The impact of communication campaigns on diversity data disclosure: A randomised controlled trial

Evaluation protocol

Evaluator (institution): Behavioural Insights Team

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Table 1: Project overview

PROJECT TITLE	The impact of communication campaigns on diversity data disclosure: A randomised controlled trial
PARTNER (INSTITUTION)	Kier Group plc
EVALUATOR (INSTITUTION)	Behavioural Insights Team
PRINCIPAL INVESTIGATOR(S)	Shoshana Davidson, Laure Bokobza
PROTOCOL AUTHORS	Hannah Chappell, Shoshana Davidson, Tim Hardy, Reny Kiryakova, Miller Piggott, Nilufer Rahim, Jelka Stojanov, Giulia Tagliaferri
EVALUATION DESIGN	Randomised controlled trial, two arms, employee-level randomisation

EVALUATION SETTING	Kier Group plc's internal email communications in July 2026
TARGET GROUP	Kier employees (aged 16-24, aged 25 and over)
PRIMARY OUTCOME	Number of in-scope characteristics disclosed by young Kier employees (aged 16-24) in a Microsoft (MS) Form created by Kier , one month after the start of the campaigns. This outcome uses the "core" definition of disclosure (i.e. excluding 'prefer not to say' responses).
SECONDARY OUTCOME	Number of in-scope characteristics disclosed by Kier employees aged 25 and over in a MS Form created by Kier , one month after the start of the campaigns (core definition)
EXPLORATORY OUTCOMES	The following will be analysed for employees aged 16-24 and 25 and over separately: 1. Number of in-scope characteristics disclosed by Kier employees in Kier's MS Forms one month after the start of the campaigns (core definition) 2. Whether employee disclosed all in-scope characteristics one month after the start of the campaigns (core definition) 3. Whether employee disclosed (1) neurodivergence status, (2) disability status (3) social mobility or

(4) ethnicity, one month after the start of the campaigns (core definition)

   a. Whether employee disclosed disadvantaged group status for each of these characteristics

   b. Whether employee disclosed non-disadvantaged group status for each of these characteristics

4. Number of in-scope characteristics disclosed one month after the start of the campaigns. This outcome uses the "expanded" definition of disclosure (i.e. including 'prefer not to say' responses).

5. Whether employee disclosed all in-scope diversity characteristics one month after the start of the campaigns (expanded definition)

The following will be analysed for employees aged 25+ only:

1. Number of in-scope characteristics disclosed one month after the start of the campaigns (core definition), moderated by employee tenure.

Table 2: Evaluation plan version history

VERSION	DATE	REASON FOR REVISION	AUTHORS
1.0 [ORIGINAL]	30 June 2026		Hannah Chappell, Shoshana Davidson, Tim Hardy, Reny Kiryakova, Miller Piggott, Nilufer Rahim, Jelka Stojanov, Giulia Tagliaferri, Laure Bokobza

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1. Study rationale and background

England's NEET rate has remained stubbornly high for a decade, even as employers face persistent skills shortages. Identifying how employers can most effectively support diverse young people into good work is a strategic opportunity to strengthen the workforce and secure future talent.

As part of its What Works for Recruitment and Retention programme, Youth Futures Foundation is partnering with a small group of employers and organisations to test promising, practical interventions that aim to improve outcomes for young people. The goal is to build a strong evidence base that helps employers nationwide adopt approaches that are both effective and equitable. Kier Group plc ("Kier") is one of the employers participating in this programme.

Kier is a large UK infrastructure services and construction company employing over 10,000 people across the country, including several hundred young people in early career roles. As with many employers, it faces gaps in its understanding of the diversity characteristics of its workforce. Having reliable data on employees' diversity characteristics enables employers to identify where disparities exist, assess whether policies are having their intended effects and design organisational changes that better support employees, including those at earlier stages of their careers. However, where disclosure rates are low or uneven across characteristics, employers have limited visibility of who may be underserved or facing barriers, making it harder to target improvements and monitor progress for young people and the wider workforce.

YFF has partnered with Kier to evaluate whether introducing communication campaigns aimed at Kier employees can increase disclosure of diversity characteristics (such as disability status, ethnicity, gender identity, transgender status, social mobility and other personal characteristics). In this project, two communication campaigns are being compared. They share a common purpose and core design features. Specifically, both campaigns take an email format and aim to bring clarity and purpose to Kier's request for diversity characteristics, addressing two key barriers identified among Kier

employees through the preceding feasibility study: lack of understanding of the purpose and benefits of disclosure, and difficulty navigating the disclosure process. To address these barriers, both campaigns explain the positive impact of disclosure and include a direct hyperlink to the Microsoft (MS) Form that Kier is using to collect employees' diversity characteristics . Both are followed by reminder emails sent at regular intervals and set out the same deadline for responding.

However, the two campaigns differ in several respects. Specifically, the standard campaign reflects common practice among employers: a longer, more compliance-oriented email with an organisational focus on why diversity characteristics are needed. It includes:

- More formal, passive language
- FAQ-style content addressing anticipated concerns
- Organisational-level benefits to collecting diversity characteristics
- A general organisational messenger

The behaviourally enhanced campaign conveys the same core message but applies behavioural insights to make it shorter, clearer and more personal. It includes:

- Plainer, jargon-free English with warmer 'you/your' language
- Employee-facing benefits of disclosure
- A time estimate ("It only takes three minutes")
- An action-oriented call to action (e.g. an "Update your diversity information" button)
- More personalised language - using the employee's first name and coming from a recognised individual
- A dynamic social norm - that a growing number of employees are choosing to share their information
- A named, recognisable senior leader to reinforce credibility and trust

All these components are discussed in more detail in Section 2 of this trial protocol.

Youth Futures commissioned the Behavioural Insights Team ("BIT") to assess whether a Randomised Controlled Trial ("RCT" or "trial") comparing these two

interventions could feasibly be run within Kier. The feasibility study confirmed that it could, and this protocol sets out the agreed trial design.[1] Analysis and reporting associated with this trial will be completed by the end of October 2026.

The trial will comprise three components: an impact evaluation, an implementation and process evaluation (IPE) and an economic evaluation. The **impact evaluation** will take the form of a two-arm RCT in which eligible employees are randomised to receive either a behaviourally enhanced communication campaign, or a standard communication campaign (for more detail, see Section 2 of this trial protocol). Randomisation will be stratified by historical disclosure in Kier's HR system[2] and age group. The primary outcome will assess whether the behaviourally enhanced campaign increases the number of in-scope characteristics disclosed by employees aged 16-24 compared to the standard campaign, with employees aged 25+ forming the secondary analytical group. Alongside this, an **IPE** will use mixed methods to examine fidelity to the intended design, understand how the campaigns are delivered in practice, and capture the experiences of employees receiving the intervention and staff involved in delivery. Finally, an **economic evaluation** will estimate and compare the costs of delivering the two communication campaigns within Kier, estimate the cost for another employer to deliver comparable communication campaigns, and assess cost-effectiveness by producing metrics such as the cost per employee and the cost per unit change in disclosure, with costs based on staff time and other implementation resource data.

[1] A feasibility study was initially conducted for a three-arm trial, which would have included a pure control group receiving no communications. Due to operational barriers, the feasibility study was subsequently revisited for an alternative, two-arm design in which all employees receive a communication. This trial protocol reflects that finalised design.

[2] Kier has historically collected employees' diversity characteristics through its HR system. For the purposes of this trial, the data is being collected via MS Forms instead, and the communication campaigns explain this switch to employees and ask them to submit their information again even if they have previously provided it in Kier's HR system. Historical disclosure recorded in Kier's HR system is used here as a stratification variable for randomisation.

2. Interventions

The two interventions to be implemented within Kier are described below, following the Template for Intervention Description and Replication (TIDieR) checklist. The finalised and signed-off intervention materials can be found in Appendix 1.

Intervention name

This trial compares two diversity disclosure communication campaigns. Both are email-based campaigns asking Kier employees to disclose their diversity characteristics; the two trial arms are referred to throughout as:

1. **The standard arm:** a longer, information-heavy campaign with an organisational focus, reflecting common practice among employers.[3]
2. **The behaviourally enhanced arm:** a shorter, higher-salience campaign which uses behaviourally enhanced messaging and has a more individual focus. A campaign with these characteristics is less commonly used by employers.

Why: Rationale and theory

As noted in the "Study rationale and background" section, improving disclosure of diversity characteristics matters because it directly affects an organisation's ability to understand its workforce composition, identify inequities, and design effective policies and support systems. Improving data coverage relies not only on employers collecting and storing data, but on employees voluntarily sharing it, which is both a behavioural and a procedural challenge.

Evidence from other organisations shows that behaviourally informed communication campaigns can substantially improve disclosure of diversity characteristics. At Arup, an engineering consultancy, a pre-post evaluation revealed that a succinct, behaviourally designed email which simplified the

[3] Chartered Institute of Personnel and Development. (2022). *Inclusion at work: Findings from the inclusion at work survey*. CIPD. https://www.cipd.org/globalassets/media/knowledge/knowledge-hub/reports/2022-pdfs/2022-inclusion-at-work-report.pdf

process of disclosure led 37% of previously non-disclosing employees to complete their disclosure form, and follow-up reminders further increased this share to 67% of the target audience.[4] This resulted in overall disclosure rising from 55% to 85%, giving Arup sufficient data to measure and track diversity and inclusion goals with confidence. This research highlights the value of addressing both practical hurdles (such as ease of taking action) and behavioural barriers (such as salience and clarity) through structured communications and follow-ups.

The feasibility study identified two main barriers to disclosure for Kier employees: limited understanding of the purpose and benefits of disclosure, and difficulty navigating the disclosure process. Email-based campaigns were chosen because they can address both barriers at scale with minimal operational burden and cost: email allows targeted, personalised messaging that explains why disclosure matters, simplifies the disclosure route through direct links, and uses trusted organisational voices to enhance credibility. Emails are also one of the most commonly used communication tools across employers, so if any email-based interventions are found to be successful at Kier, they can more easily be scaled. The trial tests two distinct email communication approaches; the behaviourally enhanced arm layers several additional features on top of the components common to both arms, all described in the "What" section below.

What: Materials and procedures

Both campaigns share a common set of components designed to address the barriers identified during the feasibility study. Across both arms, employees receive an email that explains the purpose of disclosure and makes the act of disclosing simpler. Both campaigns also use the same number and timing of reminders, make the same ask, set the same deadline, and link to the same data collection tool (i.e., MS Forms). The common components are as follows:

- **Explanation of the reason for requesting data:** Each arm explains the

[4] The Behavioural Insights Team. (2021). Improving equality, diversity and inclusion starts with good data. Available here: https://www.bi.team/blogs/improving-equality-diversity-and-inclusion-starts-with-good-data/

purpose behind collecting diversity information - how it informs internal policies, workplace culture and targeted support - in order to raise the perceived value of disclosing and help employees see the request as meaningful and worthwhile.

- **Direct hyperlink to reduce friction:** Each arm contains a direct link to the same data collection tool (i.e., MS Forms). Relative to Kier's original HR system, where employees need to navigate multiple pages before reaching the disclosure form - a single MS Forms link removes several steps and makes the act of disclosing considerably simpler . Reducing small frictions matters because even minor "hassle costs" can significantly reduce follow-through on simple tasks.[5] MS Form itself is not treated as part of the intervention. The exact diversity questions included in it can be found in Appendix 2.
    - As noted above, Kier has historically collected diversity characteristics through their HR system rather than MS Forms. Because the MS Forms route is therefore unfamiliar to employees, both arms explain that, on this occasion, the data is being collected via MS Forms, and ask employees to submit their information again even if they have previously disclosed it in Kier's original HR system - pre-empting any confusion or suspicion arising from the change in data collection method.
- **Explicit deadline:** Both arms state a clear closing date. A definitive time limit creates mild urgency, helping to counter procrastination and preventing employees from delaying the action indefinitely.[6]
- **Confidentiality assurance:** Both arms state that all submitted information is strictly confidential, handled securely and never shared with direct line managers. This mitigates perceived organisational risk and privacy concerns.
- **Reminder emails to maintain salience:** Following the initial email, two

[5] The Behavioural Insights Team (2020). EAST: Four simple ways to apply behavioural insights. Available here: https://www.bi.team/wp-content/uploads/2014/04/BIT-EAST-1.pdf

[6] O'Donoghue, T., & Rabin, M. (1999). Doing it now or later. *American Economic Review*, *89*(1), 103–124. https://doi.org/10.1257/aer.89.1.103

reminders are sent at roughly ten-day intervals, reaching employees on different working days to account for variation in working patterns. Reminders keep the request salient so that it reaches employees when they have time to act; evidence from other settings, including Arup, suggests reminders substantially increase disclosure.[7] Reminders will only go to employees who have not yet disclosed.

The behaviourally enhanced arm introduces additional components, drawing on behavioural science:

- **Visual hierarchy:** The layout is optimised to capture attention the moment the email is opened, with the call to action (the link to the form) placed at the top so employees can act immediately rather than scrolling through the message.[8]
- **Reduced length:** The behaviourally enhanced email is kept short and scannable, stripping out additional detail used in the standard arm (e.g., the supporting links and FAQ-style content) so the core message and call to action stand out. Shorter, less cluttered communications lower cognitive load and make it easier for employees to take in the request and act on it.
- **Personalisation and messenger:** Rather than a generic greeting ("Dear colleague") from a generalised messenger ("Inclusion Team"), this arm addresses employees by first name and comes from a specific, recognisable senior figure at Kier, signalling personal relevance and drawing on the authority and credibility of the messenger.[9]

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[7] Milkman, K. L., Beshears, J., Choi, J. J., Laibson, D., & Madrian, B. C. (2011). Using implementation intentions prompts to enhance influenza vaccination rates. Proceedings of the National Academy of Sciences, 108(26), 10415-10420.
Karlan, D., McConnell, M., Mullainathan, S., & Zinman, J. (2016). Getting to the top of mind: How reminders increase saving. Management Science, 62(12), 3393-3411.
The Behavioural Insights Team. (2021). Improving equality, diversity and inclusion starts with good data. Available here: https://www.bi.team/blogs/improving-equality-diversity-and-inclusion-starts-with-good-data/

[8] Kumar, A., & Salo, J. (2018). Effects of link placements in email newsletters on their click-through rate. *Journal of marketing communications*, *24*(5), 535-548.

[9] Dolan, P., Hallsworth, M., Halpern, D., King, D., Metcalfe, R., & Vlaev, I. (2012). Influencing behaviour: The MINDSPACE way. *Journal of Economic Psychology*, *33*(1), 264–277. https://doi.org/10.1016/j.joep.2011.10.009

- **Relevance framing:** The benefits of disclosure are reframed around the individual rather than the organisation. Emphasising how sharing information shapes the support and opportunities available to the employee makes the request feel personally tangible rather than transactional.[10]

- **Social norms:** This arm notes that, by completing the form, the employee is joining a growing number of colleagues choosing to share their information. Invoking a descriptive norm normalises desirable behaviour, fosters a sense of shared action, and reduces the perceived social risk of sharing personal data.[11]

- **Time expectations:** The email states that the form takes only three minutes to complete, directly addressing the anticipated administrative effort and making the task feel easier to begin.

- **Reminder differences:** Although both arms include two reminders after the initial email, each reminder follows the style of its own arm.

Who: Recipients and delivery teams

- **Recipients:** The campaigns will be sent to all eligible Kier employees, defined as those with a Kier work email address (i.e., a kier.co.uk address). For analytical purposes and to address our research objectives, the sample is divided into two groups: employees aged 16-24 (approximately 757, based on Kier's most up-to-date workforce data) and employees aged 25 and above (approximately 8,885). Half of these groups will receive the standard campaign, while the other half will receive the behaviourally enhanced campaign.

- **Delivery teams:** Two groups are involved in the delivery of email communications. First, prior to trial launch, the communications for both arms are approved by the same individuals - members of Kier's

[10] Petty, R. E., & Cacioppo, J. T. (1986). The elaboration likelihood model of persuasion. *Advances in Experimental Social Psychology*, *19*, 123–205. https://doi.org/10.1016/S0065-2601(08)60214-2

[11] Goldstein, N. J., Cialdini, R. B., & Griskevicius, V. (2008). A room with a viewpoint: Using social norms to motivate environmental conservation in hotels. *Journal of Consumer Research*, *35*(3), 472–482. https://doi.org/10.1086/586910

communications team and a senior staff member with recognised responsibility for organisational inclusion. Second, two members of Kier's HR and Emerging Talent and Inclusion (ET&I) teams handle technical implementation, distributing the emails via Kier's Power Automate tool to ensure they reach the intended recipients.

How and where

Most aspects of how and where the interventions are delivered are captured above. Each arm is delivered from the inclusion@kier.co.uk email to all eligible Kier employees. Implementation is carried out by members of the HR and ET&I teams using Power Automate. Both arms are approved by the same individuals prior to launch, but the named messenger who signs the communication differs by arm: the standard arm comes from the "Inclusion Team", while the behaviourally enhanced arm comes from a named senior individual. Emails are sent to employees within working hours and their normal work environment, through their organisational email accounts. However, it is plausible that at least some employees will notice the emails and choose to act on them outside of their working hours and environment (e.g., because they have access to their Kier email on their phones).

When and how much

The campaigns are planned for July 2026. Following the initial email, two reminders are sent at roughly ten-day intervals: the initial campaign will go out on 1 July (Wednesday), with the first reminder on 13 July (Monday) and the second on 23 July (Thursday). The full trial window, during which employees can update their diversity information as part of the trial, spans four weeks. The campaigns will be sent to 9,642 employees, resulting in a maximum of around 29,000 emails across the three contact points. However, as reminder emails will only be sent to employees who have not yet disclosed their characteristics, the final number of emails is expected to be lower. A precise delivery time within each contact point cannot be specified: given the volume of emails Kier needs to send, distribution will take at least a few hours to complete, so employees will receive their emails at slightly different times.

Tailoring and modifications

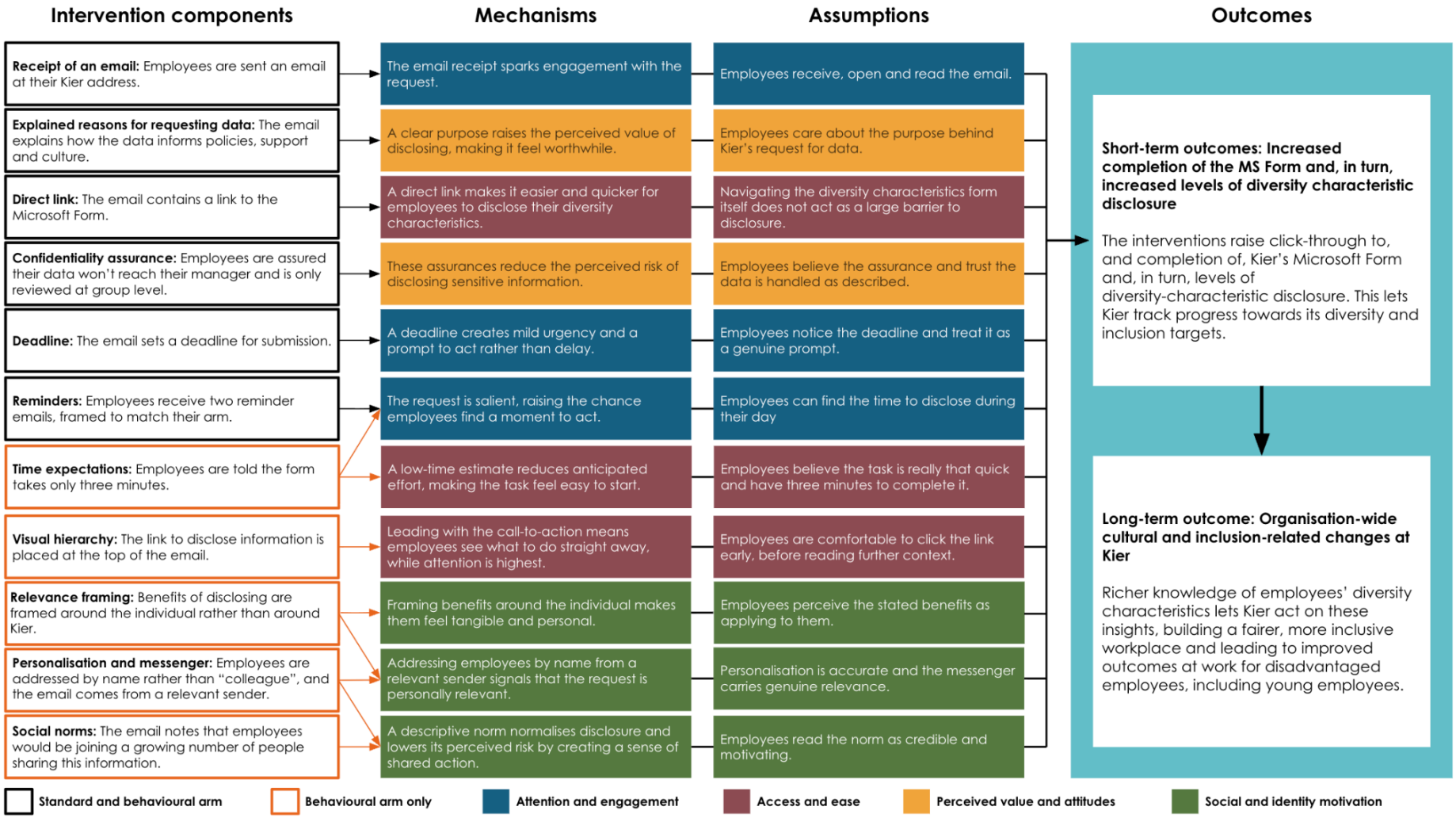
Tailoring: The campaigns involve minimal individual-level tailoring. Emails in the behaviourally enhanced arm are personalised by first name, but beyond this the content is consistent for all employees receiving the same arm. The defining characteristics of each arm, set out in the "What" section, do not vary by employee.

Modifications: No modifications are planned during the trial. Should unforeseen operational issues arise, or immediate feedback be received after the first round of communications, any necessary adjustments will be documented in line with TIDieR guidance, including what changed, when, why and how.

Theory of Change

The Theory of Change (ToC) in Figure 1 sets out how the two diversity disclosure communication campaigns are expected to lead to improved outcomes at Kier. It is organised around four behavioural mechanisms: attention and engagement, access and ease, perceived value and attitudes and social and identity motivation.

Figure 1: Theory of Change



Both arms clearly explain the reasons for requesting data, illustrating how disclosure informs Kier's policies, workplace support and inclusion culture, so that employees better understand what their information is used for. This speaks directly to key barriers identified in the feasibility study - employees not understanding the relevance of the request or how the data would be used and the difficulty in accessing, and ease of completing, the diversity characteristics form.

Mechanisms: Across both arms, the email format generates initial engagement; the MS Form link should make disclosure quicker and easier, reducing cognitive burden; and scheduled reminders maintain salience, increasing the chance that employees act when they have time. The deadline adds mild urgency, and the confidentiality assurance reduces the perceived risk of sharing sensitive information.

The behaviourally enhanced arm layers additional levers on top. Placing the call to action at the top of the email removes scrolling friction. The email uses the employee's first name to increase perceived value and a relevant, trusted messenger alongside framing the benefits of disclosure around the individual rather than organisational metrics increases the personal relevance. It uses a descriptive social norm that frames disclosure as joining a "growing movement", normalising the behaviour and easing data-sharing concerns. Finally, clear time expectations ("it only takes three minutes") support access and ease by minimising the perceived effort of disclosing.

Assumptions: These mechanisms will only operate as intended if a set of assumptions holds. Across both arms, employees must open the email, be able to navigate the MS Form, and treat the deadline as genuine. For the behaviourally enhanced arm specifically, employees must perceive the three-minute estimate as credible, interpret the individual benefits as applying to them, receive accurately implemented personalisation, and find the social norm both believable and motivating.

Outcomes: If these conditions hold, the behaviourally enhanced arm is expected to increase click-throughs to the MS Form and diversity characteristic disclosure relative to the standard arm. Over the longer term, richer and more accurate workforce data will enable Kier to build targeted

training, design tailored support systems, and address hidden structural barriers, ultimately driving improved outcomes at work for disadvantaged employees, including young employees. .

3. Impact evaluation

Research questions

The research questions use two alternative definitions of disclosure. The "core definition" of disclosure is defined as having a response listed for the in-scope characteristics, excluding "prefer not to say" responses. By restricting "disclosure" to cases where employees actively provide a response other than "prefer not to say", the main analyses will not be able to capture employees who complete the MS Form but give "prefer not to say" as their response to questions.

The "expanded" definition of disclosure includes "prefer not to say" responses and will capture individuals who complete the MS Form but select "prefer not to say" as their response to questions.

Research questions 1-4, 7 and 8 use the core definition of disclosure, while research questions 5 and 6 use the expanded definition of disclosure.

The following nine diversity characteristics will be included as in-scope: disability status, neurodiversity status, gender identity, transgender/gender reassignment, sexual orientation, ethnicity, social mobility, religion and carer status. These characteristics were selected because (1) they are of particular interest to Youth Futures and/or Kier and (2) they have historically had a disclosure rate of less than 95% among all employees (see Table 4).[12] Historical disclosure rates for disability status were coded, such that the reported percentages reflect only employees who answered "Yes" to all three questions (see Table 4).

The impact evaluation has eight research questions:

[12] The following characteristics will be collected but were excluded from analysis:

- Ex-forces status and reservist status were not identified as a priority by either YFF or Kier.
- Ethnicity historically had an extremely high disclosure rate (99% for employees aged 16-24, and 95% for employees aged 25+) and was initially deprioritised due to both high baseline disclosure and operational constraints; however, following subsequent amendments to trial design, it was determined that ethnicity will be captured in the trial.

Primary research question

- RQ1: What is the impact of the two communication campaigns on the number of in-scope diversity characteristics disclosed by Kier employees aged 16-24, compared to each other? This will use the "core" definition of disclosure.

Secondary research question

- RQ2: What is the impact of the two communication campaigns on the number of in-scope diversity characteristics disclosed by Kier employees aged 25+ (core definition), compared to each other?

Exploratory research questions

- RQ3: What impact do the two communication campaigns have on the proportion of Kier employees who disclose all in-scope diversity characteristics (core definition), compared to each other? This will be analysed separately for Kier employees aged 16-24 and 25+.
- RQ4: What is the impact of the two communication campaigns on the proportion of Kier employees who disclose the following characteristics individually: neurodivergence status, disability status, ethnicity and social mobility (core definition), compared to each other? This will be analysed separately for Kier employees aged 16-24 and 25+.
    - RQ4.1: What is the impact of the two communication campaigns on the proportion of Kier employees who disclose disadvantaged group status for each of these characteristics, compared to each other?
    - RQ4.2: What is the impact of the two communication campaigns on the proportion of Kier employees who disclose non-disadvantaged group status for each of these characteristics, compared to each other?
- RQ5: What is the impact of the two communication campaigns on the number of in-scope diversity characteristics disclosed by Kier employees, compared to each other? This will use the "expanded" definition of disclosure, where "prefer not to say" responses are

included. This will be analysed separately for Kier employees aged 16-24 and 25+.

- RQ6: What impact do the two communication campaigns have on the proportion of Kier employees who disclose all in-scope diversity characteristics (expanded definition), compared to each other? This will be analysed separately for Kier employees aged 16-24 and 25+.
- RQ7: What is the impact of the two communication campaigns on the number of in-scope diversity characteristics disclosed by Kier employees aged 25+ (core definition)?
- RQ8: To what extent does employee tenure (based on continuous length of service) moderate the impact of the enhanced communication campaign on the number of in-scope diversity characteristics disclosed by Kier employees aged 25+ (core definition), compared to the standard-arm?

Historical disclosure

Table 4 captures disclosure rates from individual-level data from Kier's HR system provided by Kier in October 2025; however, this is shared for historical context only as employees will be asked to re-disclose diversity characteristics in MS Forms, regardless of their previous disclosure status.[13]

Table 4: Historical disclosure rates for Kier employees aged 16-24 and 25+

Characteristic	Question on Kier HR system self-service	Response options (Note: all questions also have a "prefer not to say" option)	Disclosure rate for young Kier employees (aged 16-24; n =	Disclosure rate for remaining Kier employees (aged 25+; n =

[13] The diversity questions included here reflect older iterations of the questions that were sourced from Kier's HR system; see Appendix II for a full list of the diversity questions used in this trial.

			614)[14]	7,056)[15]
Gender identity	Which gender identity do you most identify with?	Female / Gender fluid / Inter-sex / Male / Non-binary / I use another term	518 (95%)	5,242 (74%)
Transgender / gender reassignment	Do you consider yourself to be transgender?	Yes / No	518 (95%)	5,229 (74%)
Sexual orientation	What term best describes your sexual orientation? If you prefer to use another term to describe your sexual orientation, please define[16]	Heterosexual/straight / Gay / Lesbian / Bisexual / I use another term Open text box for describing with another term	598 (97%)	6,306 (89%)

[14] Disclosure rates were calculated from individual-level data from Kier's online HR platform, provided by Kier in October 2025. Each disclosure rate is calculated as the number of "active" responses (i.e. excluding blank and "prefer not to say" responses) divided by 614, which is the total number of 16-24-year-old Kier employees with a valid email address who have access to Kier's HR systems' self-service.

[15] Disclosure rates were calculated the same way as above, but for those aged 25 and over, divided by 7,056.

[16] When creating an aggregate index for our primary and secondary outcomes, BIT proposes that the free-text response option would be re-coded into 1 if it is not empty, and 0

Ethnicity	What is your ethnic origin?	White - English, Welsh, Scottish, Northern Irish or British / White - Irish / White - Gypsy/Irish Traveller / White - Roma / White - Other / Asian/Asian British - Chinese / Asian/Asian British - Indian / Asian/Asian British - Pakistani / Asian/Asian British - Bangladeshi / Asian/Asian British - Other / Black/African/Caribbean / Black British - African / Black/African/Caribbean / Black British - Caribbean / Black/African/Caribbean / Black British - Other / Mixed - White and Black African / Mixed - White and Black Caribbean / Other ethnic group - Arab / Other ethnic group - Other / Mixed - White and Asian / Mixed - Other	608 (99%)	6,676 (95%)
Disability status	Do you have any physical or mental health conditions or illnesses?; Has this lasted, or is it expected to	Yes / No Yes / No	604 (98%)	6,298 (89%)

otherwise. For sexual orientation to be considered disclosed, an employee must have selected a response other than "prefer not to say", and if they selected "I use another term," the associated free-text field must not be empty.

	last, for 12 months or more; Do any of your conditions reduce your ability to carry out daily activities?	Yes / No		
Social mobility	What was the occupation of your main household earner when you were aged 14?	Clerical and intermediate e.g. secretary, office clerk, call centre agent, nursery nurse / Long-term unemployed / Middle or Junior Managers e.g. manager in retail, bank, office, restaurant, pub / Modern Professional e.g. teacher, nurse, police sergeant, software designer, artist / Other / Routine, manual and service e.g. van driver, cleaner, sewing machinist, labourer, waiter / Semi-routine manual and service e.g. postal worker, caretaker, receptionist, sales assistant / Senior managers e.g. finance manager, chief executive / Small business owners who employed less	305 (50%)	1,719 (24%)

		than 25 people / Technical and craft e.g. mechanic, inspector, plumber, tool maker, electrician, train driver / Traditional professional e.g. solicitor, doctor, accountant, scientist, engineer		
Neurodiversity	Do you consider yourself to be neurodiverse?	Yes / No	561 (91%)	5,064 (72%)
Religion	What is your religion or belief?	Buddhist / Christian (including CoE, Catholic, Protestant and all other denominations) / Hindu / Jewish / Muslim / Sikh / Any other religion / No religion	562 (91%)	4,895 (69%)
Carer status	Are you currently a carer?	Yes / No	580 (94%)	5,195 (74%)

Impact evaluation design

Table 5: Trial design

TRIAL DESIGN, INCLUDING NUMBER OF ARMS	Two-arm, individually-randomised trial

TRIAL TYPE		Effectiveness
EVALUATION SETTING		Emails sent to Kier employees in July 2026
TARGET GROUP		Kier employees with a valid work email address
TREATMENT CONDITION		Behaviourally enhanced communication campaign
COMPARISON CONDITION		Standard communication campaign
UNIT OF RANDOMISATION		Employee (individual)
STRATIFICATION VARIABLES		Previous disclosure (complete disclosure [i.e., disclosed all 9 characteristics] vs. incomplete disclosure [i.e., disclosed 0-8 characteristics]); age range (16-24; 25+)
PRIMARY OUTCOME	VARIABLE	Number of in-scope characteristics disclosed by young Kier employees (aged 16-24) one month after the start of the campaigns (core definition)
	MEASURE (INSTRUMENT, SCALE, SOURCE)	The fields associated with each characteristic will be converted into a binary indicator of disclosure (0 = no response or "prefer not to say"; 1 = "active" disclosure response), and these indicators will be summed across all in-scope characteristics. The primary outcome measure (when aggregated across individuals within the treatment or control conditions) will therefore be continuous, ranging from 0 (no disclosure responses provided for any

		characteristic) to 9 (disclosure responses provided for all in-scope characteristics).
SECONDARY OUTCOME	VARIABLE	Number of in-scope characteristics disclosed by Kier employees over the age of 25, one month after the start of the campaigns (core definition)
	MEASURE (INSTRUMENT, SCALE, SOURCE)	Continuous, ranging from 0-9, calculated based on disclosure of each in-scope characteristic. All other details will be the same as for the primary outcome.
EXPLORATORY OUTCOMES	VARIABLES	The following will be analysed for employees aged 16-24 and 25+ separately: 1. Number of in-scope characteristics disclosed by Kier employees, one month after the start of the campaigns (core definition) 2. Whether employee disclosed all in-scope characteristics one month after the start of the campaigns (core definition) 3. Whether employee disclosed the following characteristics (1) neurodivergence status (2) disability status (3) ethnicity (4) social mobility, one month after the start of the campaigns (core definition) a. Whether employee disclosed disadvantaged group status for each of these characteristics b. Whether employee disclosed non-disadvantaged group status for each of these characteristics

		4. Number of in-scope characteristics disclosed, one month after the start of the campaigns (expanded definition) 5. Whether employee disclosed all in-scope diversity characteristics one month after the start of the campaigns (expanded definition)
	MEASURES (INSTRUMENT, SCALE, SOURCE)	For employees aged 16-24 and 25+ separately: 1. Continuous, ranging from 0-9, calculated based on disclosure of each in-scope characteristic. Binary for each employee, coded as 1 if the employee disclosed all nine in-scope characteristics under the core definition, and 0 otherwise. 2. Binary, coded as 1 if the employee disclosed their (1) neurodivergence status (2) disability status (3) ethnicity (4) social mobility under the core definition, and 0 if their response is blank or "prefer not to say". a. Binary, coded separately for each characteristic as 1 if the employee disclosed disadvantaged group status (i.e. disabled, neurodiverse, minority ethnicity, low social mobility), and 0 if their response is blank, "prefer not to say" or disclosing non-disadvantaged group status (i.e. not disabled, neurotypical, majority ethnicity, high social mobility).[17]

[17] An employee would be considered as disabled if they answer "Yes" to all three disability questions. An employee would be considered as neurodiverse if they answer "Yes" to this question: "Do you consider yourself to be neurodiverse?". An employee would be

		b. Binary, coded separately for each characteristic as 1 if the employee disclosed non-disadvantaged group status (i.e. not disabled, neurotypical, majority ethnicity, high social mobility), and 0 if their response is blank, "prefer not to say" or disclosing disadvantaged group status (i.e. disabled, neurodiverse, minority ethnicity, low social mobility).[18] 3. The fields associated with each characteristic will be converted into a binary indicator of disclosure (0 = no response; 1 = either "active" disclosure or "prefer not to say" response provided), and these indicators will be summed across all in-scope characteristics. This outcome will therefore be continuous, ranging from 0 (no disclosure responses provided for any characteristic) to 9 (active or "prefer not to say" responses provided for all in-scope characteristics). 4. Continuous, ranging from 0-9, calculated based on disclosure of each in-scope characteristic. Binary for each employee, coded as 1 if the employee disclosed all nine in-scope characteristics under the expanded definition, and 0 otherwise. 5. Binary for each employee, coded as 1 if the employee disclosed all nine in-scope

considered to have low social mobility if they answer "Routine, manual and service / Semi-routine manual and service / Technical and craft / Long-term unemployed".

[18] An employee would be considered as disabled if they answer "Yes" to all three disability questions. An employee would be considered as neurodiverse if they answer "Yes" to this question: "Do you consider yourself to be neurodiverse?". An employee would be considered to have low social mobility if they answer "Routine, manual and service / Semi-routine manual and service / Technical and craft / Long-term unemployed".

		characteristics under the expanded definition (i.e. not blank fields), and 0 otherwise. All disclosure data will be sourced from MS Forms.

This is a two-arm effectiveness randomised-controlled trial. Employees will be randomised to the standard-arm group or the behaviourally-enhanced group in a 1:1 allocation ratio.

Randomisation will be stratified on previous disclosure and age range to control the level of imbalance of these variables between groups. See the Randomisation section for further detail.

The primary and secondary analyses examine whether the interventions led to a change in the number of in-scope diversity characteristics disclosed by employees aged 16-24 and 25+ respectively (core definition). Exploratory analyses will examine (1) the number of in-scope characteristics disclosed by employees who had not disclosed all characteristics at baseline (core definition), (2) the proportion of employees who disclose all eight in-scope characteristics (core definition), (3) the proportion of employees who disclosed characteristics of particular interest (disability status, neurodiversity, ethnicity, social mobility) under the core definition, and the proportion of employees who disclosed disadvantaged and non-disadvantaged status for each characteristic, (4) the number of disclosed characteristics under the expanded definition of disclosure, and (5) the proportion of employees who disclosed all in-scope characteristics under the expanded definition, for employees aged 16-24 and 25+ separately. Outcomes will be measured at one month after the start of the campaigns (i.e., after the first email is sent out).

Randomisation

Level of randomisation

Randomisation will take place at the employee level (i.e. allocating each employee to receive the behaviourally enhanced or standard communications package). This was the only level deemed feasible, as

randomising at any other level (e.g. business stream) would meaningfully reduce power for the primary analysis. In addition, the individual level is most relevant for implementing behaviourally enhanced communications that draw on individual levers, such as personalisation.

Type of randomisation

To increase the chance of the treatment and comparison groups being balanced on key characteristics that are correlated with the primary and secondary outcomes, randomisation will be stratified by:

- **Previous disclosure in Kier's HR system (as of May 2026) categorised into two levels** (disclosed no data or partially disclosed data [i.e., disclosed 1-8 characteristics]; disclosed all data [i.e., disclosed all 9 characteristics][19])
- **Age group** (16-24; 25+)

Steps for randomisation

Our sample of employees to be randomised includes all employees at Kier with a work email address. BIT will randomise employees before the trial begins.

- **Kier's data team will send the list of employees (with pseudonymised IDs)** with their age group and whether or not employees previously disclosed all diversity characteristics. This list represents all employees with a valid Kier email address. BIT will conduct stratified randomisation of these employees by previous disclosure and age. Then, BIT will send back the pseudonymised IDs of eligible employees in the standard and behaviourally-enhanced groups.
- **Craig Melvin, Kier's Emerging Talent Acquisition Manager, will match the pseudonymised IDs back to employee contact details.** This information will then be shared with the relevant member of Kier's HR team (Susan Lucas, HR Systems Training Manager), who will use Power

[19] The present trial focuses on disclosure of 9 in-scope characteristics (including ethnicity). However, as ethnicity is stored separately from other diversity characteristics in Kier's HR system (due to design constraints of the platform), this dichotomous variable represents previous disclosure of in-scope diversity characteristics excluding ethnicity.

Automate to distribute the email communications according to the randomised assignment.

Randomisation will be conducted by BIT in R, and all code will be quality assured by at least one other researcher at BIT. The output of the randomisation will be stored in a dataset with columns including (pseudonymised) employee ID, previous disclosure, age range and treatment allocation.

Balance checks

BIT will calculate normalised differences[20] to check for imbalance on stratification variables and covariates used in the analysis. For a given variable, the normalised difference is calculated as the difference in means between the standard and behaviourally-enhanced groups, divided by the square root of half the sum of the standard- and behaviourally-enhanced-group variances.

BIT will calculate normalised differences for each of the following:

- Previous disclosure (binary): a composite binary variable, indicating all 9 diversity characteristics disclosed vs. partial disclosure or no characteristics disclosed.
- Previous disclosure (continuous): a composite variable capturing the total number of diversity characteristics previously disclosed by the individual, ranging from 0 to 9. This variable is treated as continuous in the regression model.
- Tenure: a continuous variable capturing the number of days the employee has been employed at Kier, derived from employee start date
- Age range (16-24; 25+)

Normalised differences of 0.25 or less confirm adequate balance between the groups. Where the normalised difference for any variable exceeds 0.25, BIT will include that variable as an additional covariate in the regression model and will report the imbalance transparently in the analysis write-up. For

[20] Chapter 14.2, page 311 in Imbens, G. W., & Rubin, D. B. (2015). *Causal Inference for Statistics, Social, and Biomedical Sciences: An Introduction* (1st ed.).

variables already specified as covariates in the regression model (*previous disclosure binary* and *previous disclosure continuous*) imbalance would indicate that those covariates are accounting for a greater share of outcome variance but would not alter the model specification.

Note that for *previous disclosure binary*, which was used as a stratification variable, a normalised difference of approximately zero is expected by construction. The balance check for this variable serves to confirm that randomisation was implemented correctly rather than to detect imbalance.

Monitoring randomisation, blinding and spillovers

Emails of BIT project team members will be "seeded" into each trial arm to ensure that communications are sent out correctly to each arm. Kier will also perform a test run with these BIT email addresses only prior to the trial launch. Kier will share a dataset after each intervention cycle (i.e., the initial communication and subsequent reminders), showing which package of communications was sent to which pseudonymised employee ID. BIT will cross-reference this dataset against the original randomisation records to verify that randomisation assignments have been followed and to identify any anomalies.

Although Kier employees will be aware of communications they receive encouraging them to disclose their diversity information, BIT do not expect many (if any) to be aware that they are in a trial where different employees are exposed to different trial conditions. The Kier project team will not mention the existence of the trial while it is ongoing. After the trial concludes, all employees will be debriefed.

Spillovers may arise as employees may share emails or discuss the content of them with each other. It is not possible to place restrictions on the re-sharing or forwarding of emails, or to prevent staff from in-person or online discussions; however, spillover risk is expected to be minimal because the channel for delivering the interventions (i.e., email) was chosen carefully to keep spillover risk low. For example, BIT decided against push notifications alerting staff of new content on Your Kier, the organisation's intranet, as these are more likely to appear publicly on a desktop or phone and be seen by nearby colleagues. Overall, the threat to internal validity associated with these

modest levels of spillovers is considered to be limited. Nevertheless, the extent of spillovers will be assessed as part of the IPE through employee interviews, during which individuals will be asked if they talked about or forwarded the email or the request to share diversity information with anyone else at Kier.

Participants

Participants in the trial are all employees at Kier who have a valid work email address (N = 9,642s).[21]

The sample will include those employed permanently, as well as graduates, apprentices, temporary staff and those on fixed-term contracts.

Attrition

Employees who leave Kier during the trial period will be excluded from the analysis. The rate of attrition based on this is expected to be very low – for example, only 1.2% of employees exited Kier between September and October 2025.

It is likely that some employees will be on annual leave during the trial period and so may not see the email communications as a result; however, the reminder emails aim to engage employees who may be on leave when the first communication is sent As data on email open rates will not be available, these individuals will simply appear as having disclosed 0 characteristics. Finally, Kier will share aggregated data on the number of employees in each age group who are on leave during the trial period. BIT will then use this data to approximate the number of employees who may not have seen the communications campaigns and thus may be inflating the number of individuals with zero characteristics disclosed in the outcome data.

Settings

Setting of intervention delivery

Employees will be sent a package of communications that use behaviourally-

[21] Employees who are directly involved in trial implementation will be excluded from the analysis. These individuals will be removed by the Kier data time before the pseudonymised outcome data is shared with BIT.

enhanced communication strategies (treatment group) or a package of communications that uses standard communications practices (comparison group) in July 2026.

Packages of communications will be sent via email using Power Automate (one of Power BI's tools).

Settings of data collection

Data will be collected on the platforms shown in Table 6 below.

Table 6: Platforms used for data collection

Platform	Description
MS Forms	Online survey form, which will be sent in the communication packages and used to capture: • Employees' diversity characteristics • Employees' first names, last names, and employee IDs
Power Automate	Power BI tool, containing information on emails sent.

Outcome measures

Primary outcome: Number of in-scope characteristics disclosed by young Kier employees (aged 16-24) (core definition)

The primary outcome measure is the number of in-scope characteristics disclosed by Kier employees aged 16-24. In the primary analysis, disclosure will be defined under the "core" definition, as selecting a response listed for the in-scope characteristics in the MS Form, excluding "prefer not to say" responses.

For the primary analysis, employees who complete the "Update My Diversity Information" MS Form but select "prefer not to say" in response to the questions will be coded as not having disclosed any characteristics (i.e., assigned a value of 0 for all characteristics).

Information required to construct this outcome will be sourced from MS Forms.

Secondary outcome: Number of in-scope characteristics disclosed by Kier employees aged 25 and over (core definition)

Our secondary outcome is the same as the primary outcome but focuses on those aged 25 and over.

Exploratory outcomes

The following exploratory outcomes will also be collected and analysed for ages 16-24 and 25+ separately, conducting all pairwise comparisons of the arms in the trial:

1. **Whether the employee disclosed all nine in-scope characteristics.** This uses the core definition and is intended to capture whether employees fully disclose all in-scope characteristics.
2. **Whether the employee disclosed the following characteristics individually: neurodivergence status, disability status, ethnicity and social mobility.** This uses the core definition and will allow BIT to see if the interventions have a differential impact on diversity characteristics of particular interest to YFF/Kier.
    a. **Whether the employee disclosed disadvantaged group status for each of the above characteristics.** This set of outcomes are intended to capture whether one communication campaign, more than the other, shifted disclosure of disadvantaged group status (disabled, neurodiverse, minority ethnicity, low social mobility).
    b. **Whether the employee disclosed non-disadvantaged group status for each of the above characteristics.** This set of outcomes are intended to capture whether one communication campaign, more than the other, shifted disclosure of non-

disadvantaged group status (not disabled, neurotypical, majority ethnicity, high social mobility)

c. **Number of in-scope characteristics disclosed using the expanded definition of disclosure, which includes "prefer not to say" responses.** This outcome is intended to capture whether employees updated their diversity characteristics but selected "prefer not to say" as their response. If there is a significant difference between trial arms for this exploratory outcome, but not for the primary or secondary outcomes, this would suggest that the interventions prompted employees to access the link to the MS Form in the communications package but did not increase the number of characteristics they were willing to actively disclose.

3. **Whether the employee disclosed all fields (i.e. no blank responses).** This uses the expanded definition of disclosure and is intended to capture those who are willing to complete the form but select "prefer not to say" for all characteristics. .

Sample size and power calculations

BIT will use all Kier employees with a valid work email address as the sample for randomisation. Of these, the sample for the primary analysis will consist of all Kier employees aged 16-24. 757 young Kier employees are expected to be included in the primary analysis.

For the secondary analysis, the sample will consist of all Kier employees aged 25 and over. 8,885 Kier employees aged 25+ will be included in the secondary analysis.

BIT ran power calculations in R to identify how many treatment arms would be feasible to test based on the sample used to analyse the primary and secondary outcome measures.

BIT examined how the MDES changes based on (i) the sample used to analyse the primary and secondary outcome measures and (ii) MS Form response rates for the standard communications campaign (low: 15%, med: 30%, and high: 50%). For each response rate, we calculate the baseline

mean number of characteristics declared per employee. This represents a weighted average generated by combining the extensive margin (i.e., what proportion of participants open the email and click on the MS Form link) and the intensive margin (i.e., of those who do open the email and click the link, how many characteristics do they disclose).[22]

All assumptions and inputs that informed the power calculations are reported in Table 7.

Table 7: Summary of power calculation assumptions and inputs

Assumption		Rationale
Alpha (significance level)	5%	Standard assumption.
Power	80%	Standard assumption.
Planned sample size	757 for primary outcome; 8,885 for secondary outcome	See the "Sample size and power calculations" section.
Estimated response rate for standard communications arm	15%, 30%, 50%	BIT's prior experience with email campaign-based trials suggests that a response rate of 4-6% is typical for "cold" campaigns (i.e., unsolicited emails). We anticipate a significantly larger response rate (i.e., around 30%) for this trial, given that the communications will come from trusted

[22] The baseline mean number of characteristics declared per employee is calculated by multiplying the estimated response rate by the estimated mean disclosure of responders. This represents the average number of diversity characteristics we expect an employee in the control group to disclose by the end of the trial period.

		messengers within Kier and email campaigns of this nature are relatively common within the Organisation.

To make the results between different numbers of arms (and therefore sizes of arms) comparable, MDESs are expressed in two ways: (1) the number of additional characteristics disclosed per employee, and (2) as a percentage of the gap to full disclosure. Results are provided in Table 8, and the code is available in Appendix 3.

Given the difference in sample sizes between the two age groups, the 16-24 analysis will have lower statistical power than the 25+ analysis. A pattern in which a statistically significant effect is detected for the 25+ group but not for the 16-24 group should not be interpreted as evidence of age as a moderator. Such a pattern may simply reflect the reduced ability of the smaller sample to detect an effect of the same magnitude.

Table 8: Power calculations for primary and secondary outcome measures

	Assumed MS Form response rate for standard communications arm[23]		
	15%	**30%**	**50%**
Primary outcome: Number of in-scope characteristics disclosed (out of 9 possible diversity characteristics) by 16-24-year-old Kier employees (n = 757)			
NUMBER OF EMPLOYEES (DIVIDED EQUALLY BETWEEN ARMS)	378		

[23] This refers to the percentage of employees in the standard communications campaign arm who open the email and click on the MS Form link.

BASELINE: Mean number of characteristics declared per employee	1.22	2.43	4.05
MINIMUM DETECTABLE EFFECT SIZE (MDES) AS NUMBER OF ADDITIONAL CHARACTERISTICS DISCLOSED PER EMPLOYEE	0.59	0.76	0.84
MDES AS PERCENTAGE OF GAP TO FULL DISCLOSURE	7.6%	11.6%	16.9%
Secondary outcome: Number of in-scope characteristics disclosed by Kier employees aged 25 and over (n = 8,885			
NUMBER OF EMPLOYEES (DIVIDED EQUALLY BETWEEN ARMS)	4,442		
BASELINE: Mean number of characteristics disclosed in standard group	1.04	2.07	3.43
MINIMUM DETECTABLE EFFECT SIZE (MDES) AS NUMBER OF ADDITIONAL CHARACTERISTICS DISCLOSED PER EMPLOYEE	0.15	0.19	0.21
MDES AS PERCENTAGE OF GAP TO FULL DISCLOSURE	1.9%	2.8%	3.8%
Linear model estimated by OLS, using baseline number of characteristics			

disclosed as control variable.

Our assessment is that a trial with two arms (i.e., one behaviourally-enhanced intervention and a standard control) is sufficiently powered to detect realistic effects on primary and secondary outcomes when anchored on a plausible 30% baseline response rate. Under a hurdle model framework where responding individuals disclose on average 8.1 characteristics (ages 16–24) and 6.9 characteristics (ages 25+), the trial is powered to detect an MDES of 0.76 (for the 16-24 group) and 0.19 (25+ group) additional characteristics, respectively. This is structurally driven by the extensive margin: because the baseline average of characteristics disclosed per responding individual is expected to be quite high (8.1 and 6.9 for each age group, respectively), the model relies on the behaviourally enhanced communications campaign driving up the overall form completion rate by an additional 9.4 percentage points for young employees and 2.8 percentage points for employees ages 25 and above.

A previous pre-post study that BIT conducted with the engineering firm Arup saw the proportion of staff with fully completed forms increase from 55% to 85%,[24] closing approximately 64% of the gap to full disclosure. The targets for the present study sit comfortably below this, suggesting the required effect sizes are highly plausible.[25]

Analysis

More information on the analytical approach will be provided in the Statistical Analysis Plan (SAP) for this project, to be published prior to BIT's receipt of outcome data .

Intention-to-treat approach

BIT will perform the main analysis on an intention-to-treat (ITT) basis (i.e.,

[24] The Behavioural Insights Team. (2021). Improving equality, diversity and inclusion starts with good data. Available here: https://www.bi.team/blogs/improving-equality-diversity-and-inclusion-starts-with-good-data/

[25] The previously conducted study with Arup included a total of 8 diversity characteristics, while the present study considers 9 characteristics as being in scope.

coding the treatment variable using intended treatment assignment, regardless of which package of communications employees receive).

Primary analysis: number of in-scope characteristics disclosed by young Kier employees (aged 16-24)

For the primary outcome, the main regression model will use Kier employees aged 16-24 as the sample and the number of in-scope characteristics disclosed under the core definition of disclosure as the outcome. Specifically, BIT will estimate the following linear regression model using ordinary least squares (OLS):

$$Y_i = \alpha + \beta_T T_{1i} + \beta_2\, previous\ disclosure\ binary_i + \beta_3\, previous\ disclosure\ continuous_i + \beta_4\, tenure_i + \epsilon_i$$

Where:

- Y_i is the number of in-scope characteristics disclosed for $employee_i$
- T_{1i} is a binary indicator for employee i being allocated to the treatment grou p
- β_T is the coefficient of interest, representing the intention-to-treat effect
- *previous disclosure binary*$_i$ is a binary indicator presenting the previous disclosure (stratification variable), coded as 1 if employee i previously disclosed all diversity characteristics and coded as 0 if employee i previously partially disclosed or disclosed no characteristics
- *previous disclosure continuous*$_i$ is a continuous variable capturing the total number of diversity characteristics previously disclosed by employee i, ranging from 0 to 9
- *tenure*$_i$ is a continuous variable capturing the duration of employee i's employment at Kier
- ε_i is the error term

BIT will evaluate the distribution of the data for all outcome variables prior to analysis. If a high proportion of zeros is observed such that a standard model

is poorly specified or underpowered, BIT will conduct exploratory secondary analyses using a zero-inflated model (e.g., zero-inflated Poisson) to account for this skew.[26]

Secondary analysis: number of in-scope characteristics disclosed by Kier employees aged 25 and over

The secondary analysis will follow the same approach as the primary analysis but will focus on employees aged 25 and over. Given the difference in sample sizes between the two age groups, the 16-24 analysis will have lower statistical power than the 25+ analysis. A pattern in which a statistically significant effect is detected for the 25+ group but not for the 16-24 group should not necessarily be interpreted as evidence of age as a moderator, and rather may simply reflect the reduced ability of the smaller sample to detect an effect of the same magnitude.

Exploratory analyses

BIT will use a linear model to analyse the number of disclosed in-scope characteristics by employees (core definition) and the number of disclosed in-scope characteristics (expanded definition), and a logistic model to analyse whether the employee has disclosed all nine in-scope characteristics (core definition), disclosed characteristics of particular interest (disability status, neurodiversity status, ethnicity, social mobility) under the core definition and the proportion of employees who disclosed disadvantaged [27] and non-disadvantaged status for each characteristic, and disclosed all in-scope characteristics under the expanded definition. Separate analyses will be run for employees aged 16-24 and 25+.

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[26] Long, D. L., Preisser, J. S., Herring, A. H., and Golin, C. E. (2014). A Marginalized Zero-Inflated Poisson Regression Model with Overall Exposure Effects. *Stat Med*, 33(29), 5151-5165. DOI: 10.1002/sim.6293

[27] When analysing exploratory outcomes related to disadvantaged group disclosure, BIT will frame results as a 'total volume shift in captured diversity data' rather than an attitudinal shift in the willingness to disclose. This acknowledges that a treatment effect here could be compositional (i.e., pulling in a demographic pool with a different true disadvantaged baseline) rather than attitudinal (i.e., increasing the comfort level of disclosing disadvantaged group membership). Results will be interpreted with this limitation explicitly noted.

BIT will use the same treatment variable and covariates as the primary analysis (baseline disclosure and employee start date), except the baseline disclosure variable will be replaced by the value of the outcome actually being analysed at baseline. All covariates will be sourced from Kier's HR system.

Compliance

In this trial, "compliance" with the interventions has several dimensions:

- **Implementation of randomisation:** Each package of communications (standard vs behaviourally enhanced) should be sent to the correct employees.
- **Spillovers across groups**: Employees in each intervention group may forward emails to peers in the other treatment group, or discuss the content with one another in person.

Implementation of randomisation

To assess whether the packages of communications are sent to the correct employees, the email addresses of BIT staff members will be included within different trial arms, as previously noted in the Randomisation section of the protocol. In addition, emails will be sent in 'batches' to ensure that randomisation has been executed correctly: the first batch will be sent to 500 email addresses and subsequent batches will be sent to 1500 email addresses each. This will enable the team to check whether randomisation has been implemented correctly in between batches and to identify and correct any errors early in the implementation process. Refer to the Randomisation section for further detail on how randomisation implementation will be checked for correctness.

Spillovers across groups

To assess the degree of spillovers across groups, BIT will ask about spillovers in interviews with employees as part of the IPE. Specifically, BIT will ask Kier employees from both trial arms whether they shared or talked about the communication campaigns with their colleagues, and if they did, or if one of their colleagues did, whether that affected their propensity to disclose their

diversity characteristics. This information will be used to make a determination about the extent to which spillovers or contamination effects may have impacted the outcomes, which will be explicitly noted when reporting results. See Table 9 (Risk Register) for further details on mitigation measures for spillover effects.

4. Implementation and process evaluation

Research questions

The research questions to be addressed by the IPE are as follows:

- RQ1. Was the randomisation procedure implemented correctly?
    - RQ1a. Were the interventions delivered as assigned?
    - RQ1b. Were any challenges encountered during allocation or monitoring (e.g., spillovers) and how were these resolved?
    - RQ1c. Did any randomisation issues have a measurable impact on trial integrity or outcomes?
- RQ2. How were the interventions implemented in practice, and how can implementation be improved?
    - RQ2a. What factors facilitated or hindered successful implementation?
    - RQ2b. What changes can be made to the implementation process to improve the intervention's effectiveness and scalability for future roll-outs at Kier?
    - RQ2c. Did any implementation issues have a measurable impact on trial integrity or outcomes?
    - RQ2d. What direct or indirect feedback, if any, did implementers receive?
- RQ3. What evidence is there that the mechanisms from the ToC lead to any impact / variation in impact, including any unintended effects?
    - RQ3a. Did the interventions activate mechanisms predicted by the ToC?, and did they trigger any mechanisms not anticipated by the ToC

- RQ3b. Were there factors that moderated the strength or consistency of these mechanisms (e.g., perceptions of MS Forms as a data collection tool)?

- RQ4. What are the views of the Kier employees who received the interventions, and of the staff involved in implementation, regarding the interventions?
    - RQ4a. How did Kier employees who received the interventions perceive them, including their clarity, persuasiveness, relevance and ease of actioning?
    - RQ4b. How did the interventions' reception or influence vary across key employee sub-groups (e.g., by age, work location)?
    - RQ4c. For employees who received the intervention but did not update their data, what specific attitudinal or procedural barriers remained significant?
    - RQ4d. How did relevant Kier staff perceive the implementation of the interventions, including its practicality, burden and overall acceptability?

Research methods and analysis

The IPE will be conducted between July and September 2026, covering both the period in which the communication campaigns are live and the immediate period afterwards. It will draw on a mixed-methods approach involving the review of quantitative implementation data and qualitative interviews with both implementation staff and Kier employees receiving one of the interventions.

Activity 1. Review of randomisation data

An overview of Activity 1 is provided in Table 9 below.

Table 9: Overview of IPE activity 1 - Review of implementation data

RESEARCH METHODS	Review of implementation data

DATA COLLECTION METHODS / ACTIVITIES	1) Including BIT team members' email addresses into different trial arms and checking whether the campaigns are received as expected 2) Reviewing summary datasets after each intervention cycle
PARTICIPANTS / DATA SOURCES (TYPE, NUMBER)	1) Campaign emails received by BIT team members 2) Datasets of email sends showing which communication campaign was sent to which pseudonymised employee ID
DATA ANALYSIS METHODS	Descriptive analysis
RESEARCH QUESTIONS ADDRESSED	RQ1, RQ2
IMPLEMENTATION THEORY OF CHANGE RELEVANCE	N/A

To address RQ1 and RQ2, the team will review randomisation data to verify correct allocation. This review will identify any issues arising during randomisation, document how these were resolved and outline any implications for trial integrity.

Once employee randomisation is completed, BIT will provide Kier with a list of pseudonymised employee IDs and their assigned treatment arms. Kier will then match these identifiers to employee contact details and deliver the interventions accordingly. To support ongoing monitoring, four BIT staff members will be included within the two trial arms so that the team can

confirm that they are receiving the correct intervention and the expected reminders. This will provide a practical, real-time check on delivery accuracy.

In addition, a dataset of email sends will be shared after each intervention cycle (i.e., the initial communication and subsequent reminders), showing which communication campaign was sent to which pseudonymised employee ID. BIT will then cross-reference this dataset against the original randomisation records to verify that assignments have been followed and to identify any anomalies.

Activity 2. Qualitative interviews

An overview of Activity 2 is provided in Table 10 below.

Table 10: Overview of IPE activity 2 - Qualitative interviews

RESEARCH METHODS	Qualitative interviews
DATA COLLECTION METHODS / ACTIVITIES	Qualitative interviews with two participant groups: 1) implementation staff and 2) Kier employees receiving the intervention
PARTICIPANTS / DATA SOURCES (TYPE, NUMBER)	Up to six implementation staff members across the following groups: • Representatives from IT and data teams who will be responsible for providing BIT with data required for analysis • Representatives from Communications, HR and ET&I teams who will be responsible for direct delivery of the email interventions • Staff from Kier's Inclusion Team who will act as official

	messengers/signatories for the behaviourally enhanced communication campaign Up to 15 Kier employees who received the intervention: ● Primary sampling criterion: ○ At least six employees from each of the two trial arms ○ At least four who updated their diversity characteristics in response to the interventions and at least four who did not ● Secondary sampling criterion: ○ At least six female and six male employees ○ At least four employees aged 16-24 and at least six aged 25 or older
DATA ANALYSIS METHODS	Thematic analysis using Framework approach
RESEARCH QUESTIONS ADDRESSED	RQ2, RQ3, RQ4
IMPLEMENTATION THEORY OF CHANGE RELEVANCE	● Examine fidelity of intervention implementation, overall and at component level ● Examine which mechanisms are perceived as relevant

	• Explore assumptions through which interventions were expected to affect outcomes

Qualitative interviews will be conducted with implementation staff and Kier employees. These interviews will address IPE RQs 2-4 by exploring fidelity, delivery, mechanisms and stakeholder experiences. Topic guides for these interviews can be found in Appendix 4.

Implementation staff

Sample and interview set-up:

Up to six relevant Kier staff will be interviewed in paired or triad sessions lasting up to one hour and 15 minutes, conducted via MS Teams. These interviews will occur after the trial period once the outcome dataset has been received. Interviewees will include members of the Communications, HR and ET&I teams, who will be responsible for distributing campaigns; representatives from the IT team, who will provide diversity data; and staff from the Inclusion Team who will act as the official messengers/signatories for the behaviourally enhanced communication campaign. All participants will have insight into implementation processes and operational considerations relevant to the interventions.

Recruitment:

Participants will be approached directly by BIT. Where BIT does not already hold the relevant contact details through existing collaboration from the feasibility study and trial set-up, Kier's ET&I team will first confirm with the identified staff members that they are happy for their name and business email to be shared with BIT for the purpose of arranging the interview. Only those who provide this agreement will have their details passed on. Once confirmation is obtained, the central Kier contact will securely transfer the information to BIT. BIT will then send participants the interview information materials, including an information sheet, privacy notice and session details, and arrange a suitable time for the paired or triad session.

Implementation staff will not receive an incentive for the interview, as it will be considered a part of their professional responsibilities within Kier.

Interview topics:

The topic guide is designed to address the research questions by exploring implementation fidelity and practicality, perceived effectiveness, the activation of key mechanisms, and broader reflections on the intervention. Discussions will examine how easily communication campaigns were delivered to selected employees (RQ2a), challenges encountered during delivery (RQ2a, RQ2c), and factors that could have enabled smoother or more efficient implementation (RQ2b). Participants will be invited to reflect on lessons learned and potential improvements if the intervention were repeated or scaled up (RQ2b). For interviewees directly involved in distributing messages or acting as named messengers/email signatories, additional questions will explore employee responses, including any queries or resistance received (RQ2d). Interviews will also assess whether the intended mechanisms operated as expected (RQ3a, RQ3b), alongside staff views on the practicality, burden, and overall acceptability of implementation (RQ4d).

To support the economic evaluation, implementation staff will also complete a cost pro-forma during their interviews and take part in a brief, role-specific process-mapping exercise. Each participant will first be given a few minutes to fill in the pro-forma individually, before the group discusses the entries together to add detail, reconcile any differences and identify anything missed. Aided by the cost pro-forma, participants will then be asked to walk through the steps involved in preparing and delivering the campaigns - for example reviewing and signing off content, checking and preparing mailing lists, configuring and sending the emails and reminders via Power Automate, monitoring delivery, and responding to employee queries - so that intervention activities can be broken down into discrete components and the associated resource use captured accurately. The exercise will also capture the time it would take to adapt the trial materials for use in another organisation. More detail on the economic evaluation approach and how these activities support the overall cost analysis can be found in Section 5.

Employee interviews

Sample and interview set-up:

Up to 15 Kier employees from both trial arms will be interviewed after the trial period and receipt of the outcome dataset. Interviews will be one-to-one, conducted via MS Teams, and last around 30 minutes, with slightly longer slots scheduled to allow for overrun. Most interviews are expected to take place during the working day, with out-of-hours options available if needed.

In the trial, BIT will have access to all information relevant for sampling (i.e., treatment allocation, diversity disclosure, gender, age) in pseudonymised form (meaning direct identifiers are removed and replaced with codes) before recruitment for interviews begins. This will allow BIT to pre-select a pool of potential interviewees that meets the predefined sampling criteria (see 'Recruitment' sub-section below for more detail), because at this stage each pseudonymised record can be sorted into relevant sampling categories. However, once employees opt in to participate and BIT receives their identifiable details (e.g., names, emails) for scheduling, there will be no way for BIT to connect those identities to the earlier pseudonymised records. As a result, the position of participants who ultimately join an interview in relation to certain sampling criteria - specifically treatment allocation and disclosure status - can only be confirmed during the interview itself.

Within this constraint, the primary sampling aim is to include at least six employees from each trial arm, with at least four who updated their diversity information and four who did not. If any trade-offs between primary sampling criteria prove to be necessary, we will prioritise securing balanced representation across both trial arms. As secondary criteria, we will aim to include at least six female and six male employees, at least four employees aged 16-24 and at least six aged 25 or older. Given the overall sample size, we do not anticipate difficulty meeting these aims; however, if necessary, we will prioritise representation across the two age groups. Because outcome and treatment data are pseudonymised, it will only be possible to confirm primary sampling criteria at the start of interviews, while it will be possible to confirm secondary sampling criteria in advance (see "Recruitment" section below).

Recruitment:

Once Kier shares the pseudonymised outcome dataset, one month after the intervention launch date, BIT will identify a pool of around 150 employees who reflect the sampling matrix above, anticipating that around 15 will ultimately consent to interview based on research sign-up rates observed during the feasibility study. If the initial pool does not yield sufficient participants, additional employees meeting the sampling criteria on the basis of pseudonymised data will be contacted. Pseudonymised IDs for selected employees will be shared with Kier, who will then contact these individuals directly to invite participation. Kier's invitation will include a brief information summary prepared by BIT, outlining what the interview will involve, its general purpose, who is conducting the research, data-privacy assurances, and what opting in at this stage means. Employees will be asked to confirm that they are happy for Kier to share their name, email address and basic demographic information (e.g., age band and gender) with BIT for sampling and scheduling purposes. Only after BIT receives these details will full interview documentation be provided and final consent for the interview itself obtained. Participation will be entirely voluntary, no personal data will be transferred for individuals who do not consent to their details being shared with BIT, and employees who take part will receive a £20 incentive as a token of appreciation.

Importantly, as BIT will not know which pseudonymised records correspond to which named employees, it will not know interviewees' treatment allocation or disclosure status before speaking with them. It would not be appropriate to ask employees directly about their communication campaign or disclosure status in advance of the interview. Instead, BIT will begin each interview with a short set of neutral clarification questions. Participants will also be asked, if they are willing, to forward the specific email communication they received to the interviewer (who will first provide the date the communications were received and the email address they were sent from to assist with identification).

Please note that this project is running alongside another Youth Futures-funded project at Kier, which focuses on improving the fairness and consistency of apprenticeship recruitment by testing a more structured

interview format. As both projects involve BIT conducting interviews with Kier employees, individuals involved in the interview format project will not be invited to take part in the IPE activities for this project. A central Kier contact will identify and exclude these individuals from the IPE sample to avoid overlap between the two sets of interviews and reduce the risk of participants feeling over-researched or evaluated by Kier.

Interview topics:

Interviews will explore how employees experienced the communication campaigns and the extent to which they activated the mechanisms set out in the ToC (RQ3). This will include whether key messages about why Kier collects diversity data, how the information is used, and what benefits it brings were noticed, understood and influential in shaping decisions to update information (RQ3a, RQ3b). Participants will also be asked about factors that strengthened or weakened these mechanisms (RQ3b). These will include the ease of accessing and completing the MS Form, its credibility as a channel for sharing diversity information, whether being asked to resubmit information already held in Kier's HR system caused confusion or reduced willingness to engage, and the perceived relevance of the messages. Interviews will also specifically touch on whether employees discussed or shared the communications, or topic, with colleagues - to assess the impact of potential spillovers in implementation.

More broadly, interviews will gather views on the tone, clarity and overall usefulness of the communications (RQ4a, RQ4b), and for employees who did not disclose their information, the barriers that remained despite receiving the messages (RQ4c). To support recall, participants will be shown their communication campaign and MS Forms and asked to describe their reactions, actions and the process of accessing and navigating the system, with a particular focus on those who had not opened MS Forms at all as well as those who opened it but chose not to disclose their information.

Analysis:

All qualitative interview data will be analysed thematically using the Framework approach. This method involves developing a structured thematic framework based on the research questions and populating

the findings from interviews into a matrix. Using this approach allows the project team to pull out key themes, patterns and differences across participant groups, making it easier to compare responses between trial arms, and draw out key insights. BIT will use an abductive approach to coding of interviews, basing initial codes off the ToC and adjusting these if new themes emerge.

NotebookLM will support this analysis. Once the framework matrix is created, NotebookLM will be used to summarise transcripts into the matrix and to help interrogate the matrix - surfacing themes, patterns and differences across participant groups and trial arms. Researchers will verify each AI-generated output against the source material, using in-line citations to confirm that content is coded to the correct theme and is a faithful account of the participant's words. Researchers will be responsible for all interpretative judgements and conclusions.

5. Economic evaluation

Research questions

BIT will conduct a cost analysis, which will estimate and compare the costs of delivering the two communication campaigns. The research questions associated with the economic evaluation are as follows:

- RQ1: What is the cost per employee of each campaign?
- RQ2: What is the cost per unit change in disclosure of each campaign?
- RQ3: How might costs vary between Kier and employers with other characteristics?

Research methods

BIT will follow the "ingredients method" from Levin et al. (2018)[28] to identify all resources required to implement the interventions. Costs will be broken down into staff time required, capturing the time commitment over and above the time required under the current process for diversity data communications. No additional materials and system resources are required for implementing the interventions, as the infrastructure required to send email communications (e.g., bulk email tools) already exists within Kier.

Staff costs will be presented separately for developing the interventions, and for delivering them. For intervention development, Kier's HR and communications staff will provide estimates of the resources and time other employers would need to adapt the materials from this trial (e.g., templates, email content) to their own context. For intervention delivery, the costs will include both dedicated Kier staff time (e.g., sending communications to employees), and time taken by Kier employees to report their diversity characteristics.

Intervention development: This captures the time required to adapt the

[28] Levin, H. M., McEwan, P. J., Belfield, C., Bowden, A. B., & Shand, R. (2018). *Economic Evaluation in Education: Cost-Effectiveness and Benefit-Cost Analysis*. SAGE Publications, Inc. https://doi.org/10.4135/9781483396514

interventions for use elsewhere rather than the first-time costs of designing the interventions. As set out in Section 4, these costs will be estimated through the process-mapping exercise in the IPE interviews, drawing on staff estimates of the time those in similar roles at other organisations would need to adapt the intervention resources to their own contexts.

Intervention delivery: This captures the difference in time taken to implement the two interventions, including time spent setting up the email and reminder communications on Power Automate. As set out in Section 4, delivery costs will be estimated from the cost pro-forma and role-specific process-mapping completed during the IPE interviews, combined with job-grade information to enable costing against aggregated salary data.
Reporting diversity characteristics: BIT will assume that updating characteristics takes three minutes per employee. In addition, during the IPE interviews, Kier employees will be asked to walk through the steps to access the MS Form and complete their characteristics. BIT will also assume that it takes one minute of time for employees who click through but do not update characteristics.

To monetise staff time, time estimates will be combined with average hourly pay data for the relevant job grades, which Kier will share with BIT.

More details on the proposed method for eliciting each relevant cost, including key assumptions, are provided in Table 11 below.

Table 11: Breakdown of costs for economic evaluation

COST	CATEGORY	PROPOSED METHOD FOR ELICITING/ANALYSING
Staff at other organisations adapting the interventions using resources from the trial	Staff time	- Use IPE interviews to estimate time needed to adapt intervention materials to own context - Ask staff for job grade (as a proxy for the wages of staff in equivalent HR and communications roles at other employers) - Get average hourly wage for each job grade from Kier's HR system data - using annual salary and hours worked (assume 47 working weeks in a year). - Multiply time spent by hourly wage to estimate cost per staff member - Scale up using number of staff in equivalent roles at other organisations who would be involved in adapting the intervention materials
Kier staff delivering the interventions (e.g., sending emails and follow-up communications to a subset of employees)	Staff time	- Use cost pro-forma to estimate time spent on delivering the interventions. Use IPE interviews to validate and sense-check these estimates. - Ask staff for job grade in the pro-forma - Get average hourly wage from Kier's HR system data as above - Multiply time spent by hourly wage to

		estimate cost per staff member - Scale up using number of Kier staff involved in delivering the interventions in each team
Time spent by Kier employees updating diversity characteristics / going to form	Staff time	**Time spent by employees who report diversity characteristics:** - Estimate the number of employees who updated their characteristics due to the interventions from regression by comparing the percentage in the behaviourally-enhanced arm who updated any of their responses to the percentage in the standard arm - Multiply this by three minutes (the estimated time spent per employee), as well as one and five minutes (as sensitivity analysis) **Time spent by employees who click through but do not update diversity characteristics:** - Estimate that it takes one minute of time for employees who click through but do not update characteristics - Multiply this by one minute (the estimated time spent per employee)

Analysis

Our analysis approach is as follows:

- **Convert time into monetary equivalent.** For each member of staff and intervention activity, time spent (hours) will be multiplied by the hourly pay, corresponding to their job grade.[29]
- **Aggregate costs.** Costs will be summed by activity and by intervention to produce total costs for each intervention. BIT will also divide the total cost by the number of employees in each treatment arm to calculate a cost per employee.
- **Calculate cost per unit change in disclosure.** The total cost of each intervention will be divided by the number of extra characteristics estimated to be disclosed in each arm to calculate a standardised cost per extra characteristic disclosed.

BIT will also assess how intervention costs might differ between Kier and other employers. To do this, BIT will create a framework of (up to four) representative archetypes of employers based on key factors that are likely to affect costs. Key factors will be informed by IPE/economic evaluation activities and academic/grey literature. For example, it is expected that a smaller business (e.g. with fewer than 250 employees) may face a higher administrative burden and cost per employee than Kier (with 10,000+ employees) due to a lack of dedicated D&I resources and less sophisticated HR systems. For example, email personalisation may need to be done manually by organisations that lack the technological resources to automate this process.

[29] Hourly pay will be calculated by dividing their annual pay by their contracted weekly hours multiplied by 47 to reflect actual working weeks (i.e. excluding annual leave, bank holidays).

6. Ethics and registration

Ethics

BIT has classified the project as high risk, primarily because it involves special category data (including transgender/gender reassignment, sexual orientation, disability status and religion). In line with this classification, the project underwent BIT's ethical review and received approval to continue. The first ethical review (prior to the adjustment from the three-arm to two-arm design) was completed on 16th December 2025 while the second review (of the design specified in this protocol) took place on 17th June 2026.

BIT's internal ethics review process is aligned with the Government Social Research (GSR) Ethical Assurance for Social Research in Government and with ESRC governance guidance for research ethics committees. For a project of this classification, review is conducted by two trained ethics reviewers; for this evaluation, the reviewers were Eleanor Collerton (Senior Policy Advisor) and Nilufer Rahim (Head of Qualitative Research).

A summary of key ethical considerations is presented in Table 12 below.

Table 12: Summary of key ethical considerations and how they will be addressed

Ethical issue	Why this issue arises	How it is addressed
Use of sensitive personal data (impact evaluation)	The impact evaluation relies on HR data that include special category information (e.g., transgender/gender reassignment, sexual orientation, disability status, religion) to construct disclosure outcomes. This requires BIT to process the raw disclosure responses for each in-scope	A DSA is in place. All data will be pseudonymised by Kier prior to transfer; BIT will hold no re-identification keys. Data will be transferred and stored via secure, access-controlled systems. Only variables needed to derive disclosure outcomes will be processed, and reporting will be fully aggregated with no

	characteristic, which elevates confidentiality requirements and the risk of re-identification.	individual-level results.
Transparency about the trial and its aims distorts behaviour (impact evaluation)	Awareness that communication campaigns are being compared may influence employees' disclosure behaviour, compromising trial validity.	The communication campaigns will be delivered as standard Kier internal messages, with no reference to the evaluation. This avoids influencing employees' disclosure behaviour and preserves the validity of the trial. A full post-trial debrief will explain the study's purpose, methods and findings once there is no longer any risk of affecting behaviour.
Confidentiality and safeguarding in qualitative interviews (IPE)	Interviews may involve discussion of diversity disclosure, workplace inclusion and data-privacy concerns. Participants may disclose identifiable organisational details or sensitive personal information, and some topics may cause discomfort.	Interviews follow BIT safeguarding procedures; participants may skip questions, pause or stop at any time and request data deletion within 72 hours. If participants make workplace misconduct or wellbeing disclosures (e.g., bullying, harassment, discrimination) during employee interviews, BIT would consult its

		Safeguarding Leads (Nilufer Rahim and Martina Vojtkova), who would then contact Kier's Safeguarding Lead (Carly Coleman). Participants would be informed about this safeguarding pathway in the participant materials and at the start of the IPE interview so they can decide what they wish to disclose. Recordings and transcripts will be stored securely, accessed only by the BIT research team and deleted after analysis. Reporting will be fully anonymised, with quotations checked to remove any identifying details. Support resources will be signposted where appropriate.
Voluntary and informed participation in IPE and economic evaluation activities	The IPE and economic evaluation require direct contact with Kier staff. Because invitations may be sent by Kier, employees and implementation staff may feel obliged to participate or worry that declining could reflect negatively on them. Staff must clearly understand what participation involves and how their information will be	Participation will be strictly opt-in. BIT will receive personal details from Kier only for individuals who have explicitly agreed to be contacted for participation in the IPE and economic evaluation activities. All materials will emphasise voluntariness, withdrawal rights and non-impact on role and relationships at Kier. Consent will be proportionate for each activity (interview and/or cost

	used.	pro-forma). Identifiable details will be stored separately, used only for sampling and scheduling, and deleted once no longer needed.

Registration

This trial will be registered on the Open Science Framework (OSF) following the approval of this trial protocol. Registration will take place under embargo, such that the registration receives a time stamp but is not made publicly available until a specified date in order to avoid potentially contaminating the trial. The registration record will be updated with outcomes at the end of the trial.

7. Data protection

Data processing roles

BIT and Kier act as joint data controllers for this project. Data sharing is governed by the Data Sharing Agreement signed on 1st October 2025. Under this arrangement, Kier will provide BIT with data on diversity disclosure, while BIT will generate additional data through interviews and cost pro-formas conducted with Kier staff for the IPE and economic evaluation. BIT is responsible for the privacy notice covering any data it collects directly, and the key elements of this notice will be summarised verbally at the start of each activity. For the pseudonymised data supplied by Kier for the impact evaluation, Kier remains responsible for providing an appropriate privacy notice, as BIT has no direct relationship with Kier employees and relies solely on data previously collected by Kier.

Legal basis for processing data

Personal data: This project involves the processing of personal data from employees at Kier. BIT's legal basis for processing personal data is **legitimate interests.**[30] Specifically, BIT has a legitimate business interest in delivering this research that has been commissioned by YFF. The research project fulfils BIT's aims, including undertaking innovative research, evaluation and information activities that will deliver social impact. It is also aligned with the goal of YFF's What Works for Recruitment and Retention programme, to build a strong evidence base that helps employers nationwide adopt approaches that are both effective and equitable.

Special category data: This project also involves processing of special category data from Kier employees pertaining to gender identity, ethnicity, sexual orientation, religion and health status (disability status, neurodivergent status). BIT's legal basis for processing special category data in this project is for **research purposes**.[31] The processing of special category data is necessary because BIT's analysis specifically focuses on disclosure of diversity

[30] See Article 6 1(f) of General Data Protection Regulation (GDPR)
[31] See Article 9 2(j) of GDPR

characteristics, which include the characteristics above. The processing of special category data is also in the public interest because the project aims to improve internal equity, diversity and inclusion outcomes within Kier and advance equitable employment outcomes for young people by generating evidence of what works to improve employer practice.

Data protection

In order to protect the rights and interests of the data subjects, BIT has put in place a number of measures, including:

- Limiting data collection to what is strictly necessary for the purpose of the research
- Pseudonymising all ID variables (employee IDs) before data are shared from Kier to BIT
- Only allowing access to data on a need-to-know basis (i.e., to BIT researchers working on the project), within secure folders and workspaces
- Ensuring participants can withdraw from research, and explaining this clearly in all communications for activities where BIT is collecting data (qualitative fieldwork)
- Using informed consent for activities where BIT is collecting data (qualitative fieldwork)
- Anonymising all findings in reports and outputs so no individuals can be identified
- Retaining data only until 6 months after the end of the contract period for this project, and then destroying it securely (anticipated destruction date: April 2027)
- Complying with UK GDPR and BIT's internal data protection policies

As part of BIT's internal policies, a Data Protection Impact Assessment (DPIA) was also conducted.

8. Stakeholders and interests

Delivery team

The delivery of the interventions and extraction of relevant datasets will be done by Kier staff. In particular, Alexandra Damian (Diversity and Inclusion Coordinator) will set up the communications and the associated reminders on Power Automate and send them to relevant Kier employees, with the help of Susan Lucas (HR Systems Training Manager). Gareth Austin (HR People Analytics Manager) will extract and supply trial outcome data from MS Forms, while Craig Melvin (Emerging Talent Recruitment Manager) will support BIT with recruiting Kier employees for IPE activities.

Evaluation team

The evaluation will be performed by BIT, with Dr Jelka Stojanov (Project Manager) and Hannah Chappell (Lead Researcher) overseeing day-to-day delivery; Tim Hardy was the Lead Researcher during the initial feasibility study phase of this project. Strategic oversight and quality assurance will be provided by Shoshana Davidson, Dr Laure Bokobza and Nilufer Rahim. The wider project team also includes Miller Piggott and Dr Mona Joly, who will provide essential delivery and research support. Jonah Champaud (Evaluation Manager), Dan Muir (Principal Economist) and Katy Neep (Head of Employer Engagement & Partnerships) from YFF will provide contributions to the evaluation approach and will review key outputs.

Funding

BIT's work on this project is funded by YFF through the What Works for Recruitment and Retention programme.

Publications

Key written outputs from this project include:

- A feasibility study report
- This evaluation protocol
- A final evaluation report covering all results

- An employer-facing output covering key findings and implementation information for the employer audience

For more information on likely publication dates, please see the Timelines section.

9. Risks

Table 13 below summarises the main risks to the evaluation, with their assessed impact (I) and likelihood (L) rated as low (L), medium (M) or high (H), alongside adaptations already in place and mitigations that are recommended going forward.

Table 13: Risk register for the proposed trial

RISK	I	L	ADAPTATIONS (What has already been done to address this risk?)	MITIGATIONS (What is yet to be done to address this risk?)
Spillover effects from employees forwarding emails to peers or discussing content with one another in person	M	M	• Communication channel (i.e., individual email) has been carefully chosen to keep spillover risk low.	• In the IPE interviews, BIT will ask Kier employees from both trial arms whether they shared or talked about the communication campaigns with their colleagues, and if they did / if one of their colleagues did, whether that affected their propensity to disclose. • BIT will agree with Kier a dedicated,

				low-visibility support pathway (e.g., emailing inclusion@kier.co.uk) to ensure that employees encountering technical difficulties (e.g., being unable to access the MS Form) do not use company-wide or socially visible channels (e.g., group Teams chats or open forums). However, given the similarity between the two trial arms (both involve an email asking employees to disclose their information), if a Kier employee were to raise a question in a socially visible channel, other employees would be unlikely to infer that the poster had received different communications

				from their own.
Randomisation not implemented properly (i.e., incorrect group allocation)	H	L	• BIT has already scoped out several ways to verify randomisation implementation (e.g., randomisation review as part of IPE).	• BIT emails will be "seeded" into each trial arm, to ensure that communications are sent out correctly. • Emails will be sent in batches (1st batch: 500 email addresses; subsequent batches: 1500 email addresses each). Spot-checks will be conducted after each batch is distributed to ensure that randomisation has been implemented correctly. • After each communication cycle - initial communications and two reminders - BIT will review the send data to confirm that each email communication

				was sent to the expected set of employee IDs, in line with the initial randomisation. • If a small number of employees (e.g., <50 for the 16-24 group or <200 for the 25+ group) are sent the incorrect first email communication, these individuals will be moved to the other trial arm to ensure consistency in the subsequent reminder messages. Balance checks would be re-conducted to assess whether the change in individual assignment impacted distribution between groups. In addition, the analysis would be re-conducted with these individuals excluded as an

				added robustness check. • If a small number of employees (e.g., <50 for the 16-24 group or <200 for the 25+ group) correctly receive the first email for their assigned treatment arm but subsequently are sent reminder emails from the incorrect treatment arm, we would focus our analysis on disclosure in the week(s) after the first email has been sent but before the first reminder email has been distributed (as reminder emails will only be sent to employees who have not already disclosed their data). • In an unlikely scenario that randomisation fails, such that a large

				number or all employees receive the same communications campaign (rather than the campaign assigned at randomisation), then an impact evaluation will not be possible. In this case, the qualitative interviews conducted as part of the IPE will be expanded to capture employees' experience and perception of the communication campaigns.
Breach of sensitive data, especially due to various data owners sharing information	H	L	• A shared encryption method for key identifiers has been implemented across Kier data owners, ensuring consistent, secure	• All analyses will be carried out on pseudonymised datasets, meaning direct identifiers are removed and replaced with encrypted codes, with the original identifiers held separately and

			handling of data throughout the trial. • All data protection and sharing documentation (including the DPIA and DSA) has been agreed and signed in advance of the trial starting. • A secure, access-restricted data transfer process was tested during the feasibility study and will continue to be used during the trial.	never shared with the analysis team. All work will be undertaken within a secure environment.
Staff may feel uncomfortable disclosing diversity characteristic	M	M	• Communication campaigns in both trial arms include	• The MS Form will include clear introductory text explaining the purpose of the

s, particularly through MS Forms rather than Kier's usual HR system, or may be reluctant to re-disclose their diversity data			an explanation that Kier has temporarily switched from their original system employees are familiar with, to MS Forms. • Additionally, it has been agreed that the communication campaigns will be sent from a known Kier inbox (inclusion@kier.co.uk) to help employees recognise the request as legitimate. • To address broader concerns (e.g., privacy concerns),	data collection and why employees are being asked to provide their diversity information. This text will state that responses will be kept confidential and used only for anonymous reporting and trend analysis. Employees will also be reassured that they may select "prefer not to say" for any question they do not wish to answer. • Employees will be prompted to use inclusion@kier.co.uk to raise any questions or concerns. This contact route will be included in intervention materials and other internal communications related to the project (e.g., in the

			communication campaigns also assure employees that their data won't reach their manager and is only reviewed at group level, so they cannot be personally identified. • Previous disclosure data will be included as covariates in the impact evaluation analysis to capture potential perverse effects.	post-trial debrief). • Kier will ensure that any queries received via agreed channels in relation to the project are regularly monitored and responded to. • BIT will provide Kier with guidance on how to respond to anticipated FAQs that may be raised by employees. This will include an explanation as to why MS Forms was used in this trial and information on how data privacy is secured through the platform.
Difficulty recruiting for IPE qualitative activities	H	M	• BIT has completed initial IPE recruitment planning	• Kier employees who received one of the communication campaigns and

			during the feasibility study. Central Kier contacts have already been consulted on the steps involved in recruiting participants for the IPE activities. • Participant incentives for qualitative interviews have also been agreed with YFF.	are selected for an interview will receive simple, direct explanations covering what the interview involves, what data is shared and between whom, and that participation is voluntary and will not affect their employment at Kier. This will help address hesitation among employees, who may be unsure about how their data will be used, or have concerns about negative consequences. • All interviews will be short and scheduled at a time guided by the participant. Phone interviews will be offered for off-site employees. Interviews with employees who received one of the interventions

				will be scheduled as soon as possible after the trial ends. This will support recall.

10. Timeline

Table 14: Timeline

DATES	ACTIVITY	STAFF RESPONSIBLE / LEADING
Late June 2026	BIT has already completed randomisation and shared pseudonymised employee IDs assigned to trial arms with Kier. The pseudonymised IDs will be matched back to employee contact details by Kier so that communication campaigns can be distributed.	Kier (Craig Melvin) to match pseudonymised IDs back to employee contact details and share these with the relevant Kier colleagues (Alexandra Damian, Susan Lucas) who will send out communication campaigns.
W/c 29 June 2026	The content of the email communications, trial arm allocation, employee names and email addresses will be uploaded on Power Automate in preparation for sending out communication campaigns on 1 July 2026.	Kier (Alexandra Damian, Susan Lucas) to upload data on Power Automate, and schedule initial and follow-up communications.
July - September 2026	Impact evaluation analysis will take place. During this period, IPE interviews will also be conducted and cost information for the	Kier (Gareth Austin) to share the necessary MS Forms outcome data.

	economic evaluation (cost pro-formas) will be collected. The corresponding analyses will then follow.	BIT (Hannah Chappell and Dr Mona Joly) to conduct impact evaluation and economic evaluation analysis. Kier (Craig Melvin) to support the collection of cost information for the economic evaluation (i.e., to distribute cost pro-formas to colleagues BIT does not have a connection with). BIT (Miller Piggott and Jelka Stojanov), with the help of Kier (Craig Melvin) to recruit participants for IPE interviews. BIT (Miller Piggott and Jelka Stojanov) to conduct IPE analysis.
September - October	Drafting, reviews and edits of the final evaluation report	BIT to draft and edit the report in line with comments, YFF

2026		and Kier to review the report

Appendices

Appendix 1: Communication campaigns

Initial communications

Standard arm

Subject line: Request to colleagues: Please provide your diversity information

Dear colleague,

Here at Kier, we are committed to creating an inclusive workplace for all. As part of this commitment, we are currently updating our employee diversity records, and we are asking all colleagues to submit their diversity information.

This information will help us understand who works at Kier, what additional support we can offer and how we can continue improving as an organisation.

We recognise that colleagues from different backgrounds may face different challenges in the workplace. Collecting this information allows us to better understand these differences and ensure appropriate support is in place across the organisation.

Please note we will be utilising a Microsoft Form to collect this data on this occasion to ensure it is accessible and easy for everyone to use. This is an ideal opportunity for us to check the information we hold on record for you. We are therefore asking all employees to take some time to complete a new submission, even if you have previously provided your details in Oracle.

Please rest assured that all information will be treated confidentially. It won't be shared with your manager, and it will be securely stored and handled in line with Kier's data protection policies.

Please share your diversity information by the deadline on [deadline date].

We recognise some employees may have concerns and want to understand more about what happens to this data. We've therefore compiled a list of FAQs below. You can also take a look at our previous gender and ethnicity

pay gap reports to see how we use your data to make Kier a more inclusive place for everyone.

Please use the following link to access the Microsoft Form: [Link]

Thank you for your cooperation,

Inclusion Team

Frequently asked questions (FAQs):

Why am I being asked to share this information?

Kier is asking all employees to share their diversity information, so we have a more accurate and up-to-date picture of our workforce. This helps us understand the different experiences and needs of our people. Some of this information also helps us meet reporting requirements - for instance, we can use it to analyse and report on any pay gaps for different groups of staff - as well as to create internal learning and development opportunities for our staff.

How often can I update my diversity data?

We encourage you to check your information at regular intervals, to ensure we have the most accurate and up-to-date information. You can amend it as often as you like. Any changes to personal circumstances should be updated.

Who will be able to see my information?

All information will be kept strictly confidential. Access will be restricted to authorised HR personnel who need it for workforce reporting, analysis and monitoring purposes. The information will be handled in full compliance with Kier's data protection policies and relevant data protection legislation.

What happens if I don't want to share my information?

Sharing this information is entirely voluntary and there is no obligation to fill in the Microsoft Form. Each question also includes a 'prefer not to say' option, if there are any questions you would prefer not to answer.

Will my answers affect my role or opportunities at Kier?

No. This information is used exclusively to help Kier understand and support its workforce. It will not be used to make decisions about your role, performance or progression.

Where can I find more context?

You can find out more about Kier's work on inclusion on our [D&I SharePoint site] and through our past gender and ethnicity pay gap reports and updates from our staff inclusion networks.

Behaviourally enhanced arm

Subject line: Please take 3 minutes to share your diversity information

Dear [name],

Help us shape a Kier that works for everyone - including you. When we understand our workforce better, we can create support, benefits and opportunities that reflect your needs.

It only takes **three minutes**:

[Update your diversity information button]

Please share your diversity information by [deadline date].

We are using a Microsoft Form to collect this data on this occasion to ensure it is accessible and easy for everyone to use. This is an ideal opportunity for us to check the information we hold on record for you, so we need you to share your information again, even if you have already done this before in Oracle.

Why does this matter to you?

Your responses directly help us:

- Create benefits and support tailored to your needs and experiences
- Make sure our workplace support reaches everyone who needs it
- Build policies and processes that are shaped by your and your colleagues' perspectives

By sharing your data, you'd be joining a growing movement. Year on year,

more employees are choosing to share this information to help build fairer, more transparent workplaces.

Thank you for taking three minutes to share your diversity information and help us make Kier an inclusive place for everyone.

Many thanks,

[Relevant messenger, i.e., Kier's Sustainability Director]

Your information will be treated confidentially. Responses will always be combined and reviewed at a group level, so you will never be personally identified.

Reminder 1

Standard arm: Reminder 1

Subject line: Reminder: Please provide your diversity information

Dear colleague,

We recently contacted you regarding the update of our employee diversity records here at Kier. This is a reminder to complete and submit your diversity information if you have not already done so.

There are now [x] days remaining before the deadline on [deadline date].

We are using this opportunity to double-check the information held on Oracle, so we are therefore asking all colleagues to take some time to complete this Microsoft Form, even if you have previously provided your details in Oracle.

As a reminder, collecting this information allows us to understand who works at Kier, what additional support we can offer, and how we can keep improving as an organisation. All information will be treated confidentially, will not be shared with your manager, and will be securely handled in line with Kier's data protection policies.

Please use the following link to access the Microsoft Form and complete your submission: [Link]

If you have any questions, please refer to the frequently asked questions included in our email sent on [date of original email], or reply to this email.

Thank you for your cooperation,

Inclusion Team

Behaviourally enhanced arm: Reminder 1

Subject line: Reminder: Please take 3 minutes to share your diversity information

Dear [name],

We recently got in touch about sharing your diversity information - there are now [x] days before the deadline on [deadline date].

If you haven't had a chance yet, it only takes **three minutes**:

[Update your diversity information button]

By sharing, you're directly helping us create support, benefits and opportunities that reflect your needs and those of your colleagues - and you'd be joining a growing number of employees choosing to help build fairer, more transparent workplaces.

We are using this opportunity to double-check the information held on Oracle, so we need you to share your information again, even if you have already done this before in Oracle.

Thank you for your time - it really makes a difference.

Many thanks,

[Relevant messenger, i.e., Kier's Sustainability Director]

Your information will be treated confidentially. Responses will always be combined and reviewed at a group level, so you will never be personally identified.

Reminder 2

Standard arm: Reminder 2

Subject line: Final reminder: Please provide your diversity information

Dear colleague,

This is the final reminder to complete and submit your diversity information. There are only [x] days left before the deadline on [deadline date].

As a reminder, collecting this information helps us understand our workforce and ensure appropriate support is in place across Kier. All details are kept strictly confidential, will not be shared with your manager, and are securely handled in line with our data protection policies.

Please use the following link to access the Microsoft Form and complete your submission: [Link]

If you have any questions, please refer to the frequently asked questions included in our email sent on [date of original email], or reply to this email.

Thank you again,

Inclusion Team

Behaviourally enhanced arm: Reminder 2

Subject line: Final chance to share your diversity information

Dear [name],

This is your last chance - the deadline is in [x] days.

It only takes **three minutes** to share your diversity information and have a direct say in shaping the support, benefits and opportunities available to you and your colleagues at Kier:

[Update your diversity information button]

Thank you for taking a few moments to shape a Kier that works for everyone.

Many thanks,

[Relevant messenger, i.e., Kier's Sustainability Director]

All responses are strictly confidential, combined at a group level, and will never be used to identify you personally.

Appendix 2: Microsoft (MS) Form diversity questions

Section 1: About You

1. First Name (Required to answer; Text)
2. Last Name (Required to answer; Text)
3. Employee Number (Required to answer; Text)

Section 2: Ethnic Origin & Language

4. Ethnic Origin (Single choice)
    a. White - English, Welsh, Scottish, Northern Irish or British
    b. White - Irish
    c. White - Gypsy/Irish Traveller
    d. White - Roma
    e. White - Other
    f. Asian/Asian British - Chinese
    g. Asian/Asian British - Indian
    h. Asian/Asian British - Pakistani
    i. Asian/Asian British - Bangladeshi
    j. Asian/Asian British - Other
    k. Black / African / Caribbean / Black British - African
    l. Black / African / Caribbean / Black British - Caribbean
    m. Black / African / Caribbean / Black British - Other
    n. Mixed - White and Black African
    o. Mixed - White and Black Caribbean
    p. Other ethnic group - Arab
    q. Other ethnic group - Other
    r. Mixed - White and Asian
    s. Mixed - Other
    t. Prefer not to say
5. What is your main language? (Single choice)
    a. English
    b. Other (including sign language) - please state in next question
6. [If Q5 == "Other"] Please list your main language. (Text)

Section 3: Gender & Sexuality

7. Which gender identity do you most identify with? (Single choice)
    a. Female
    b. Male
    c. Gender Fluid
    d. Inter-sex
    e. Non-binary
    f. I use another term
    g. Prefer not to say
8. [If Q7 == "I use another term"] If you prefer to use another term to describe your gender identity, please define. (Text)
9. Do you consider yourself to be Transgender? (Single choice)
    a. No
    b. Yes
    c. Prefer not to say
10. What term best describes your Sexual Orientation? (Single choice)
    a. Heterosexual / Straight
    b. Gay
    c. Lesbian
    d. Bisexual
    e. I use another term
    f. Prefer not to say
11. [If Q10 == "I use another term"] If you prefer to use another term to describe Sexual Orientation, please define. (Text)

Section 4: Disability & Health

12. Do you consider yourself to have any physical or mental health conditions or illnesses lasting, or expected to last, 12 months or more? This can include, but is not limited to, diabetes, a mental health condition, arthritis, a heart condition, or a neurodivergent condition such as dyslexia, dyspraxia, ADHD, autism or Tourette's. If this applies to you, please answer Yes here - we'll also ask a short follow-up about neurodivergence specifically. A formal diagnosis is not required to answer yes below. (Single choice)
    a. Yes
    b. No

c. Prefer not to say

13. [If Q12 == "Yes"] Do any of your conditions or illnesses reduce your ability to carry out day to day activities? (Single choice)
    a. Yes, a lot
    b. Yes, a little
    c. Not at all
    d. Prefer not to say
14. Do you consider yourself to have a neurodivergent condition such as dyslexia, dyspraxia, ADHD, autism or Tourette's? You do not need to have a formal diagnosis to answer yes. (Single choice)
    a. Yes
    b. No
    c. Prefer not to say

Section 5: Social Mobility

15. What was the occupation of your main household earner when you were aged about 14? (Single choice)
    a. Clerical and intermediate e.g. secretary, office clerk, call centre agent, nursery nurse
    b. Long-term unemployed (claimed Jobseeker's Allowance or earlier unemployment benefit for more than a year)
    c. Middle or junior managers such as office manager, retail manager, bank manager, restaurant manager, warehouse manager
    d. Modern Professional such as teacher, nurse, physiotherapist, social worker, musician, police officer (sergeant or above), software designer
    e. Routine, Manual and Service such as machine operative, security guard, farm worker, HGV driver, cleaner, porter, packer, labourer, waiter or waitress, bar staff
    f. Semi-routine Manual and Service e.g. postal worker, caretaker, receptionist, sales assistant
    g. Senior Managers e.g. finance manager, chief executive
    h. Small business owners who employed less than 25 people such as corner shop owners, small plumbing companies, retail shop

owner, single restaurant or cafe owner, taxi owner, garage owner

i. Technical and craft such as motor mechanic, plumber, printer, electrician, gardener, train driver
j. Traditional Professional e.g. solicitor, doctor, accountant, scientist, engineer
k. Other such as retired, this question does not apply to me, I don't know
l. Prefer not to say
m.

Section 6: Religion

16. What is your religion or belief? (Single choice)
    a. Muslim
    b. Jewish
    c. Prefer not to say
    d. Sikh
    e. Buddhist
    f. Christian (including CoE, Catholic, Protestant and all other denominations)
    g. Hindu
    h. No religion
    i. Any other religion
17. [If Q16 == "Any other religion"] If you selected "any other religion" please detail. (Text)

Section 7: Military Connections

18. Are you ex-forces personnel? (Single choice)
    a. Yes
    b. No
    c. Prefer not to say
19. Are you currently serving as a reservist? (Single choice)
    a. Yes
    b. No
    c. Prefer not to say

Section 8: Caring Responsibilities

20. Are you currently a carer? A carer is someone who has significant caring responsibilities for an individual, not including routine childcare responsibilities. They may undertake activities such as helping with personal care, mobility or managing medication.
    a. Yes
    b. No
    c. Prefer not to say

Appendix 3: Power analysis code

```
## Script in R markdown

#List key assumptions for power calcs

alpha <- 0.05

power <- 0.8

n_characteristics <- 9 # amended to include ethnicity question

N_total_young <- 757

N_total_other <- 8885

prop_zeros_low <- 0.85 #this is 1 - response rate (5% in this line)

prop_zeros_med <- 0.70

prop_zeros_high <- 0.50

# We assume that conditional on clearing the hurdle, an employee will disclose

# an average of 8.1 (16-24s) or 6.9 (25+) out of 9 characteristics.

mean_outcome_young_non_zeros <- 8.1

mean_outcome_other_non_zeros <- 6.9


# Using our Binomial distribution rule for 8 traits with a 50% fill rate:

# SD = sqrt(9 * 0.9 * 0.1) =

sd_outcome_young_non_zeros   <- 0.9

# SD = sqrt(9 * 0.76 * 0.24) =

sd_outcome_other_non_zeros   <- 1.27


#3.1 Primary analysis - number of characteristics declared, full sample

#Make power calcs function for primary analysis

mdes_cont <- function(N_total, ## mdes_cont (values are assigned below)

                      n_arm,

                      n_characteristics,

                      prop_zeros,
```

```
                    mean_outcome_non_zeros,
                    sd_outcome_non_zeros,
                    alpha,
                    power){
                    #R_squared){ #ignore/set to 0 as no pre-data

  #Get mean and sd of overall outcome (including zeros)
  mean_outcome <- (1 - prop_zeros) * mean_outcome_non_zeros
  print(paste0("Baseline mean number of characteristics declared per employee = ",
round(mean_outcome,2)))

  var_outcome <- (1 - prop_zeros) * (sd_outcome_non_zeros^2) +
            (prop_zeros * (1 - prop_zeros) * (mean_outcome_non_zeros^2))
  sd_outcome <- sqrt(var_outcome)
  #               Here: - Var(X) = E(X^2) - (E(X))^2
  #                     - E(X^2) = (1-p) * E(X^2 | X>0)
  #                              = (1-p) * (Var(X | X>0) + E(X | X>0)^2)
  #                              = (1-p) * (sd^2 + mu_d^2)
  #                     - E(X) = (1-p)*mu_d
  #               So Var(X) = [(1-p) * (sd^2 + mu_d^2)] - ((1-p)*mu_d)^2
  #                         = [(1 - p) * (sd_d^2)] + [p*(1-p)*mu_d^2]

  #Get MDES
  nComparisons <- choose(n_arm, 2) #TH 23/10: this is assuming we'll compare all arms against each
other (should be noted
                          #when writing up)
  alpha_adj <- alpha / nComparisons ## BF adjustment
  d <- pwr.t2n.test(n1=floor(N_total/n_arm), n2=floor(N_total/n_arm), sig.level=alpha_adj,
power=power)$d ### calculating standardized effect size
```

```
  MDES <- d * sd_outcome

  print(paste0("MDES as n of characteristics per employee = ", round(MDES,2)))


  #***Convert MDESs into different interpretable units

  #% increase on baseline

  MDES_perc <- 100*MDES/mean_outcome

  print(paste0("MDES as % increase on baseline = ", round(MDES_perc,1)))


  #% of gap between mean and max disclosure (useful for interpretation)

  MDES_percent_gap <- 100*MDES/(n_characteristics - mean_outcome)

  print(paste0("MDES as % of gap to max disclosure = ",round(MDES_percent_gap,1)))


  #% of an arm who need to update all characteristics

  MDES_total_n_characteristics <- MDES * floor(N_total/n_arm)

  MDES_total_N_need_to_update_all <- MDES_total_n_characteristics/n_characteristics

  MDES_perc_in_arm_need_to_update_all <- 100 *
(MDES_total_N_need_to_update_all/floor(N_total/n_arm)) #converts headcount into a final
percentage of the treatment group (i.e., what percentage of the treatment arm needs to update all 8
characteristics for us to detect a statistically significant effect.)

  print(paste0("MDES as % of employees in arm who need to update all characteristics = ",

               round(MDES_perc_in_arm_need_to_update_all, 1)))

}

##B. Ages 16-24 only

mdes_cont(N_total_young, 2, n_characteristics, prop_zeros_low, mean_outcome_young_non_zeros,
sd_outcome_young_non_zeros, alpha, power)

mdes_cont(N_total_young, 3, n_characteristics, prop_zeros_low, mean_outcome_young_non_zeros,
sd_outcome_young_non_zeros, alpha, power)

mdes_cont(N_total_young, 4, n_characteristics, prop_zeros_low, mean_outcome_young_non_zeros,
sd_outcome_young_non_zeros, alpha, power)

mdes_cont(N_total_young, 5, n_characteristics, prop_zeros_low, mean_outcome_young_non_zeros,
sd_outcome_young_non_zeros, alpha, power)
```

mdes_cont(N_total_young, 2, n_characteristics, prop_zeros_med, mean_outcome_young_non_zeros, sd_outcome_young_non_zeros, alpha, power)

mdes_cont(N_total_young, 3, n_characteristics, prop_zeros_med, mean_outcome_young_non_zeros, sd_outcome_young_non_zeros, alpha, power)

mdes_cont(N_total_young, 4, n_characteristics, prop_zeros_med, mean_outcome_young_non_zeros, sd_outcome_young_non_zeros, alpha, power)

mdes_cont(N_total_young, 5, n_characteristics, prop_zeros_med, mean_outcome_young_non_zeros, sd_outcome_young_non_zeros, alpha, power)

mdes_cont(N_total_young, 2, n_characteristics, prop_zeros_high, mean_outcome_young_non_zeros, sd_outcome_young_non_zeros, alpha, power)

mdes_cont(N_total_young, 3, n_characteristics, prop_zeros_high, mean_outcome_young_non_zeros, sd_outcome_young_non_zeros, alpha, power)

mdes_cont(N_total_young, 4, n_characteristics, prop_zeros_high, mean_outcome_young_non_zeros, sd_outcome_young_non_zeros, alpha, power)

mdes_cont(N_total_young, 5, n_characteristics, prop_zeros_high, mean_outcome_young_non_zeros, sd_outcome_young_non_zeros, alpha, power)

##C. Ages 25+

mdes_cont(N_total_other, 2, n_characteristics, prop_zeros_low, mean_outcome_other_non_zeros, sd_outcome_other_non_zeros, alpha, power)

mdes_cont(N_total_other, 3, n_characteristics, prop_zeros_low, mean_outcome_other_non_zeros, sd_outcome_other_non_zeros, alpha, power)

mdes_cont(N_total_other, 4, n_characteristics, prop_zeros_low, mean_outcome_other_non_zeros, sd_outcome_other_non_zeros, alpha, power)

mdes_cont(N_total_other, 5, n_characteristics, prop_zeros_low, mean_outcome_other_non_zeros, sd_outcome_other_non_zeros, alpha, power)

mdes_cont(N_total_other, 2, n_characteristics, prop_zeros_med, mean_outcome_other_non_zeros, sd_outcome_other_non_zeros, alpha, power)

mdes_cont(N_total_other, 3, n_characteristics, prop_zeros_med, mean_outcome_other_non_zeros, sd_outcome_other_non_zeros, alpha, power)

mdes_cont(N_total_other, 4, n_characteristics, prop_zeros_med, mean_outcome_other_non_zeros,

```
sd_outcome_other_non_zeros, alpha, power)

mdes_cont(N_total_other, 5, n_characteristics, prop_zeros_med, mean_outcome_other_non_zeros,
sd_outcome_other_non_zeros, alpha, power)


mdes_cont(N_total_other, 2, n_characteristics, prop_zeros_high, mean_outcome_other_non_zeros,
sd_outcome_other_non_zeros, alpha, power)

mdes_cont(N_total_other, 3, n_characteristics, prop_zeros_high, mean_outcome_other_non_zeros,
sd_outcome_other_non_zeros, alpha, power)

mdes_cont(N_total_other, 4, n_characteristics, prop_zeros_high, mean_outcome_other_non_zeros,
sd_outcome_other_non_zeros, alpha, power)

mdes_cont(N_total_other, 5, n_characteristics, prop_zeros_high, mean_outcome_other_non_zeros,
sd_outcome_other_non_zeros, alpha, power)


#3.2 Exploratory analysis 1 (extensive margin) - whether declared any characteristics, full sample

#Make power calcs function for primary analysis

mdes_bin <- function(N_total,

                     n_arm,

                     prop_baseline,

                     alpha,

                     power){


  #Get MDES

  nComparisons <- choose(n_arm, 2) #TH 23/10: this is assuming we'll compare all arms against each
other (should be noted

                           #when writing up)

  alpha_adj <- alpha / nComparisons ## BF adjustment

  h <- pwr.2p2n.test(n1=floor(N_total/n_arm), n2=floor(N_total/n_arm), sig.level=alpha_adj,
power=power)$h ### calculating standardized effect size (comparing two proportions)

  print(paste0("Baseline (%) =", round(100*prop_baseline,2)))

  print(paste0("MDES as Cohen's h = ", round(h,2)))
```

```
  #Convert into pp and % increase in baseline

  p2 <- (sin(h/2 + asin(sqrt(prop_baseline))))^2 ## this transformation makes the variance uniform across
the scale (otherwise the variance shrinks close to 0% and close to 100%)

  MDES_pp <- 100*(p2 - prop_baseline)

  print(paste0("MDES as pp increase on baseline = ", round(MDES_pp,1)))


  MDES_perc <- MDES_pp/prop_baseline

  print(paste0("MDES as % increase on baseline = ", round(MDES_perc,1)))

}


##B. Ages 16-24 only

mdes_bin(N_total_young, 2, 1-prop_zeros_low, alpha, power)

mdes_bin(N_total_young, 3, 1-prop_zeros_low, alpha, power)

mdes_bin(N_total_young, 4, 1-prop_zeros_low, alpha, power)

mdes_bin(N_total_young, 5, 1-prop_zeros_low, alpha, power)


mdes_bin(N_total_young, 2, 1-prop_zeros_med, alpha, power)

mdes_bin(N_total_young, 3, 1-prop_zeros_med, alpha, power)

mdes_bin(N_total_young, 4, 1-prop_zeros_med, alpha, power)

mdes_bin(N_total_young, 5, 1-prop_zeros_med, alpha, power)


mdes_bin(N_total_young, 2, 1-prop_zeros_high, alpha, power)

mdes_bin(N_total_young, 3, 1-prop_zeros_high, alpha, power)

mdes_bin(N_total_young, 4, 1-prop_zeros_high, alpha, power)

mdes_bin(N_total_young, 5, 1-prop_zeros_high, alpha, power)


##C. Ages 25+

mdes_bin(N_total_other, 2, 1-prop_zeros_low, alpha, power)

mdes_bin(N_total_other, 3, 1-prop_zeros_low, alpha, power)
```

mdes_bin(N_total_other, 4, 1-prop_zeros_low, alpha, power)

mdes_bin(N_total_other, 5, 1-prop_zeros_low, alpha, power)

mdes_bin(N_total_other, 2, 1-prop_zeros_med, alpha, power)

mdes_bin(N_total_other, 3, 1-prop_zeros_med, alpha, power)

mdes_bin(N_total_other, 4, 1-prop_zeros_med, alpha, power)

mdes_bin(N_total_other, 5, 1-prop_zeros_med, alpha, power)

mdes_bin(N_total_other, 2, 1-prop_zeros_high, alpha, power)

mdes_bin(N_total_other, 3, 1-prop_zeros_high, alpha, power)

mdes_bin(N_total_other, 4, 1-prop_zeros_high, alpha, power)

mdes_bin(N_total_other, 5, 1-prop_zeros_high, alpha, power)

#3.3 Exploratory analysis 2 (intensive margin) - number of characteristics declared conditional on declaring

#Note: We're using a hurdle model here - in reality the second model in hurdle actually

#estimates a truncated model, but this requires simulations so am just running power calcs on a

#conditional analysis of those with outcome > 0 for simplicity, assuming no TE on the extensive margin.

- This means we can use mdes_cont but just change N_total and set prop_zeros==0

##B. Ages 16-24 only

mdes_cont(floor(N_total_young*prop_zeros_low), 2, n_characteristics, 0, mean_outcome_young_non_zeros, sd_outcome_young_non_zeros, alpha, power)

mdes_cont(floor(N_total_young*prop_zeros_low), 3, n_characteristics, 0, mean_outcome_young_non_zeros, sd_outcome_young_non_zeros, alpha, power)

mdes_cont(floor(N_total_young*prop_zeros_low), 4, n_characteristics, 0, mean_outcome_young_non_zeros, sd_outcome_young_non_zeros, alpha, power)

mdes_cont(floor(N_total_young*prop_zeros_low), 5, n_characteristics, 0, mean_outcome_young_non_zeros, sd_outcome_young_non_zeros, alpha, power)

mdes_cont(floor(N_total_young*prop_zeros_med), 2, n_characteristics, 0, mean_outcome_young_non_zeros, sd_outcome_young_non_zeros, alpha, power)

```
mdes_cont(floor(N_total_young*prop_zeros_med), 3, n_characteristics, 0,
mean_outcome_young_non_zeros, sd_outcome_young_non_zeros, alpha, power)

mdes_cont(floor(N_total_young*prop_zeros_med), 4, n_characteristics, 0,
mean_outcome_young_non_zeros, sd_outcome_young_non_zeros, alpha, power)

mdes_cont(floor(N_total_young*prop_zeros_med), 5, n_characteristics, 0,
mean_outcome_young_non_zeros, sd_outcome_young_non_zeros, alpha, power)


mdes_cont(floor(N_total_young*prop_zeros_high), 2, n_characteristics, 0,
mean_outcome_young_non_zeros, sd_outcome_young_non_zeros, alpha, power)

mdes_cont(floor(N_total_young*prop_zeros_high), 3, n_characteristics, 0,
mean_outcome_young_non_zeros, sd_outcome_young_non_zeros, alpha, power)

mdes_cont(floor(N_total_young*prop_zeros_high), 4, n_characteristics, 0,
mean_outcome_young_non_zeros, sd_outcome_young_non_zeros, alpha, power)

mdes_cont(floor(N_total_young*prop_zeros_high), 5, n_characteristics, 0,
mean_outcome_young_non_zeros, sd_outcome_young_non_zeros, alpha, power)

##C. Ages 25+

mdes_cont(floor(N_total_other*prop_zeros_low), 2, n_characteristics, 0,
mean_outcome_other_non_zeros, sd_outcome_other_non_zeros, alpha, power)

mdes_cont(floor(N_total_other*prop_zeros_low), 3, n_characteristics, 0,
mean_outcome_other_non_zeros, sd_outcome_other_non_zeros, alpha, power)

mdes_cont(floor(N_total_other*prop_zeros_low), 4, n_characteristics, 0,
mean_outcome_other_non_zeros, sd_outcome_other_non_zeros, alpha, power)

mdes_cont(floor(N_total_other*prop_zeros_low), 5, n_characteristics, 0,
mean_outcome_other_non_zeros, sd_outcome_other_non_zeros, alpha, power)

mdes_cont(floor(N_total_other*prop_zeros_med), 2, n_characteristics, 0,
mean_outcome_other_non_zeros, sd_outcome_other_non_zeros, alpha, power)

mdes_cont(floor(N_total_other*prop_zeros_med), 3, n_characteristics, 0,
mean_outcome_other_non_zeros, sd_outcome_other_non_zeros, alpha, power)

mdes_cont(floor(N_total_other*prop_zeros_med), 4, n_characteristics, 0,
mean_outcome_other_non_zeros, sd_outcome_other_non_zeros, alpha, power)

mdes_cont(floor(N_total_other*prop_zeros_med), 5, n_characteristics, 0,
mean_outcome_other_non_zeros, sd_outcome_other_non_zeros, alpha, power)

mdes_cont(floor(N_total_other*prop_zeros_high), 2, n_characteristics, 0,
mean_outcome_other_non_zeros, sd_outcome_other_non_zeros, alpha, power)

mdes_cont(floor(N_total_other*prop_zeros_high), 3, n_characteristics, 0,
```

mean_outcome_other_non_zeros, sd_outcome_other_non_zeros, alpha, power)

mdes_cont(floor(N_total_other*prop_zeros_high), 4, n_characteristics, 0,
mean_outcome_other_non_zeros, sd_outcome_other_non_zeros, alpha, power)

mdes_cont(floor(N_total_other*prop_zeros_high), 5, n_characteristics, 0,
mean_outcome_other_non_zeros, sd_outcome_other_non_zeros, alpha, power)

Appendix 4: Interview topic guides

Interview with Kier staff involved in intervention implementation

Please note that these interviews are intended to be conducted in paired or triad formats. Depending on who attends each session and their specific involvement in the intervention and trial, not all questions listed below will be applicable.

Section 1: Introduction and context setting (Anticipated duration: 5 minutes)

At the start of the interview, the BIT researcher will welcome the participants and thank them for taking part. The researcher will introduce themselves, BIT and BIT's collaboration with Kier. They will also explain the purpose of the interview.

The researcher will then explain that participation is entirely voluntary and that the participants may pause or stop the interview at any stage. They will reassure the participants that all information shared will be kept confidential, that findings will be reported anonymously, and that the data collected will be used only for research purposes. The researcher will also clarify how the information may appear in outputs, such as through anonymised quotations.

The researcher will inform the participants that the interview will be recorded to ensure their views are captured accurately. Before switching on the recorder, the researcher will ask the participants for consent to record the conversation. Once the recording has begun, the researcher will ask again for verbal confirmation of their consent to take part.

Finally, the researcher will check whether the participants have any questions before moving on to the next section.

Section 2: Roles, responsibilities and involvement in implementation (Anticipated duration: 10 minutes)

a. Introductory questions

- To begin with, could you briefly describe your role within Kier and your usual responsibilities within your team?
- Looking specifically at this project, which parts of the communication campaign's development, delivery, oversight or evaluation were you personally involved in (for example, reviewing and signing off the communications, sending the communications, extracting the data)?

b. Team structure and coordination

- How did responsibilities relating to the campaigns and the trial sit across different teams (e.g., Communications, HR, Diversity and Inclusion)?
- Thinking back to when the project was first introduced to you internally, how prepared did you feel to support its delivery?

Section 3: Randomisation, allocation and delivery processes (Anticipated duration: 15 minutes)

a. Allocation and message delivery (RQ1a, RQ2a): Could you talk me through how the randomisation of Kier employees to one of the two campaigns translated into day-to-day delivery?

- **Potential prompts (if needed):**
  - How were employee lists received and used?
  - How were the two communication campaigns prepared and sent?
  - How did you ensure the correct version (standard vs behaviourally enhanced) reached the correct employees?
  - How was the automation tool set up and used to send the communications to the right employees?
  - How did you deal with reminders?

b. Monitoring processes (RQ1a, RQ1b): How did communication delivery monitoring work in practice?

- **Potential prompts (if needed):**
    - Did you have any logs, tracking spreadsheets or delivery reports in place to check who had been sent each campaign?
    - Were any anomalies identified? How were these investigated? Were any issues escalated?

c. Challenges and unexpected issues (RQ1b): Were there any challenges, delays or unexpected issues during campaign delivery?

- **Potential prompts (if needed):**
    - Missing or incorrect contact details?
    - Scheduling issues?
    - Technical hurdles (e.g., with the automation tool or MS Forms links)?
    - Overlaps or confusion between multiple internal communications?
    - How were these issues resolved?

d. Impact on trial integrity (RQ1c, RQ2c): Do you think any of these issues could have affected the accuracy or consistency of delivery?

- **Potential prompts (if needed):**
    - Any situations where an employee might have received the wrong communication campaign (standard instead of behaviourally enhanced or vice versa)?
    - Delays in sending messages or reminders?
    - Any concerns about partial delivery or missed recipients?
    - Any risk of employees discussing the campaigns across groups

and influencing each other?

Section 4: Practicality, feasibility and operational experience (Anticipated duration: 15 minutes)

a. Delivery experience (RQ2, RQ4d): From an operational point of view, how easy or difficult was it to deliver the campaigns as planned?

- **Potential prompts (if needed):**
    - Any parts that ran particularly smoothly?
    - Any stages that took more time, people or back-and-forth than expected?

b. Facilitators and barriers (RQ2a): What factors helped support delivery, and what factors hindered it?

- **Potential prompts (if needed):**
    - The automation tool?
    - MS Forms?
    - How well teams communicated and handed work over to one another?
    - Clarity of instructions?
    - Staffing capacity?
    - Accuracy of employee data?
    - Competing organisational priorities?

c. Implementer feedback (RQ2d): Did you receive any feedback from colleagues or employees about the communications while the campaign was live?

- **Potential prompts (if needed):**
    - Queries or concerns raised?
    - Requests for clarification?

- Positive reactions or appreciation?

d. Improvements and scalability (RQ2b): Thinking about future roll-outs, what changes - if any - would make these campaigns easier or more efficient to deliver?

- **Potential prompts (if needed):**
  - Changes to the wording, layout or templates of the emails?
  - Changes to the steps involved in preparing, sending or monitoring the campaigns?
  - Additional support or guidance needed?

e. Staff perceptions of burden and acceptability (RQ4d): Overall, how practical and acceptable did the campaigns feel from your perspective?

- **Potential prompts (if needed):**
  - Time and effort the campaigns added on top of your usual workload?
  - How well the tasks fit alongside the way your team normally works?
  - Willingness to deliver again?

f. Data / IT experience (RQ1b, RQ2c)

- From your perspective, how well did existing data / IT systems support the campaigns?
  - **Potential prompts (if needed):**
    - Data accuracy?
    - Extracting the diversity-disclosure responses from MS Forms?
    - Pseudonymising the data and matching BIT's pseudonymised IDs to Kier records?
- What challenges, if any, arose when preparing or checking data for

this project?

- **Potential prompts (if needed):**
  - Missing or ambiguous data?
  - Turnover or leavers?

- Did any system issues (e.g., delays, extraction problems, access restrictions) have the potential to affect trial outcomes or the consistency of delivery?
- How easy or difficult was it to extract the final diversity-disclosure dataset from MS Forms for the evaluation?

Section 5: Mechanisms and broader reflections (Anticipated duration: 10 minutes)

a. Mechanisms in the ToC (RQ3a): Based on your interactions with employees or colleagues, do you think the campaigns helped:

- (both arms) improve understanding of why Kier collects diversity data?
- (both arms) make disclosure feel easier?
- (both arms) keep disclosure top-of-mind through reminders?
- (both arms) reduce concerns about privacy, discrimination or relevance?
- (both arms) create a sense of urgency to act rather than delay, through the deadline?
- (behaviourally enhanced arm) feel more personally relevant through being addressed by name and coming from a relevant sender?
- (behaviourally enhanced arm) make the benefits feel tangible and personal by framing them around the individual rather than around Kier?

b. Differences by message type (RQ3a, RQ3b): Did you notice any

differences in how colleagues responded to the standard communications versus behaviourally enhanced communications?

c. Moderators influencing mechanism strength (RQ3b): Do you think anything made the campaigns more or less effective for some employees than others?

- **Potential prompts (if needed):**
    - Ease of accessing and completing the MS Form?
    - Previous experience updating data (e.g., in Oracle)?
    - Views on data privacy?
    - Whether being asked to submit via MS Forms (rather than Oracle) affected trust and willingness?

Section 6: Process mapping and time spent on implementation (Anticipated duration: 15 minutes)

This section supports the economic evaluation. The aim is to capture the time involved in preparing and delivering the campaigns, broken down into discrete tasks. It covers two things: the time Kier actually spent *delivering* the campaigns (intervention delivery), and the time it would take another organisation to *adapt* these materials (intervention development).

a. Completing the cost pro-forma (individually): The researcher first explains how the cost pro-forma works and what each section is asking for. Each participant is then given 3-5 minutes to fill it in individually, recording the tasks they were involved in and their own estimates of time. Completing it independently first means each person commits their own view before the group discussion, reducing the risk of estimates anchoring on whoever speaks first.

b. Discussing the pro-forma (jointly): Once everyone has filled theirs in, we discuss the entries together - comparing how each person approached the tasks, talking through the estimates, and identifying anything that was missed. Could you each walk me through what you recorded, starting with the main tasks you were involved in and roughly how long they took and how often?

Follow-up probes (to add detail, reconcile differences, or fill gaps):

- *Setup and preparation*
    - Reviewing or inputting on the communication campaign materials
    - Coordinating with other teams (e.g. communications, HR, inclusion)
    - Verifying or signing off final versions
    - Setting up the MS Form
    - Checking employee lists, and matching pseudonymised IDs to contact details
- *Delivery*
    - Setting up the initial emails and the two reminders on Power Automate
    - Preparing or uploading mailing lists
    - Sending the communications, including any difference in effort between the standard and behaviourally enhanced arms (e.g. personalisation)
    - Monitoring delivery (e.g. bounce-backs or failed sends)
- *Data*
    - Extracting diversity-disclosure responses from the MS Form
    - Pseudonymising the data and preparing datasets for BIT
- *Other*
    - Responding to questions, feedback or clarifications from employees or colleagues
    - Any troubleshooting or unexpected issues

To close out delivery:

- Looking at what you've each recorded, is anything missing, or anything

you'd revise having talked it through?

- Which tasks were done by one person versus shared across the team or other teams?
- Did setting up and sending the two arms differ in the time they took? If so, where did the difference come from?

c. Intervention development - adapting the materials for another organisation: Separately, we'd like to understand what it would take for someone in a role like yours, *at a different organisation*, to adapt the materials produced for this trial - for example the email and reminder templates - to their own context. We're interested in the time to *adapt and reuse* what already exists, not the time it took to design these resources from scratch.

- Thinking about the templates and materials from this trial, if you were handed them at another organisation, what steps would you go through to adapt them for use there?
- Roughly how long would each of those steps take?
- What would make that quicker or slower - for instance, existing systems, sign-off processes, or the need to involve other teams?

Interview with Kier employees receiving the interventions

Section 1: Introduction and context setting (Anticipated duration: 3 minutes)

At the start of the interview, the BIT researcher will welcome the participant and thank them for taking part. The researcher will introduce themselves, BIT and BIT's collaboration with Kier. They will also explain the purpose of the interview.

The researcher will then explain that participation is entirely voluntary and that the participant may pause or stop the interview at any stage. They will reassure the participant that all information shared will be kept confidential, that findings will be reported anonymously, and that the data collected will be used only for research purposes. The researcher will also clarify how the information may appear in outputs, such as through anonymised quotations.

The researcher will inform the participant that the interview will be recorded to ensure their views are captured accurately. Before switching on the recorder, the researcher will ask the participant for consent to record the conversation. Once the recording has begun, the researcher will ask again for verbal confirmation of their consent to take part.

Finally, the researcher will check whether the participant has any questions before moving on to the next section.

Interviewer note: *Sections 2 to 4 below rely on the participant remembering the email. If, at any point, it becomes clear that the participant has no recollection of receiving or reading the email, do not continue working through the recall-based questions in Sections 2, 3 and 4. Reassure the participant that this is completely fine and helpful to know in itself, and move directly to the "think-aloud" walkthrough in Section 5, where they will be shown the email and can react to it fresh. Questions about sharing or discussing the email (Section 4a) and about reactions to the email and form can then be picked up during or after the walkthrough.*

Section 2: Reactions to and comprehension of the communication campaigns (Anticipated duration: 7 minutes)

a. Introductory questions:

- Do you remember receiving any recent emails at Kier asking you to disclose your diversity information by completing an MS Form?
- Do you recall whether you completed the form with any information?
- Do you remember anything about who the email was from?
- Can you tell me whether you work mainly on-site or in the office?

b. Invitation to share communication: The researcher will ask the participant to search their inbox for the email (researcher will give them the date the email was sent as well as the email address it was sent from) and forward it for the interview. If they cannot find it, the researcher will show it later in Section 5.

c. Initial impressions (RQ3a):

- Do you remember your first reaction when you noticed or opened the email?
- How did the email make you feel at the time?

b. Message comprehension (RQ3a): How clear did you find the email?

- **Potential prompts (if needed):**
  - What did you understand about why Kier collects diversity information?
  - What did you understand about how this information is used?
  - Was anything unclear, unexpected or confusing?

c. Mechanisms (RQ3a, RQ3b): Did the message change how you felt about disclosing your diversity data in any way?

- **Potential prompts (if needed):**
  - Did it help you understand why Kier is asking for this information?
  - Did it make you less worried about who would see your information or how it would be used?
  - Did it make disclosure feel more relevant or worthwhile to you personally?
  - Did the deadline make you feel you should act sooner rather than leave it?

Section 3: Factors shaping behaviour and response (Anticipated duration: 5 minutes)

a. Influences on behaviour (RQ3b, RQ4a, RQ4b): What made you decide to disclose (or not disclose) your diversity information?

- **Potential prompts (if needed):**
  - Having the time, or being too busy when the email arrived?

- How easy or hard it was to open and complete the MS Form?
- How comfortable you felt sharing this information?
- Other tasks taking priority?
- Whether the request felt relevant to you or your role?
- Not being sure what happens to the data after you submit it?

Section 4: Sharing, views on the communication campaigns and suggestions for improvement (Anticipated duration: 5 minutes)

a. Sharing and discussion (RQ1b): Did you talk about the email or the request to share diversity information with anyone else at Kier?

- **Potential prompts (if needed):**
  - Did you mention it to, or discuss it with, colleagues or your manager?
  - Did anyone forward you the email, or did you forward it to anyone?

b. Tone, clarity and relevance (RQ4a, RQ4b):

- From memory, how did you find the tone and clarity of the email?
- Did the email feel relevant to you and your role?
- What do you remember about the sender of the email?

c. Unintended consequences (RQ3b, RQ4c): Do you remember if there was anything about the email that caused confusion, hesitation or irritation?

Section 5: "Think-aloud" walkthrough (Anticipated duration: 10 minutes)

a. Communication (RQ3a-b, RQ4a-c): The researcher shows the participant the exact email they received. The participant is then asked to talk through their reactions and reasoning as they re-read it.

- **Potential prompts (if needed):**
  - What stands out most strongly?

- What, if anything, in this email encouraged or discouraged you from disclosing your diversity information?
    - Any parts you ignored, misunderstood or found helpful?
- Did any wording affect your trust, comfort or motivation?
- What, if anything, would make this email more helpful or motivating?
    - Different wording or framing?
    - Different sender?
    - More explanation about what happens to the data?

- Time permitting, repeat with one, or both of the reminders
    - Prompt:
        - What are your thoughts on receiving reminders for ongoing Kier initiatives?
        - How do you feel about the tone and clarity of the reminder(s)?

b. MS Forms (RQ3b, RQ4a-c): The researcher shows the participant the MS Forms pathway (the link in the email → the MS Form → the questions, step by step → the submission/confirmation screen). The participant is then asked to talk through how they would navigate it (or how they did previously).

- **Potential prompts (if needed):**
    - What did you expect to see when you clicked the link in the email?
    - Which parts of the form felt easy or intuitive?
    - Which parts felt confusing, long or inconvenient?
    - Did anything about the form put you off sharing your information?
    - Did filling in an MS Form feel unusual or unexpected in any

way?

- Did being asked to provide information you thought Kier might already hold affect whether you filled it in?
- If you opened the form but didn't share your information, what made you stop?
- If you didn't open the form at all, what would have made you more likely to click the link and complete it?