty associated with estimating the potential impacts listed above and stated in the OBR's report – some of which will be third or fourth round effects of the direct impact of the proposed increases in the NMW/NLW.
162. However, while our estimates of non-wage labour costs used in this IA (on both direct and indirect wage impacts) include a range of costs, they are largely made up of employer NICs, which will go to the Exchequer in the first instance. Indirectly these exchequer benefits are also for employees - a proportion of NIC receipts are paid into the National Insurance Fund and go towards the state pension.
163. Moreover, we have estimated the additional wage costs on public sector employers. A fuller depiction of this is provided in Annex D, but in summary 10% of the total cost in this IA is estimated to be borne by public sector employers<sup>81</sup>; in present value terms, this is equivalent to £230m over the appraisal period in our central case scenario, however only £130m is a direct cost as a result of the proposed NMW/NLW rates. The remaining £100m is an indirect cost and will depend on behavioural responses of public sector employers. Increases to the NLW and NMW rates are expected to be met from within departments' existing budgets.

## Enforcement

164. His Majesty's Revenue and Customs (HMRC) enforce the NMW/NLW on behalf of the Government. HMRC responds to 100% of worker complaints and also conducts proactive, targeted enforcement of at-risk employers. HMRC also carry out awareness-raising activity to prevent non-compliance in the first place and therefore reduce the need for enforcement action. If HMRC investigate an employer and find it is breaking the NMW law, HMRC then issues a Notice of Underpayment (NoU) containing details of the underpayments, the period to which they relate, and the workers affected. Once issued with an NoU, the employer will have to pay back the arrears owed to workers, face a financial penalty, and can be publicly named and shamed under the NMW Naming scheme, unless they successfully appeal against the NoU. See paragraph 117 for a discussion of non-compliance analysis.
165. DBT have increased resources to enforce the minimum wage – almost doubling the budget from 2015/16 to 2020/21. There were solid enforcement results in 2020/21: £16.7m in arrears identified, benefitting over 155,000 workers as well as £14.1 million in penalties issued in 2020/21. In total since 2015, the Government has ordered employers to repay £100 million to over 1 million workers.

## Coverage

166. In order to supplement our cost estimates, we also produce forecasts of coverage, i.e., the estimated number workers in NMW/NLW jobs following the uprating in April 2023.
167. Coverage of the incoming rates is sensitive to when in the year it is measured and to the forecasted counterfactual. We use ASHE earnings data from April 2022 and apply our counterfactual growth rate to forecast coverage in April 2023 when the rates will be introduced. The nature of our appraisal methodology means that coverage of the rates falls over the course of the appraisal period.
168. Based on central, low and high estimates, we estimate that between 2.3-3.8 million workers will be covered by the incoming NMW/NLW rates in April 2023. This includes private and voluntary sector workers and public sector workers.
169. The wide range between our estimates emphasises the uncertainty associated with projecting coverage of the minimum wage and therefore these figures are only indicative of what true coverage will be.

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<sup>81</sup> Note this may be an underestimate since it is unlikely to capture the full impact on occupations that are private-owned but publicly funded, for example much of adult social care.

Nevertheless, Table 6 contains our central estimates of coverage, and sector and regional level estimates are provided in Tables 7 and 8 respectively.

Table 6: Breakdown of projected coverage in April 2023 across different NMW/NLW rates

Rate bracket	Proposed rate	Central estimate of projected coverage	
		Size of coverage	Percent of labour force
23+ NLW	£10.42	2,540,000	9.4%
21-22 NMW	£10.18	200,000	23.2%
18-20 NMW	£7.49	120,000	13.3%
16-17 NMW	£5.28	40,000	13.7%
Apprentice NMW	£5.28	40,000	18.1%
<b>Total</b>		<b>2,940,000</b>	<b>10.1%</b>

Source: DBT Analysis of ASHE 2022. Note: Totals may not sum due to rounding; figures rounded to nearest 10,000

170. When the NLW was introduced in 2016, coverage of the NMW/NLW increased from around 1 million to 1.6 million workers. However, since then, coverage has stayed relatively flat and actually decreased in 2022 due to high wage growth in low paying occupations meaning that many workers' pay grew by more than the NMW/NLW increases.

171. In recent years, our analytical approach, that is to apply a uniform counterfactual wage growth assumption across the wage distribution, has tended to overestimate the level of coverage. For example, in the 2022 IA we projected that in April 2022 there would be 2.1M NLW workers, but data from ASHE 2022 shows it was actually around 1.4M. This is in part because wage growth was higher over late 2021 and early 2022 than we had assumed before the fact.

172. Another reason why our approach has overestimated coverage is it implicitly assumes businesses will not seek to maintain pay differentials and instead allow workers to fall onto the NLW/NMW rates<sup>82</sup>. However, we know that firms in recent years have raised pay for workers above the NLW/NMW rates in order to maintain differentials and expect this to continue to some degree. This suggests that our coverage estimates may represent an overestimate.

173. In their 2022 report, the LPC illustrate an alternative approach to forecasting coverage for April 2023. Instead of applying a wage growth assumption to ASHE 2022, they use the historic relationship between the increase in bite and the increase in coverage from every uprating in the NMW/NLW since 2000. In the past, the two measures have tended to move together; when coverage rates grow the bite grows too. If we assume this relationship stays the same, we can estimate how coverage rates will change based on the projected bite change. This approach indirectly accounts for spillover effects and yields coverage across NMW/NLW rates of 2.0M. More detail on this approach is available in Section 10 of the LPC Report.

174. We welcome the LPC's work on projecting coverage and will monitor if it yields a more accurate result when we receive ASHE 2023 data next year. If this approach represents an improvement, we will consider how this can be incorporated into our cost modelling in the future. However, at this stage we have not adjusted our cost or coverage estimates. Firstly, there is no guarantee the historical relationship between increases in the NMW/NLW and coverage will hold moving forward, especially given businesses continue

<sup>82</sup> Although our coverage estimates do not take into account these 'spillover' impacts, we do model the wage costs from these spillovers as discussed in paragraphs 79 to 84.

to report pressure on maintaining pay differentials<sup>83</sup>. Secondly, a lower coverage figure than our approach yields due to the maintenance of differentials suggests that the direct cost to business would be lower, but this would be offset by increases in indirect, spillover costs. In total, it is not clear whether this would increase or decrease the total cost to business, but it is clear that it would significantly reduce the EANDCB since this only takes into account direct costs. As a result, we stick with our more conservative approach until it is clear the alternative would produce a more accurate approach to estimating the direct cost to business.

## Regional Impacts

175. The coverage of the NMW/NLW rates as a percentage of the regional workforce varies from region to region. Proportionally more jobs outside of London and the Southeast are covered by the minimum wage. Therefore, proportionately more workers in these regions stand to benefit from the uplift. Table 7 shows that the regions/countries with the highest projected coverage are Northern Ireland (13.1%), Northeast England (13.8%) and the Yorkshire and the Humber (14.7%).

Table 7: Projected coverage of NMW/NLW workers in April 2023 across the UK's countries and regions

	NLW (23+)	NMW	Total	% of workers in region/country
North East	130,000	20,000	150,000	13.8%
North West	300,000	50,000	350,000	11.7%
Yorkshire & Humber	310,000	40,000	350,000	14.7%
East Midlands	200,000	30,000	230,000	12.1%
West Midlands	270,000	30,000	300,000	12.4%
South West	200,000	30,000	230,000	9.6%
East	220,000	30,000	260,000	10.0%
London	200,000	30,000	220,000	5.3%
South East	280,000	50,000	330,000	8.0%
Wales	120,000	20,000	140,000	11.4%
Scotland	180,000	30,000	210,000	8.3%
Northern Ireland	130,000	30,000	160,000	13.1%
<b>Total</b>	<b>2,540,000</b>	<b>400,000</b>	<b>2,940,000</b>	<b>10.1%</b>

Source: DBT Analysis of ASHE 2022. Note: Totals may not sum due to rounding; figures rounded to nearest 10,000

## Sectoral impact

176. Low-pay sectors will be impacted disproportionately by the NMW/NLW rate increases. Table 8 provides a detailed estimate of the coverage of the NLW and NMW rates for a range of low-pay sectors, as defined by the LPC, such as social care, retail, and hospitality. This shows that NMW/NLW workers are projected to make up the largest part of the workforce in Hair and Beauty (50.1%), Cleaning and Maintenance (40.9%), and Hospitality (33.8%).

Table 8: Projected coverage of NMW/NLW workers in April 2023 by low-paying sector

<sup>83</sup> LPC long report 2022, page 71: <https://www.gov.uk/government/publications/low-pay-commission-report-2022>

	NLW (23+)	NMW	Total	% of workers in sector
Agriculture	30,000	4,000	40,000	20.9%
Food processing	80,000	10,000	90,000	23.8%
Textiles	10,000	1,000	10,000	30.3%
Retail	450,000	80,000	530,000	27.2%
Hospitality	290,000	100,000	400,000	33.8%
Security and enforcement	30,000	2,000	30,000	20.8%
Cleaning and maintenance	350,000	10,000	360,000	40.9%
Social care	120,000	10,000	130,000	17.5%
Childcare	90,000	20,000	110,000	32.9%
Leisure	40,000	20,000	60,000	23.3%
Hair & beauty	30,000	20,000	50,000	50.1%
Office work	90,000	10,000	100,000	20.8%
Non-food processing	50,000	10,000	60,000	17.0%
Storage	100,000	10,000	120,000	18.0%
Transport	90,000	4,000	100,000	21.6%
Call centres	10,000	1,000	10,000	14.6%
Non-low paying sectors	660,000	110,000	760,000	3.6%
<b>Total</b>	<b>2,540,000</b>	<b>400,000</b>	<b>2,940,000</b>	<b>10.1%</b>

Source: DBT Analysis of ASHE 2022. Note: Totals may not sum due to rounding; figures rounded to nearest 10,000 unless figure is less than 5,000 and then is rounded to nearest 1,000.

## Small and Micro Business Assessment (SaMBA)

### Impact on small, micro and medium sized businesses

177.Recent guidance from the Better Regulation Executive states that ‘Departments should now consider the case for exemption of medium-sized businesses in addition to that for SMBs via the completion of an IA’. As a result the discussion in our SaMBA has been extended in this year’s IA to cover the impact on medium-sized businesses.

178.Table 9 contains our estimates of projected coverage for NMW/NLW in April 2023 and our central estimate of the total costs, broken down by business size.

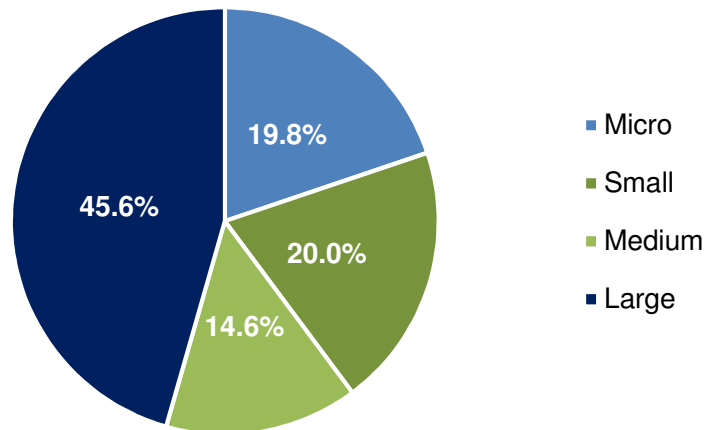
Table 9: Coverage of NMW/NLW workers and costs by business size

Rate	Micro		Small		Medium		Large	
	Coverage	Total Cost	Coverage	Total Cost	Coverage	Total Cost	Coverage	Total Cost
NLW (23+)	490k	£420m	470k	£430m	370k	£360m	1.2m	£1,090m
Main (21 - 22)	40k	£40m	40k	£30m	30k	£20m	90k	£60m
Others	60k	£30m	70k	£30m	30k	£10m	50k	£20m
<b>Total</b>	<b>580k</b>	<b>£480m</b>	<b>590k</b>	<b>£490m</b>	<b>430k</b>	<b>£390m</b>	<b>1.3m</b>	<b>£1,170m</b>

Source: DBT Analysis of ASHE 2022. Note: Coverage and cost estimates by business size may not match total costs and coverage exactly due to rounding and sampling error when data is disaggregated



Figure 6: Proportion of total costs by business size



179. We expect around 40% of the costs of this policy to be borne by small and micro businesses and 15% by medium sized businesses (see Figure 6). According to ASHE 2022, 24% of workers are employed in small and micro businesses. A further 15% are employed in medium businesses. Therefore, relative to the UK average proportion of small and micro businesses, the burden is expected to fall more on small and micro businesses compared to larger firms.

### **The reasons against exempting small, micro and medium businesses**

180. There are both equity and economic reasons why small, micro and medium businesses are not exempt from the NMW/NLW. Firstly, an exemption would undermine the objectives of the policy because a significant proportion of NMW/NLW workers work in small, micro and medium businesses and so an exemption would significantly undermine the ability of the minimum wage to address the possibility of employers exploiting the vulnerability of certain workers to pay them unacceptably low wages and undercut their competitors. Moreover, the cost imposed on small, micro, and medium businesses is equal to the benefits that the workers receive. Consequently, exempting these firms would mean a significant proportion of the expected benefits from this proposal would not be realised.

181. There are also economic reasons against an exemption. Exempting small, micro and medium businesses would enable them to avoid the increase in labour costs associated with raising the wages of the lowest paid. This would create economic inefficiencies through several effects. Firstly, it would create a distortion in the market by distorting cost-competitiveness at the expense of large businesses, which would undermine competition. Secondly, it would create a disincentive for businesses to grow – if they were to expand sufficiently to be classified as a large sized business, they would be obliged to raise wages for all their employees to meet the NMW/NLW rates, thereby introducing a significant cost of expansion at the threshold between small and medium sized businesses.

182. The annual NMW/NLW increases are fully embedded in the UK labour market with rate changes being made for over 20 years. The majority of employers are aware of the increasing minimum wage, in particular the NLW, with good knowledge among businesses that the rates had changed in April (the Government communication campaigns suggest that over 90% of employers were aware of the NLW). Given the success of previous communications campaigns, there will be employer targeted communications activity and guidance to ensure small and micro businesses are aware of the NMW/NLW

changes. Moreover, rates are announced before the legislation has gone through Parliament to maximise adjustment time for businesses. This year, rates were announced at the Autumn Budget, over 5 months before the rates come into effect. This, combined with the communications campaigns, will seek to mitigate the burden placed on small and micro businesses.

183. The Government has more recently announced further measures to support small businesses in the Autumn budget. On business rates, retail, hospitality, and leisure (RHL) business rates relief will be increased from 50 per cent to 75 per cent (up to £110,000 per business) in 2023-24. Around 230,000 RHL properties will be eligible to receive this increased support worth £2.1 billion. Bill increases for the smallest businesses losing eligibility or seeing reductions in Small Business Rate Relief or Rural Rate Relief (RRR) will be capped at £600 per year from 1 April 2023. This is support worth over £500 million over the next 3 years and will protect over 80,000 small businesses who are losing some or all eligibility for relief. This means no small business losing eligibility for SBRR or RRR will see a bill increase of more than £50 per month in 2023-24.<sup>84</sup>

#### **Box 2: Case study of a medium sized employer<sup>85</sup>**

A social care charity employs 433 staff supporting children and young people, partially through the provision of residential care. The charity pays the then statutory minimum rate of £8.72 for some of its staff, including cleaners, cooks, housekeepers and some retail workers in charity shops.

One impact of the NLW is to squeeze differentials between staff. As the Deputy CEO explains: “it has meant that we have had to increase other rates to keep manager rates suitably distanced from the assistants.” This also demonstrates how increasing the NLW results in ‘spill-over’ effects for workers earning above the statutory minimum.

The Deputy CEO explained that the charity agrees with the NLW as a policy, but the financial pressure created by lockdown restrictions made adhering to the policy more difficult: “We want to continue to keep our staff pay competitive and we do value the principle of the NLW but the reality is if the NLW goes up by another 5 or 6% next April that is going to put us under intense pressure.” Out of a consideration of the pressures on businesses during lockdown, the LPC recommended a relatively modest increase in the NLW in April 2021.

The NLW also has the effect of forcing organisations to raise productivity. As the Deputy CEO puts it: “Because of the NLW I guess we are looking to add value into roles. There was an admin grade role which we are effectively gradually fading out because we are trying to enhance the roles and pay accordingly.”

Like many other organisations, the charity does not operate age-related pay for its main workforce. As the Deputy CEO explains “We tend to think that if someone is doing a job then they get paid the rate for the job and that pay should not be related to age.” The fact that many employers do not make use of the age rates was instrumental in the LPC’s decision to expand NLW eligibility to 23-24 year olds from April 2021.

<sup>84</sup> Autumn Statement 2022:

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1118417/CCS1022065440-001\\_SECURE\\_HMT\\_Autumn\\_Statement\\_November\\_2022\\_Web\\_accessible\\_1.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1118417/CCS1022065440-001_SECURE_HMT_Autumn_Statement_November_2022_Web_accessible_1.pdf)

<sup>85</sup>[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/942440/IDR\\_Study\\_of\\_impact\\_of\\_future\\_targets\\_for\\_the\\_NLW\\_FINAL\\_8\\_Dec\\_20.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/942440/IDR_Study_of_impact_of_future_targets_for_the_NLW_FINAL_8_Dec_20.pdf)

# Specific Impact Tests

## Equalities impact and Family Test

184. Section 149 of the Equality Act 2010 requires DBT to have due regard to promoting equality of opportunity, eliminating discrimination and fostering good relations between groups. The impact of the NLW and NMW increases on equalities considerations is considered in full in Annex E. In summary, the evidence suggests that there will be disproportionate positive wage impacts on protected groups as a result of the proposed increase in NMW/NLW, and we have found no evidence of significant negative impacts.

185. Some research suggests the NLW may have reduced employment for women, especially amongst those working part-time. However, the evidence is not yet conclusive and where negative employment effects are found, they have been small and have done little to halt the long-run trend of more women entering work. Overall employment rates continued to grow faster for women than for men after the introduction of the NLW<sup>86</sup>.

186. In commissioned research, McKnight (2022)<sup>87</sup> found that the introduction of the NLW did not lead to negative effects on employment retention for employees with disabilities or for disabled employees reporting at least one functional impairment. She also found no statistically significant negative effects on employment retention for BAME employees overall. However, she did find that the introduction of the NLW may have led to a small reduction in employment retention among Indian men<sup>88</sup>.

## International trade

187. In line with Better Regulation Framework guidance, we have assessed the potential for the NMW/NLW increases to have an impact on international trade.

188. This year, as with previous years, the LPC have noted that the most common response to the rise in the NMW/NLW rates is to increase prices. It is plausible that price rises could have a negative impact on the UK's competitiveness, particularly if the rises are significant in the UK's export intensive industries relative to competitors.

189. The majority of economic discussion surrounding the impact of a minimum wage floor and its impact on international trade centres around the costs of the factors of production. Economic theory suggests the introduction or raising of a minimum wage floor has the effect of unevenly increasing production costs, with more labour-intensive industries feeling more pressure than skilled and capital-intensive industries. The long-term effect is to encourage specialisation in the production of skilled labour and capital-intensive exports at the expense of low-skilled labour-intensive exports. This is explored in Brecher (1974) and expanded by Schweinberger (1978) and Neary (1985).

190. Government research has shown that the UK's highly skilled labour force and sophisticated technology are major sources of the UK's competitive advantage. Economic theory may then suggest that a minimum wage for a country such as the UK could further the specialisation in skills and capital-intensive exports without undermining overall export competitiveness. However, noting the limited empirical evidence and that macro effects such as trading terms, exchange rate, UK productivity are likely to have more

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<sup>86</sup> The National Living Wage Review (2015-2020), LPC, page 40:

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1076517/NLW\\_review.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1076517/NLW_review.pdf)

<sup>87</sup> McKnight, Abigail. 2022. The impact of the NMW/NLW on employment retention and wage progression by ethnicity, disability and gender. Research report for the Low Pay Commission. Centre for Analysis of Social Exclusion, London School of Economics.

<sup>88</sup> The National Living Wage Review (2015-2020), LPC, page 44:

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1076517/NLW\\_review.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1076517/NLW_review.pdf)

substantive impacts on international trade, we believe it is proportionate to assess that the NMW/NLW will have a negligible impact on international trade.

## Implementation

191. The changes to the NMW and NLW regulations will be made through secondary legislation and will come into force on 1<sup>st</sup> April 2023.

## Monitoring and evaluation

192. The remit for the LPC will continue to include the requirement to monitor, evaluate and review the levels of the different minimum wage rates. Historically, the LPC's report has included extensive discussion of the impacts of the NMW rates on a range of considerations, and this year's report builds upon the evidence base on the impact of the introduction of the NLW. In making future recommendations for NMW rate increases, the LPC will carry out extensive monitoring and evaluation of the current rates.

193. The Government has pledged for the NLW to reach two-thirds of median earnings by 2024, provided economic conditions allow. There is an additional target for the NLW age eligibility to be lowered to 21 by 2024. Further details on this and the consequent monitoring and evaluation steps for the LPC will be provided in the LPC's remit for 2023/2024.

## Annex A: Further modelling results

Table 10: Total labour costs in the central-cost estimate: £2,525m

	Year 1			Year 2			Year 3			Year 4		
	Wage and Non-wage Impacts (£m)			Wage and Non-wage Impacts (£m)			Wage and Non-wage Impacts (£m)			Wage and Non-wage Impacts (£m)		
	Wage Costs	Non-wage Labour Costs	Total	Wage Costs	Non-wage Labour Costs	Total	Wage Costs	Non-wage Labour Costs	Total	Wage Costs	Non-wage Labour Costs	Total
NLW (23+)	£1,214.60	£217.41	£1,432.02	£547.32	£97.97	£645.28	£189.62	£33.94	£223.56	£0.00	£0.00	£0.00
Main (21 - 22)	£77.61	£13.89	£91.50	£30.11	£5.39	£35.49	£12.12	£2.17	£14.29	£1.05	£0.19	£1.24
Development (18 - 20)	£29.60	£5.30	£34.90	£11.88	£2.13	£14.01	£3.79	£0.68	£4.47	£0.00	£0.00	£0.00
Youth (16 - 17)	£4.50	£0.81	£5.30	£1.83	£0.33	£2.16	£0.60	£0.11	£0.70	£0.00	£0.00	£0.00
Apprentice	£11.46	£2.05	£13.51	£4.37	£0.78	£5.16	£1.47	£0.26	£1.73	£0.00	£0.00	£0.00
Total	£1,337.77	£239.46	£1,577.23	£595.51	£106.60	£702.11	£207.59	£37.16	£244.75	£1.05	£0.19	£1.24

Table 11: Indirect labour costs in the central-cost estimate: £1,094

	Year 1			Year 2			Year 3			Year 4		
	Wage and Non-wage Impacts (£m)			Wage and Non-wage Impacts (£m)			Wage and Non-wage Impacts (£m)			Wage and Non-wage Impacts (£m)		
	Wage Costs	Non-wage Labour Costs	Total	Wage Costs	Non-wage Labour Costs	Total	Wage Costs	Non-wage Labour Costs	Total	Wage Costs	Non-wage Labour Costs	Total
NLW (23+)	£416.56	£74.56	£491.12	£348.78	£62.43	£411.21	£129.32	£23.15	£152.47	£0.00	£0.00	£0.00
Main (21 - 22)	£2.03	£0.36	£2.39	£5.50	£0.98	£6.48	£4.18	£0.75	£4.92	£0.43	£0.08	£0.50
Development (18 - 20)	£5.60	£1.00	£6.60	£6.55	£1.17	£7.72	£2.62	£0.47	£3.09	£0.00	£0.00	£0.00
Youth (16 - 17)	£0.93	£0.17	£1.10	£1.07	£0.19	£1.26	£0.44	£0.08	£0.52	£0.00	£0.00	£0.00
Apprentice	£1.26	£0.23	£1.48	£1.92	£0.34	£2.27	£0.88	£0.16	£1.04	£0.00	£0.00	£0.00
Total	£426.37	£76.32	£502.70	£363.81	£65.12	£428.93	£137.44	£24.60	£162.04	£0.43	£0.08	£0.50

**Table 12: Direct labour costs in the central-cost estimate: £1,431M**

	Year 1			Year 2			Year 3			Year 4		
	Wage and Non-wage Impacts (£m)			Wage and Non-wage Impacts (£m)			Wage and Non-wage Impacts (£m)			Wage and Non-wage Impacts (£m)		
	Wage Costs	Non-wage Labour Costs	Total	Wage Costs	Non-wage Labour Costs	Total	Wage Costs	Non-wage Labour Costs	Total	Wage Costs	Non-wage Labour Costs	Total
NLW (23+)	£798.04	£142.85	£940.89	£198.54	£35.54	£234.08	£60.30	£10.79	£71.09	£0.00	£0.00	£0.00
Main (21 - 22)	£75.57	£13.53	£89.10	£24.61	£4.41	£29.02	£7.94	£1.42	£9.36	£0.63	£0.11	£0.74
Development (18 - 20)	£24.01	£4.30	£28.30	£5.33	£0.95	£6.29	£1.17	£0.21	£1.38	£0.00	£0.00	£0.00
Youth (16 - 17)	£3.57	£0.64	£4.21	£0.77	£0.14	£0.90	£0.15	£0.03	£0.18	£0.00	£0.00	£0.00
Apprentice	£10.20	£1.83	£12.03	£2.45	£0.44	£2.89	£0.59	£0.11	£0.69	£0.00	£0.00	£0.00
<b>Total</b>	<b>£911.40</b>	<b>£163.14</b>	<b>£1,074.54</b>	<b>£231.70</b>	<b>£41.47</b>	<b>£273.17</b>	<b>£70.16</b>	<b>£12.56</b>	<b>£82.71</b>	<b>£0.63</b>	<b>£0.11</b>	<b>£0.74</b>

**Table 13: Total labour costs in the low-cost estimate £1,297M**

	Year 1			Year 2			Year 3			Year 4		
	Wage and Non-wage Impacts (£m)			Wage and Non-wage Impacts (£m)			Wage and Non-wage Impacts (£m)			Wage and Non-wage Impacts (£m)		
	Wage Costs	Non-wage Labour Costs	Total	Wage Costs	Non-wage Labour Costs	Total	Wage Costs	Non-wage Labour Costs	Total	Wage Costs	Non-wage Labour Costs	Total
NLW (23+)	£884.83	£158.38	£1,043.21	£125.74	£22.51	£148.25	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Main (21 - 22)	£48.32	£8.65	£56.97	£7.66	£1.37	£9.03	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Development (18 - 20)	£19.32	£3.46	£22.78	£2.35	£0.42	£2.78	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Youth (16 - 17)	£3.00	£0.54	£3.54	£0.36	£0.06	£0.42	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Apprentice	£7.51	£1.34	£8.85	£0.92	£0.16	£1.08	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
<b>Total</b>	<b>£962.98</b>	<b>£172.37</b>	<b>£1,135.36</b>	<b>£137.03</b>	<b>£24.53</b>	<b>£161.56</b>	<b>£0.00</b>	<b>£0.00</b>	<b>£0.00</b>	<b>£0.00</b>	<b>£0.00</b>	<b>£0.00</b>

**Table 14: Direct labour costs in the low-cost estimate: £637M**

	Year 1			Year 2			Year 3			Year 4		
	Wage and Non-wage Impacts (£m)			Wage and Non-wage Impacts (£m)			Wage and Non-wage Impacts (£m)			Wage and Non-wage Impacts (£m)		
	Wage Costs	Non-wage Labour Costs	Total	Wage Costs	Non-wage Labour Costs	Total	Wage Costs	Non-wage Labour Costs	Total	Wage Costs	Non-wage Labour Costs	Total
NLW (23+)	£432.88	£77.48	£510.36	£38.87	£6.96	£45.83	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Main (21 - 22)	£43.91	£7.86	£51.77	£4.91	£0.88	£5.79	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Development (18 - 20)	£11.71	£2.10	£13.81	£0.54	£0.10	£0.63	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Youth (16 - 17)	£1.69	£0.30	£2.00	£0.06	£0.01	£0.07	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Apprentice	£5.32	£0.95	£6.27	£0.32	£0.06	£0.38	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
<b>Total</b>	<b>£495.51</b>	<b>£88.70</b>	<b>£584.21</b>	<b>£44.69</b>	<b>£8.00</b>	<b>£52.69</b>	<b>£0.00</b>	<b>£0.00</b>	<b>£0.00</b>	<b>£0.00</b>	<b>£0.00</b>	<b>£0.00</b>

**Table 15: Indirect labour costs in the low-cost estimate: £660M**

	Year 1			Year 2			Year 3			Year 4		
	Wage and Non-wage Impacts (£m)			Wage and Non-wage Impacts (£m)			Wage and Non-wage Impacts (£m)			Wage and Non-wage Impacts (£m)		
	Wage Costs	Non-wage Labour Costs	Total	Wage Costs	Non-wage Labour Costs	Total	Wage Costs	Non-wage Labour Costs	Total	Wage Costs	Non-wage Labour Costs	Total
NLW (23+)	£451.95	£80.90	£532.85	£86.87	£15.55	£102.42	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Main (21 - 22)	£4.41	£0.79	£5.20	£2.75	£0.49	£3.24	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Development (18 - 20)	£7.60	£1.36	£8.97	£1.82	£0.33	£2.14	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Youth (16 - 17)	£1.31	£0.23	£1.54	£0.30	£0.05	£0.36	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
Apprentice	£2.19	£0.39	£2.58	£0.60	£0.11	£0.71	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
<b>Total</b>	<b>£467.47</b>	<b>£83.68</b>	<b>£551.15</b>	<b>£92.34</b>	<b>£16.53</b>	<b>£108.87</b>	<b>£0.00</b>	<b>£0.00</b>	<b>£0.00</b>	<b>£0.00</b>	<b>£0.00</b>	<b>£0.00</b>

**Table 16: Total labour costs in the high-cost estimate: £4.592M**

	Year 1			Year 2			Year 3			Year 4		
	Wage and Non-wage Impacts (£m)			Wage and Non-wage Impacts (£m)			Wage and Non-wage Impacts (£m)			Wage and Non-wage Impacts (£m)		
	Wage Costs	Non-wage Labour Costs	Total	Wage Costs	Non-wage Labour Costs	Total	Wage Costs	Non-wage Labour Costs	Total	Wage Costs	Non-wage Labour Costs	Total
NLW (23+)	£1,880.08	£336.53	£2,216.61	£1,016.70	£181.99	£1,198.69	£448.19	£80.23	£528.42	£168.94	£30.24	£199.18
Main (21 - 22)	£132.52	£23.72	£156.24	£67.98	£12.17	£80.15	£30.01	£5.37	£35.38	£13.53	£2.42	£15.95
Development (18 - 20)	£49.55	£8.87	£58.42	£25.55	£4.57	£30.12	£10.20	£1.83	£12.03	£3.88	£0.69	£4.57
Youth (16 - 17)	£7.44	£1.33	£8.77	£3.98	£0.71	£4.69	£1.61	£0.29	£1.90	£0.64	£0.11	£0.75
Apprentice	£18.67	£3.34	£22.01	£10.13	£1.81	£11.94	£3.84	£0.69	£4.52	£1.50	£0.27	£1.77
<b>Total</b>	<b>£2,088.26</b>	<b>£373.80</b>	<b>£2,462.06</b>	<b>£1,124.34</b>	<b>£201.26</b>	<b>£1,325.59</b>	<b>£493.85</b>	<b>£88.40</b>	<b>£582.25</b>	<b>£188.48</b>	<b>£33.74</b>	<b>£222.22</b>

**Table 17: Direct labour costs in the high-cost estimate: £3,295M**

Average Earnings	Year 1			Year 2			Year 3			Year 4		
	Wage and Non-wage Impacts (£m)			Wage and Non-wage Impacts (£m)			Wage and Non-wage Impacts (£m)			Wage and Non-wage Impacts (£m)		
	Wage Costs	Non-wage Labour Costs	Total	Wage Costs	Non-wage Labour Costs	Total	Wage Costs	Non-wage Labour Costs	Total	Wage Costs	Non-wage Labour Costs	Total
NLW (23+)	£1,542.30	£276.07	£1,818.37	£668.74	£119.70	£788.44	£181.00	£32.40	£213.40	£53.74	£9.62	£63.35
Main (21 - 22)	£132.48	£23.71	£156.19	£66.03	£11.82	£77.84	£26.53	£4.75	£31.28	£9.40	£1.68	£11.08
Development (18 - 20)	£44.82	£8.02	£52.84	£20.92	£3.74	£24.66	£5.60	£1.00	£6.61	£1.61	£0.29	£1.89
Youth (16 - 17)	£6.85	£1.23	£8.08	£3.15	£0.56	£3.71	£0.86	£0.15	£1.02	£0.25	£0.04	£0.29
Apprentice	£17.86	£3.20	£21.06	£8.98	£1.61	£10.59	£2.60	£0.46	£3.06	£0.73	£0.13	£0.86
<b>Total</b>	<b>£1,744.31</b>	<b>£312.23</b>	<b>£2,056.54</b>	<b>£767.81</b>	<b>£137.44</b>	<b>£905.25</b>	<b>£216.59</b>	<b>£38.77</b>	<b>£255.36</b>	<b>£65.72</b>	<b>£11.76</b>	<b>£77.48</b>



**Table 18: Indirect labour costs in the high-cost estimate: £1.297M**

Average Earnings	Year 1			Year 2			Year 3			Year 4		
	Wage and Non-wage Impacts (£m)			Wage and Non-wage Impacts (£m)			Wage and Non-wage Impacts (£m)			Wage and Non-wage Impacts (£m)		
	Wage Costs	Non-wage Labour Costs	Total	Wage Costs	Non-wage Labour Costs	Total	Wage Costs	Non-wage Labour Costs	Total	Wage Costs	Non-wage Labour Costs	Total
NLW (23+)	£337.78	£60.46	£398.24	£347.96	£62.29	£410.25	£267.19	£47.83	£315.02	£115.20	£20.62	£135.82
Main (21 - 22)	£0.04	£0.01	£0.05	£1.95	£0.35	£2.30	£3.48	£0.62	£4.10	£4.13	£0.74	£4.87
Development (18 - 20)	£4.74	£0.85	£5.58	£4.63	£0.83	£5.46	£4.60	£0.82	£5.42	£2.27	£0.41	£2.68
Youth (16 - 17)	£0.59	£0.11	£0.69	£0.83	£0.15	£0.97	£0.75	£0.13	£0.88	£0.39	£0.07	£0.46
Apprentice	£0.81	£0.14	£0.95	£1.15	£0.21	£1.35	£1.24	£0.22	£1.46	£0.77	£0.14	£0.91
<b>Total</b>	<b>£343.95</b>	<b>£61.57</b>	<b>£405.52</b>	<b>£356.52</b>	<b>£63.82</b>	<b>£420.34</b>	<b>£277.26</b>	<b>£49.63</b>	<b>£326.89</b>	<b>£122.77</b>	<b>£21.97</b>	<b>£144.74</b>

## Annex B: Literature Review

194. In 2019, Professor Arindrajit Dube published a Government-commissioned report on the international evidence base on the impact of minimum wage regulation on employment and wages. The report reviewed more than 50 empirical studies on the impacts of minimum wages and found that there is little evidence that minimum wage increases reduce overall employment to a significant extent. This annex summarises some of the recent studies commissioned by the LPC since the Dube review, as well as studies produced by academia.

195. While some conclusions vary from study to study, the vast majority find negligible impacts on employment and hours worked. However, concerns about pay differentials were uncovered, suggesting that the feasibility of spillover effects increasing seem unlikely.

### **Georgiadis & Manning (2020)**

196. This study uses the UK's Monthly Wages and Salaries Survey high-frequency monthly data to investigate the impact of national minimum wage changes on wages and employment.

197. The study provides that a rise in the NMW leads to a rise in average earnings as well as providing evidence of spillovers effects. The impact of the NMW on employment was also found to be indistinguishable from zero. Investigation of the timing of the impact suggests that most of the effect is contemporaneous with changes in the minimum wage, though these estimates are less precise.

### **Butcher & Dickens (2020)**

198. This study took a difference-in-difference approach to estimate the effect of the minimum wage on employment by comparing outcomes across different sections of the UK labour market, divided up by age, gender and geography, to compare the employment outcomes of those affected by a change in minimum wages. This study relied on ASHE for hourly earnings and LFS data to define employment outcomes of the groups.

199. The study found that increases in the NLW had a significantly positive impact on median earnings. The study found no significant negative impacts on employment or on hours worked from NLW increases, nor were any significant impacts found with respect to self-employment or zero-hour contracts. The study did find that NLW increases boosted labour market participation by reducing economic inactivity, but without increasing unemployment.

### **Wilson & Bailey (2020)**

200. Frontier Economics researchers Wilson and Bailey used a difference-in-difference approach drawing on a combination of data from ASHE and the Business Structure Database. Firms are either assigned to 'treatment' and 'control' groups depending on the extent to which they were exposed to the minimum wage, and according to the proportion of labour costs as part of total costs. Firms that pay below the incoming minimum wage are assigned to the treatment group, allowing researchers to compare the effect of minimum wage increases against the control group of firms.

201. The study found that firms in the treatment group experienced 2-3% lower employment growth, after controlling for firm and worker characteristics using regression analysis. The effects are concentrated in the retail and food-service sectors and in smaller workplaces. With regards to the impact of NLW increases on consumer prices of exposed goods, the authors found that inflation is higher in months when the NMW is uplifted, but only a small effect on prices relative to the size of a minimum wage

increase where a 10% increase in the minimum wage would be expected to increase prices by 0.2% to 1.1%.

### **Clark and Nolan (2021)**

202. This paper decomposes the ethnic pay gap in Great Britain across the distribution of hourly wages, yielding a detailed insight into differences between groups and how these vary over pay percentiles and through time.

203. While some groups experience reductions in the pay gap consistent with lower discrimination, including relatively well-paid Indian workers and relatively poorly paid Bangladeshis, others - specifically Black groups - face an apparent glass ceiling barring access to well paid jobs. The introduction and uprating of the National Minimum/Living Wage has contributed to improvements at the lower end of pay differentials, narrowing the ethnic wage gap slightly.

### **Latimer (2022)**

203. Latimer from the Low Pay Commission uses Gross Value Added data, ONS productivity data and wage data from ASHE, stratified by region and industry, to estimate the effect of the introduction of the NLW on productivity among areas with high versus low coverage using a difference-in-difference approach. The study found no evidence that the introduction of the NLW had a significant effect on productivity at the industry-region level but results showed a wide range of effects, with the 95 percent confidence interval showing a 1 percentage point increase in coverage in an industry-region could increase productivity by 0.1% or reduce it by 0.22%.

## Annex C: Previous cost estimates from minimum wage upratings

204. This Impact Assessment once more appraises the impact of uprating the National Minimum Wage rates and amending the NMW Act 1998 (via secondary legislation). As set out in paragraphs 3 and 4 of this document, this IA considers the impact of moving away from the current legally binding minimum wage rate.

205. The table below summarises the costs to business that each of our Impact Assessments have estimated over the course of the past six years since the introduction of the National Living Wage, in the form of the EANDCB.

206. Alongside this, we present the appraisal period of each annual cost figure and the methodology used in those respective IAs. Following the feedback, we have received both from the RPC and the wider academic community, we have continuously refined the methodology used to estimate business impacts. This does mean that the EANDCBs listed below may not be comparable year-on-year.

207. It should also be noted that the uprating in the NMW/NLW was previously exempt from the Business Impact Target prior to 2019. Subsequently BIT scores have not been provided for the years preceding 2019.

Table 19: Previous cost estimates from minimum wage uprating's and the methodology used (2017-2022)

Year	EANDCB	Business Impact Target	Appraisal Period	Methodology
2017	£131.6m	Not in scope	2 years	Counterfactual wage growth is taken as a midpoint of the inflation rate and average earnings. Spillovers taper down by the 25 <sup>th</sup> percentile, in line with the OBR methodology.
2018	£76.6m	Not in scope	3 years	After taking on board NIESR's research, the counterfactual wage growth is obtained by taking historic wage growth at the first point in the wage distribution which is not affected by the minimum wage. With the help of independent forecasts, we judge where the UK lies on the business cycle to inform over what period we should consider when taking that historic wage growth. The wage growth is the same across all groups. We use NIESR's estimate of spillovers to stop by the 20 <sup>th</sup> percentile.

Year	EANDCB	Business Impact Target	Appraisal Period	Methodology
2019	£151.8m	£303.6m	2 years	The counterfactual wage growth is obtained by taking historic wage growth at the first point in the wage distribution which is not affected by the minimum wage. With the help of independent forecasts, we judge where the UK lies on the business cycle to inform over what period we should consider when taking that historic wage growth. The wage growth is the same across all groups. We estimate spillovers to end by the 20 <sup>th</sup> percentile, which is consistent with the LPC.
2020	£205.6m	£616.7m	3 years	The counterfactual wage growth is obtained by taking historic wage growth at the first point in the wage distribution which is not affected by the minimum wage. With the help of independent forecasts, we judge where the UK lies on the business cycle to inform over what period we should consider when taking that historic wage growth. The wage growth is the same across all groups. We use the LPC's estimate for spillovers to end by the 30 <sup>th</sup> percentile.
2021	£217.9m	£438.5m	2 years	The counterfactual wage growth is obtained by taking historic wage growth at the first point in the wage distribution which is not affected by the minimum wage. With the help of independent forecasts, we judge where the UK lies on the business cycle to inform over what period we should consider when taking that historic wage growth. The wage growth is the same across all groups. In light of challenging economic circumstances, we estimate for spillovers to end by the 25 <sup>th</sup> percentile.
2022	£257.1m	£771.3m	3 years	The counterfactual wage growth is obtained from the median OBR growth forecast. This is considered the best estimate of wage growth due to the unprecedented circumstances caused by the pandemic. The wage growth is the same across all groups. In light of challenging economic circumstances, we estimate for spillovers to end by the 25 <sup>th</sup> percentile.

Year	EANDCB	Business Impact Target	Appraisal Period	Methodology
2023	£373.5M	£1232.2m	4 years	This year's IA utilises the median wage growth forecast from a range of independent forecasters for its counterfactual. Similar to 2022, the forecast of a continued tight labour market combined with slowing and declining economic growth mean it is not feasible to find and utilise a comparable time period.

Note: In 2017, BEIS commissioned NIESR to research the most appropriate counterfactual for us to employ in this and future impact assessments. The methodology therefore changed significantly in the 2018 IA and has remained consistent since.

## Annex D: Public/Private/Voluntary sector cost breakdown

208. This annex breaks down our central estimate of costs by public, private and voluntary sectors. We have done this by estimating the proportion of public, private and voluntary sector workers who are projected to be affected by each of the rates in April 2023, using ASHE 2022, and then applied these proportions to the total costs estimated previously in the impact assessment.

209. When calculating the EANDCB we combine the private and voluntary sectors. The proportion of workers who we expect to be affected in these sectors for the NLW is 91%, whilst for the 21-22, 18-20, 16-17 and Apprentices NMW rates the proportions are 95%, 99%, 100% and 92% respectively. Please note that these values are presented in constant prices, with figures rounded to the nearest million.

Table 20: Public sector cost breakdown (£m)

	Direct		Indirect		Total
	Wage Cost	Non-Wage Labour Costs	Wage Costs	Non-Wage Labour Costs	
NLW (23+)	£100	£18	£85	£15	£219
Main (21 - 22)	£5	£1	£1	£0	£7
Development (18 - 20)	£0	£0	£0	£0	£1
Youth (16 - 17)	£0	£0	£0	£0	£0
Apprentice	£1	£0	£0	£0	£2
<b>Total</b>	<b>£107</b>	<b>£19</b>	<b>£86</b>	<b>£15</b>	<b>£228</b>

Table 21: Private sector cost breakdown (£m)

	Direct		Indirect		Total
	Wage Cost	Non-Wage Labour Costs	Wage Costs	Non-Wage Labour Costs	
NLW (23+)	£870	£156	£737	£132	£1,894
Main (21 - 22)	£96	£17	£11	£2	£126
Development (18 - 20)	£29	£5	£14	£3	£51
Youth (16 - 17)	£4	£1	£2	£0	£8
Apprentice	£12	£2	£4	£1	£18
<b>Total</b>	<b>£1,011</b>	<b>£181</b>	<b>£767</b>	<b>£137</b>	<b>£2,096</b>

Table 22: Voluntary sector cost breakdown (£m)

	Direct		Indirect		Total
	Wage Cost	Non-Wage Labour Costs	Wage Costs	Non-Wage Labour Costs	
NLW (23+)	£86	£15	£73	£13	£188
Main (21 - 22)	£7	£1	£1	£0	£10
Development (18 - 20)	£1	£0	£1	£0	£2
Youth (16 - 17)	£0	£0	£0	£0	£0
Apprentice	£0	£0	£0	£0	£1
<b>Total</b>	<b>£96</b>	<b>£17</b>	<b>£75</b>	<b>£13</b>	<b>£201</b>

## Annex E: Specific Impact tests

### Equality Analysis

210. Under the Equality Act 2010 the Department for Business, Energy and Industrial Strategy, as a public authority, is legally obligated to have due regard to equality issues when making policy decisions. Specifically, the Public Sector Equality Duty (PSED) sets out:

- Eliminate unlawful discrimination, harassment and victimisation and other conduct prohibited by the Act;
- Advance equality of opportunity between people who share a protected characteristic and those who do not; and
- Foster good relations between people who share a protected characteristic and those who do not.

211. The protected characteristics consist of nine groups: age, race, gender, disability, religion or belief, sexual orientation, gender reassignment, pregnancy and maternity, marriage, and civil partnership. This Equality Analysis considers the potential equality impacts of the National Minimum Wage and National Living Wage uprating.

212. The increase in the NMW and NLW have universal coverage for workers aged 16 and over working in all sectors and regions of the United Kingdom. The policy aims to protect workers and all employers are legally obliged to pay at least the statutory minimum hourly rate.

### Estimating pay rates by personal characteristics

213. Our statistical information is sourced from Annual Survey of Hours and Earnings (ASHE) and Labour Force Survey (LFS) data published by Office for National Statistics (ONS). There are two key challenges when analysing the effects of the rate increases on protected groups in the labour market.

- Firstly, ASHE does not include data that enables us to analyse earnings by ethnicity, religion, disability status, marital status, sexual orientation, gender reassignment pregnancy and maternity.
- Secondly as set out previously in this IA, pay variables in LFS are less robust than ASHE.

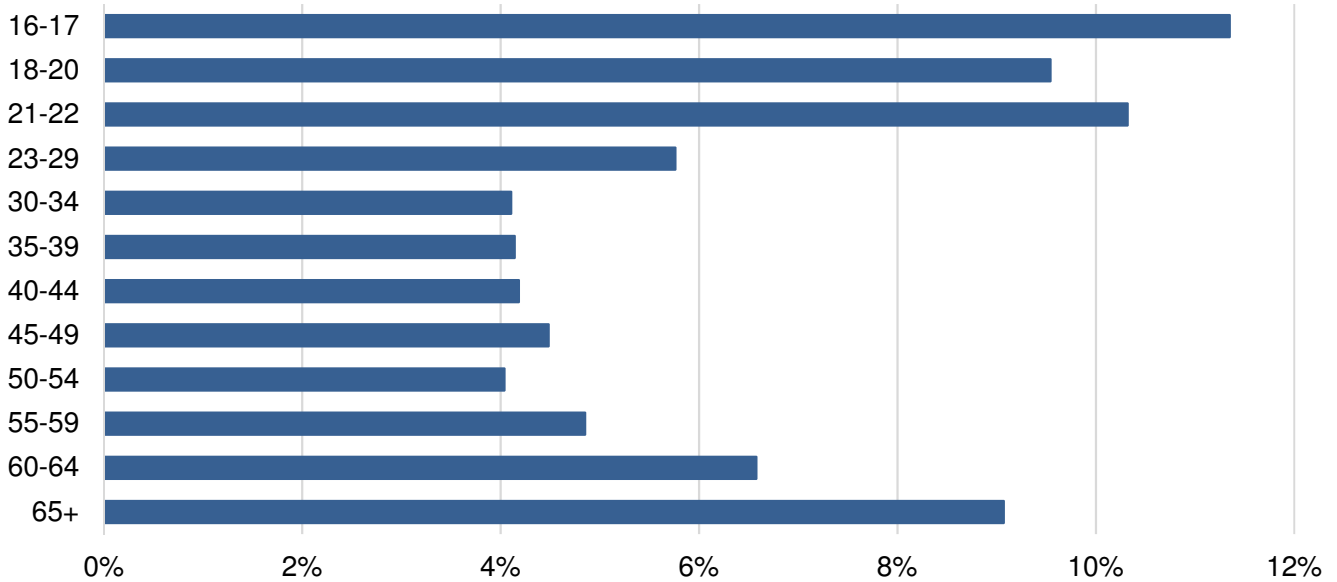
214. The Labour Force Survey does, however, provide information relating to ethnicity, nationality and disability status and earnings. Using an imputation method to boost responses, the ONS can more accurately report earnings data by personal characteristics. We have replicated their findings for the latest quarter of available data and present the findings below.

### Age

215. Figure 7 shows estimated coverage of different age groups by the NMW/NLW in April 2022. The coverage rate is highest for the youngest workers, with the section aged 16-22 having a particularly high coverage rate averaging 10%. The age group with the second highest level of coverage is the 65+ cohort with a coverage rate of 9% followed closely by the 60-64 year-old cohort at 7%. The group with the lowest share of workers covered by the NLW is the 50-54 cohort, at 4% coverage.

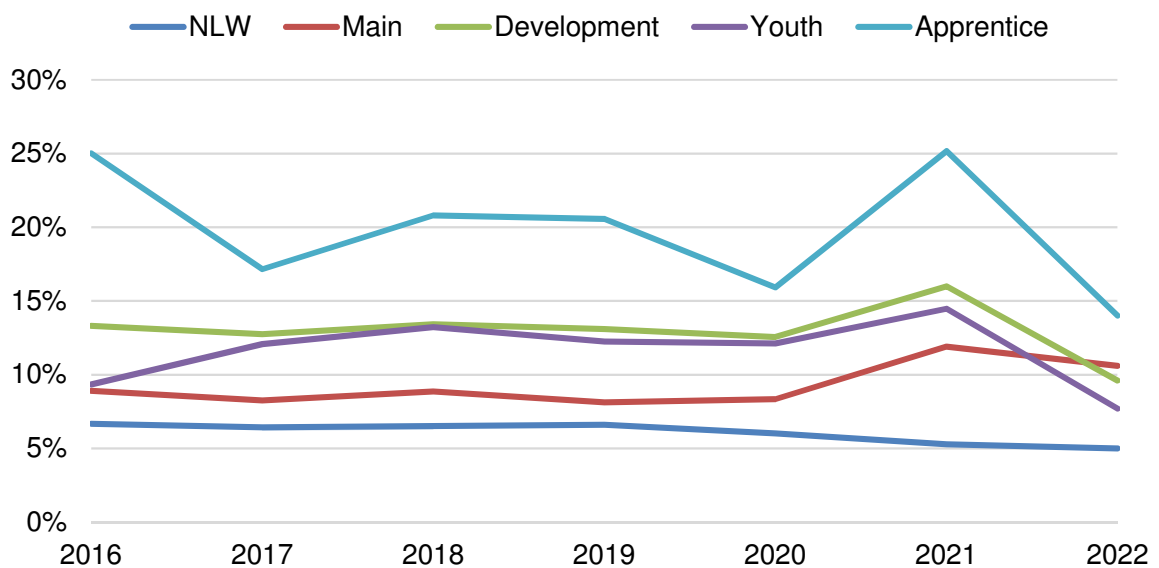
Figure 7: NLW/NMW coverage by age group, ASHE 2022





216. Figure 8 shows NMW/NLW coverage by age bands over the past 6 years. Coverage for the apprentice rate has decreased by 11 percentage points between 2021 and 2022, though note that this group generally has volatile coverage levels. Coverage for the NLW and main rate has remained relatively constant, whereas the youth and development rates have seen drops of 6 percentage points. This is likely due to changes in the composition of the labour market and strong wage growth in low paying sectors, particularly for young workers. Note also that in April 2021 the NLW age eligibility dropped from 25+ to 23+.

Figure 8: NMW/NLW coverage by age group, ASHE 2016-2022



217. The youth labour market is much more sensitive to economic shocks and young people can be exposed to longer-term scarring effects from prolonged spells of worklessness. They also face a comparative disadvantage when entering the labour market due to a lack of work experience and less knowledge. As raised in the LPC Youth Rates report, ‘young people enter the labour market with relatively limited experience and few skills, and so have lower productivity while they learn the job. In addition, employers may need to provide additional training for young workers, incurring further cost.

218. The LPC 2022 report outlines that employment levels for younger workers have increased in the last couple of years, with HMRC Real-Time Information (RTI) data reporting 88,000 more pay rolled

employees aged under 18 in September 2022 than in September 2019. The youngest groups of workers, particularly those aged 16 and 17, have seen the strongest growth in employment, pay and hours worked, as the tight labour market has increasingly led employers to rely on young workers and offer higher pay to attract them. However, young people remain vulnerable as worsening economic conditions may drive down demand for labour.

219. Any minimum wage structure needs to recognise the lower productivity and higher training costs of less experienced workers. Failure to do so could mean that some employers are unwilling to give young people those critical first opportunities. Consequently, the Government asks the LPC to recommend separate NMW rates by age band (16-17, 18–20-year-olds, and 21–22-year-olds) to protect the employment prospects of younger workers and enable them to take that valuable first step into work.

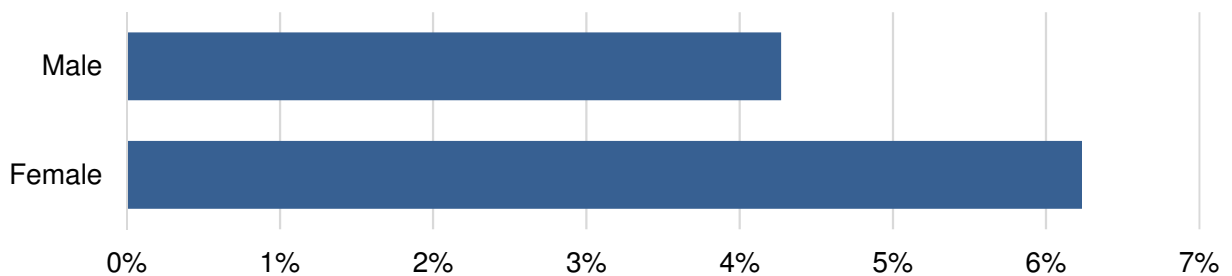
220. A CPB Discussion Paper (2021)<sup>1</sup> examines the impact of the 2017 increase in the Dutch youth minimum wage on labour market outcomes for low-paid young workers. Key findings are a rise in workers' average wage by 4%, without adverse effects on employment or hours worked, and spillover effects accounting for 75% of the total wage increase for younger workers.

221. In summary, it is the youngest and the eldest workers who are more likely to be in a minimum wage job. This means that the increases to the NLW/NMW rates will disproportionately benefit these groups.

## Gender

222. Figure 9 shows how NMW coverage rates vary by gender in the year 2022. Female workers continue to be disproportionately more likely to be on the NLW/NMW, with a coverage rate of 6%. The coverage rate for male workers is slightly lower, at 4%. Of those covered by the NLW/NMW rates in the population, 59% are female and 41% are male.

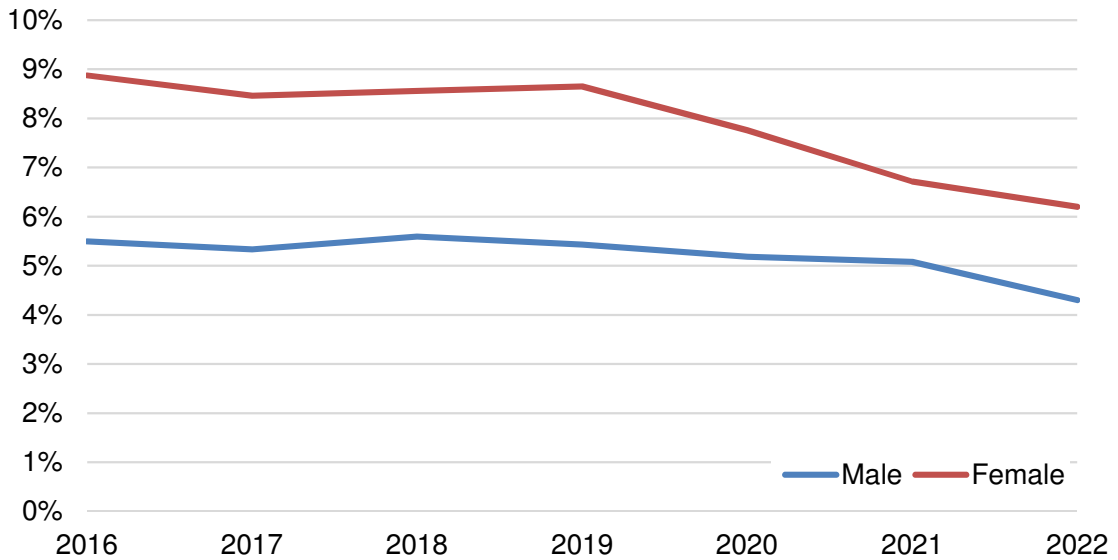
Figure 9: NLW/NMW coverage by gender, ASHE 2022



223. Figure 10 shows that, over time, NMW/NLW coverage for males has remained relatively steady with no changes higher than 1 percentage points. This was also the case for females until 2019, since then the coverage percentage has fallen slightly by 3 percentage points.

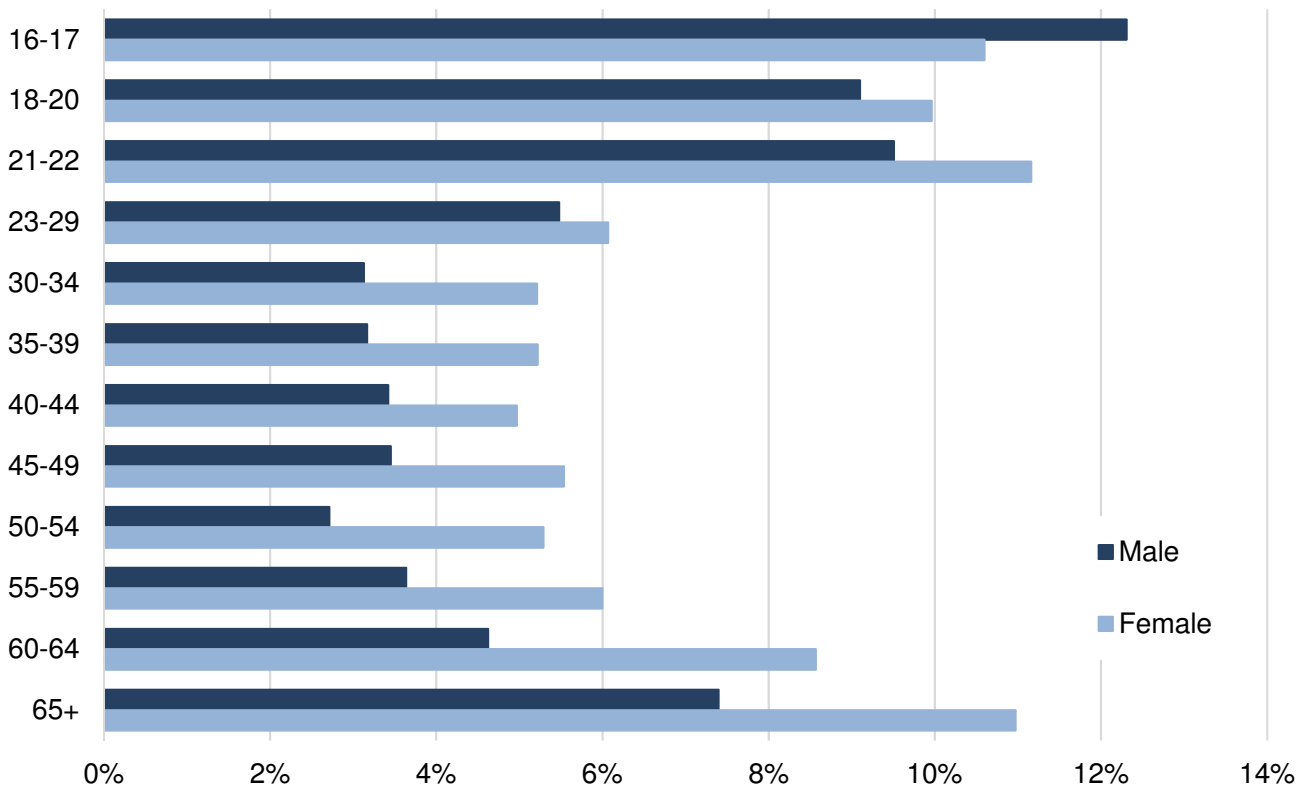
Figure 10: NMW/NLW coverage by gender, ASHE 2016-2022

<sup>1</sup> The Young Bunch: Youth Minimum Wage and Labour Market Outcomes, CPB Discussion Paper, April 2021



224. Figure 11 breaks down NLW/NMW coverage by the sex and age of respondents in the ASHE dataset. The 60-64 and 65+ cohorts see the largest variance in NLW/NMW coverage by gender (3.9 and 3.6 percentage points higher among women for both age bands). The gender gap in coverage falls to 0.6% for the 23-29 age cohort and then rises in the 18-20 age cohort to 0.9%.

Figure 11: NLW/NMW coverage by age and gender, ASHE 2022



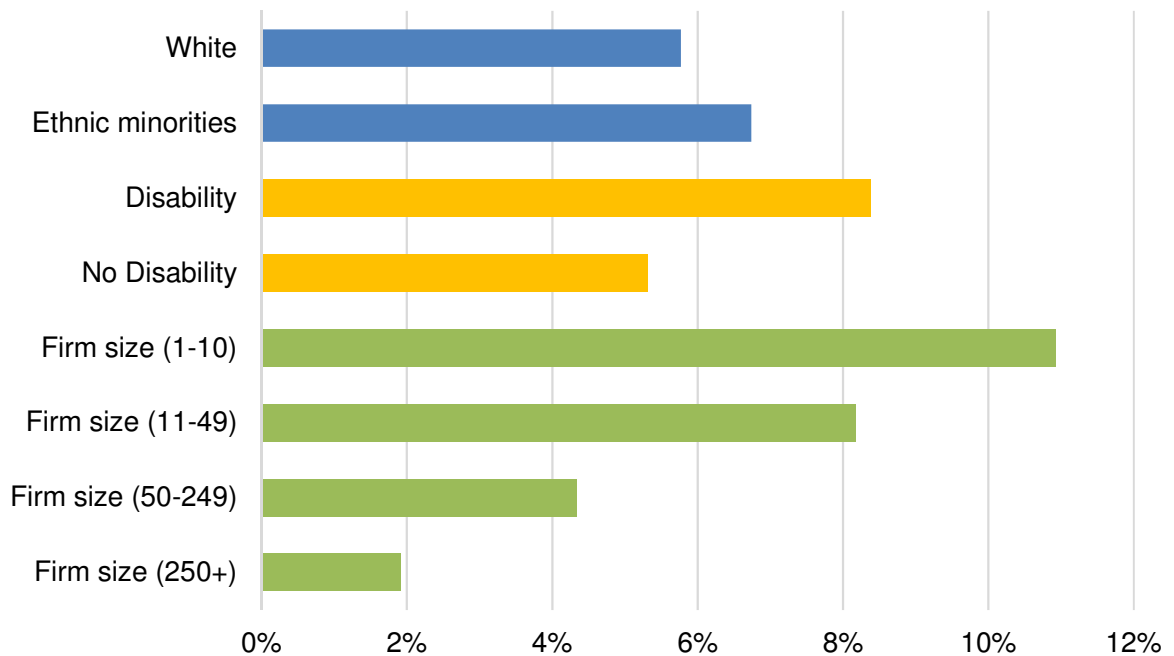
225. The higher rate of coverage among women indicates that they would benefit disproportionately from future increases in the NMW/NLW. We have also found no evidence that increases in the NMW/NLW rates cause gendered impacts on employment, with employment rates increasing for women by 2.9 percentage points between Q1 2016 and Q3 2022.

226. Econometric studies have previously found that there is weak evidence that the introduction of the NLW did have small negative impacts on part-time women and their employment prospects (Capuano et al. 2019). However, the literature is not fully conclusive, with findings for 2018 then showing no negative retention effects by any group of employees considered. Other studies (Dickens and Lind, 2018) suggest negative impacts on part-time women were not seen in 2016 but were in 2017, and Dickens and Lind suggest that those who would have been in employment without the higher minimum wage are economically inactive instead. Capuano et al. also found a positive employment retention effect on, private sector, part-time women in 2018. While this paints a somewhat complex picture, we will continue to liaise with the LPC and academics to monitor whether any adverse impacts are observed on part-time women as a result of the latest uprating.

**Disability**

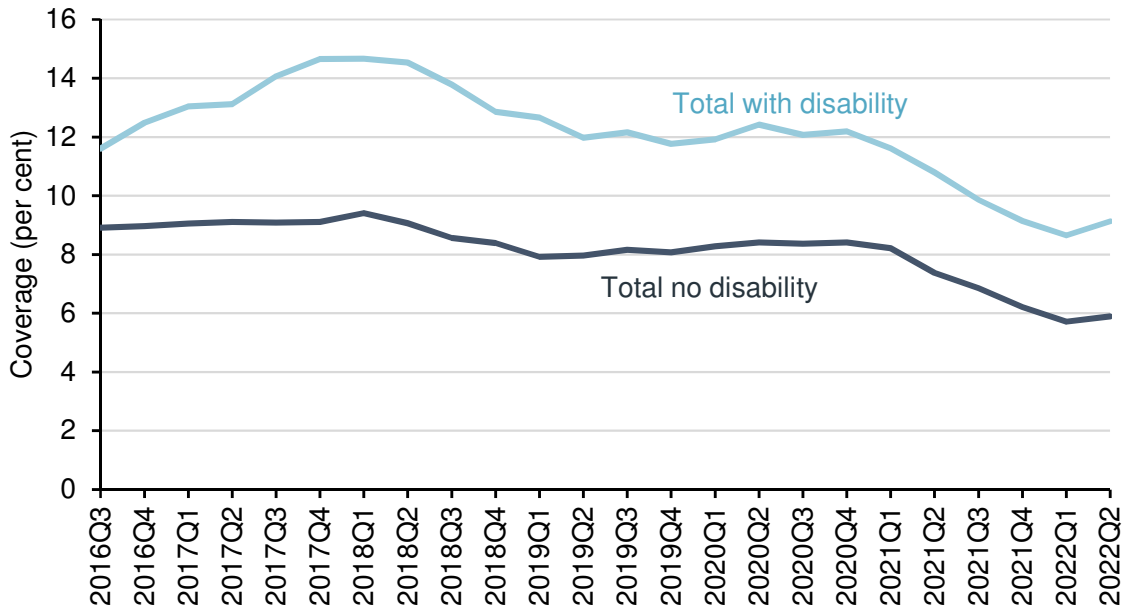
227. Data from the Labour Force Survey shows that employees who have a disability have an NMW/NLW coverage rate 3 percentage points higher than employees without a disability. This is represented in Figure 12.

Figure 12: NLW coverage for workers, aged 23 and over, by worker characteristic and workplace size, Labour Force Survey Q2 2021 - Q1 2022



228. There again remains no evidence that increases in the NMW/NLW reduces employment disproportionality for disabled people. Between Q1 2021 and Q1 2022, following a significant rise in the NLW, the employment rate for disabled workers increased by 1.7 percentage points, while employment rates for non-disabled employees increased by 1.1 percentage points over the same period. However, note that this followed a pandemic-related fall in employment, so current these increases represent the rebound to pre-pandemic levels in line with headline rises in employment levels.

Figure 13: NLW coverage for disabled workers, between 2016 and 2022, LPC analysis of LFS

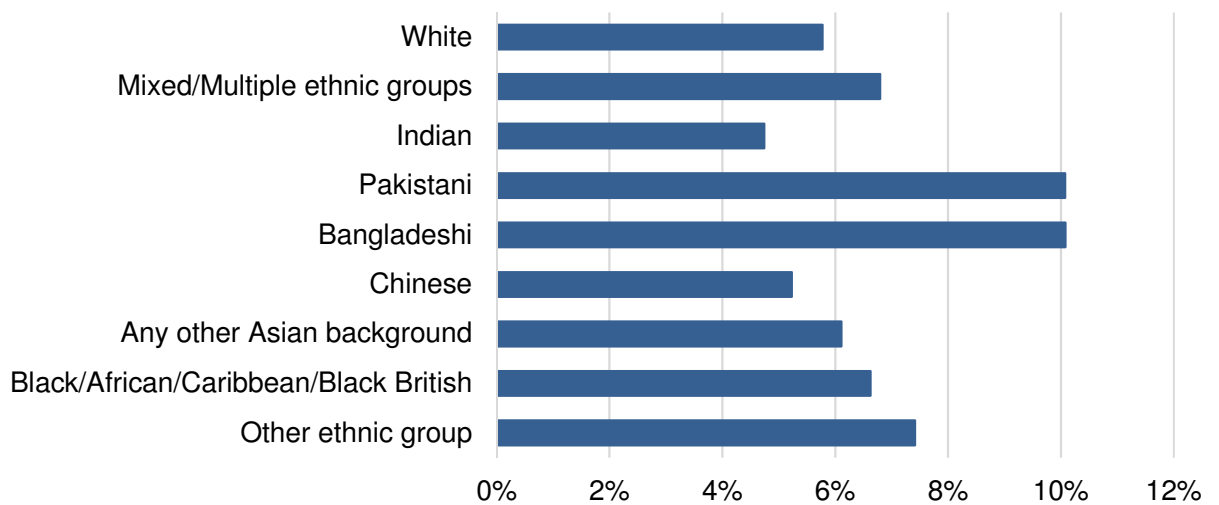


229. Figure 13 shows that NLW coverage over time has increased and decreased proportionality for all disabled and non-disabled workers. As this trend does not demonstrate any disproportionate impacts for disabled workers, we believe there are unlikely to have been large adverse effects of last year’s increases on individuals with disabilities. If the proposed NMW/NLW rate increases are implemented, there are likely to be disproportionate positive impacts felt among employees with a disability.

**Ethnicity**

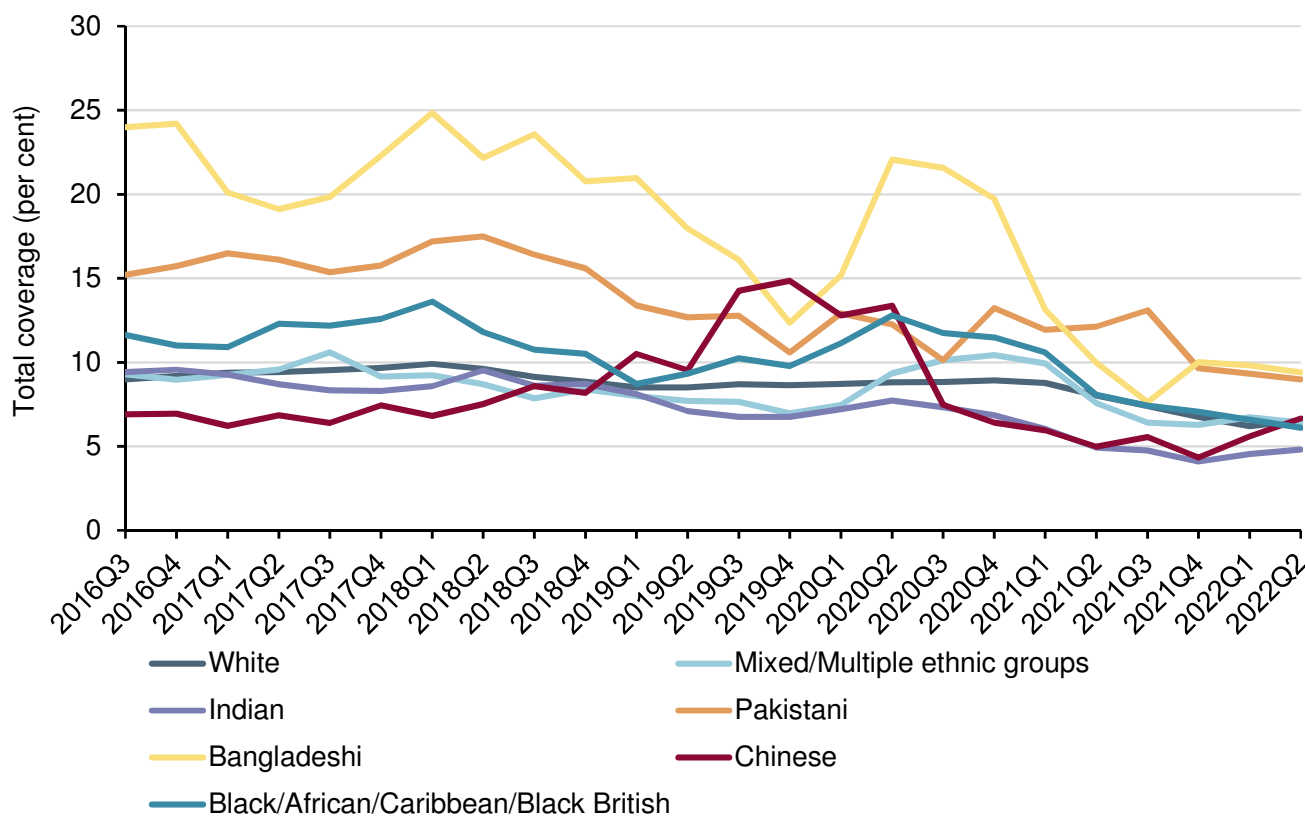
230. The coverage rate for ethnic minorities is 6.7%, 0.9 percentage points higher than the coverage rate for white workers as seen in Figure 14. This relatively small difference hides a more diverse picture. When looking at individual ethnic groups, there is greater variation in coverage with some markedly higher, such as Pakistani and Bangladeshi (both 10.1%), and some lower, such as Chinese (5.2%), than white workers.

Figure 14: NLW coverage for workers, aged 23 and over, by ethnicity, Labour Force Survey Q2 2021 - Q1 2022



231. Figure 15 shows that coverage by ethnicity has fluctuated heavily for some ethnic minorities over the past several years. NLW coverage has drastically reduced for Pakistani and Bangladeshi workers since 2018, reaching approximately 10% from peaks of 18% and 25% respectively. Meanwhile, coverage rates for most other ethnic groups, including white workers, has remained relatively steady since 2016. Chinese workers saw a small peak to 15% briefly in 2019/20, but their coverage has remained consistent aside from this.

Figure 15: NLW/NMW coverage by ethnicity, between 2016 and 2022, LPC analysis of LFS



232. There is no evidence to suggest that the NLW rise in 2022 had any adverse effect on the employment prospects of ethnic minority workers. However, due to their higher rates of NLW coverage it is likely that they would experience disproportionate benefits from further rises in the NLW.

233. Clark and Nolan (2021)<sup>2</sup> finds that while some groups experience reductions in the pay gap consistent with lower discrimination, including relatively well-paid Indian workers and relatively poorly paid Bangladeshis, others - specifically Black groups - face an apparent glass ceiling barring access to well paid jobs. The increasing educational attainment of Britain’s ethnic groups provides some optimism around narrowing pay differentials, particularly at the top of the distribution, while the introduction and uprating of the National Minimum/Living Wage has contributed to improvements at the lower end.

**Characteristics not covered by LFS**

234. We do not have a comparable way to evaluate the NMW/NLW coverage for some protected characteristics, such as marriage, pregnancy, and religion, as they are not covered within the LFS or recent literature. Nevertheless, we do not expect the uplift to have a disproportionate negative impact on these groups. The NMW applies to all workers regardless of their characteristics with no evidenced impact on employment, and strong evidence showing a positive impact for workers in low-paid jobs.

<sup>2</sup> Clark, K., and S. Nolan (2021). The changing distribution of the male ethnic wage gap in Great Britain, IZA Discussion Paper No. 14276.

## Summary

235. In summary, the evidence suggests that there will be disproportionate positive wage impacts on some protected groups as a result of the proposed increase in NMW/NLW – including the youngest, and eldest workers, women, ethnic minorities. At the same time, we have found little evidence of the potential for any negative impacts. Evidence of weak negative impacts on part-time women due to the introduction of the NLW in 2016 do not seem to have materialised in subsequent upratings.

### Advancing the equality of opportunity

236. The Public Sector Equality Duty (PSED) requires the Department to have due regard to the need to advance equality of opportunity between people who share a protected characteristic and those who do not.

237. The NMW and NLW policy is designed to have a positive impact on all workers in low paid sectors regardless of their personal characteristics. While those under the age of 23 may be impacted by being covered by a lower minimum wage rate, this is balanced by (i) protecting the employment prospects of younger workers given their tougher labour market conditions and the importance of gaining skills and experience; and (ii) possibly improving the attractiveness of younger workers for employers.

### Eliminating discrimination and other prohibited conduct

238. The PSED requires DBT to have due regard to the need to eliminate unlawful discrimination, harassment and victimisation and other conduct prohibited by the Act. The design of the NMW reflects provisions in the Act which allow the minimum wage rates to vary depending on age up to age 23. Some firms do not use pay structures based on age-related rates, negating risks of increased discriminatory recruitment policies.

### Fostering good relations

239. The PSED requires DBT to have due regard to the need to foster good relations between people who share a protected characteristic and those who do not. The NMW/NLW has national coverage, paid to all workers of any social characteristic. This should retain the diversity in the workforce, from skills to ethnicity to social background. Workplace relations should remain positive with workers benefiting from a higher wage floor.

### Family test

240. We consider the increase in the NMW/NLW rates will provide a net benefit to families, by making work pay. This policy results in a transfer from employers to employees, increasing the wage of the lowest paid.

241. Statistics produced by the ONS (2021) suggest that employment has grown more quickly for single parents and hence the effect of the proposed increases in the NMW/NLW rates is therefore likely to have a disproportionately positive effect on this group. We therefore believe that this policy will have a positive impact on families coping with couple separation.<sup>3</sup>

242. Additionally, analysis conducted by Brewer and De Agostini (2017) showed that forecast increases in the NMW and the NLW by 2020-21 would increase net real incomes of minimum wage families by, on average, about 1.5 per cent.<sup>31</sup>

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<sup>3</sup> <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/families/bulletins/familiesandhouseholds/2020>

243. Finally, the LPC have previously provided some analysis in Chapter 10 of their 2022 report, highlighting how a couple household, with two children and only one working parent in a full-time NLW job, would see their net weekly income rise by £45.49 or 9.3%. This is a greater than increase in income for a single worker (7.3%), in part due to the Government's decision to uprate benefits by 10.1% next year. For this household the benefit rise partially offsets the increase in taxes paid on their higher wages. This means their income increases nearly as fast as their wages next year, which is different from the period (2015-2020), where NLW households on benefits often saw much smaller increases in household incomes than wages. We therefore believe that this policy could have a positive impact on family members' ability to play a full role in family life, as well as positively affecting families going through key transitions such as becoming parents.