Blackpool Teaching Hospitals
NHS Foundation Trust

Screening of Health Care Workers for Tuberculosis (TB)

Unique Identifier:	CORP/POL/249				
Version Number:	3				
Type of Update / Status:	Ratified with Minor / No Technical Changes				
Division and Department:	Occupational Health, Workforce				
Author / Originator and Job Title:	Kerrie Chesters- OH Nurse Manager Clare Partington- OH Nurse Advisor				
Replaces:	CORP/POL/249, Version 2.1, Screening of Health Care Workers for Tuberculosis (TB)				
Description of amendments:	Review date reached and changes in processes in OHD.				
Approved by:	Whole Health Infection Prevention & Control (WHIPC) Committee Meeting				
Approved Date:	08/02/2022				
Issue Date:	08/02/2022				
Review Date from Date of Approval:	1 Year ☐	2 Years ☐	3 Years ☒ 08/02/2025	4 Years ☐	5 Years ☐

Version Control Sheet			
This must be completed and form part of the document appendices each time the document is updated and approved			
Date dd/mm/yy	**Version**	**Author**	**Reason for changes**
	3	Kerrie Chesters- OH Nurse Manager Clare Partington- OH Nurse Advisor	Review date reached and changes in processes in OHD.

Consultation / Acknowledgements with Stakeholders		
Name	**Designation**	**Date Response Received**
All clinical team	Occupational Health Governance group	20th October 2021
Sharon Mawdsley	Infection Prevention Team	
Richard Cardwell	TB Lead specialist. Lancashire & South Cumbria	2th October 2021
Dr Syed	TB Lead	27th October 2021
John Sweeney	Consultant	22/11/2021

CONTENTS

1 Introduction / Purpose

The aim of this policy is: To ensure that all staff who have clinical contact are protected from contracting Tuberculosis (TB) in so far as is possible. To ensure that new staff are not infected with TB To ensure that staff with clinical contact with patients do not transmit TB to patients.

2 General Principles / Target Audience

This policy applies to all managers and staff employed by the trust and locum / agency staff or staff employed by contractors on behalf of the trust. It also includes students not directly employed by the trust who maybe on placement. It also applies to volunteers.

3 Definitions and Abbreviations

BCG	Bacillus Calmette-Guerin Vaccine
HCW	Health Care Worker – any person in a health care setting who has patient contact
High Incidence Area	An area with greater than 40 cases per year per 100,000 head of population
HIV	Human Immunodefiency Virus
HPA	Health Protection Agency
IGT	Interferon Gamma Test
IV	Intravenous
Suspicious Symptoms	See Appendix 1
TB	Tuberculosis
TST	Tuberculin Skin Test (Currently Mantoux)
WHO	World Health Organisation

4 Policy

4.1 Pre-Employment Screening

The protection of staff and patients begins with pre-employment screening. All new employees who will have contacts with patients or clinical specimens must have a pre-employment assessment. People who are on work placements and other short-term placements, (e.g., less than three weeks will be dealt with on a case by case basis). The pre-employment assessment will include:

- Recording any history or symptoms of TB
- Any risk factors for TB
- Documentary evidence of TB skin testing and previous Bacillus Calmette-Guerin Vaccine (BCG) noting if BCG scar present

A BCG scar check (if required) must be carried out by an Occupational Health Nurse or Doctor and not rely on an employee's personal assessment.

Any staff with suspicious symptoms must have a medical assessment and possible further tests / investigations to exclude active TB.

All new staff must be provided with information on TB symptoms and when to seek medical advice (Appendix 1)

4.2 NICE Guidelines

In March 2006 NICE published (1) initial guidelines recommending different screening procedures for individuals arriving from areas where TB incidence rates are greater than 40 per 100,000 per year, and employees from areas with incidence rates below this threshold. The former are classed as “New Entrants”. This guidance was updated in January 2016 (8).

Employees new to the NHS who will be working with patients and/or clinical specimens must not start work until they have completed a TB health screen or health check or provided satisfactory documentary evidence of such screening within the preceding 12 months.

Screening for latent tuberculosis in a new NHS employee who is a new entrant from a high-incidence country, or has had contact with patients in settings with a high tuberculosis prevalence

Caution should be exercised when assessing some individuals from areas within the UK where the prevalence of TB is also above 40/100,000. In particular, there are several boroughs in London and the Midlands that report an increased prevalence of TB. Further information can be obtained from

- Tuberculosis (TB) in England: surveillance data - GOV.UK (www.gov.uk) (2) last accessed 13/10/2021

Caution should be exercised when assessing some individuals from areas within the UK where the prevalence of TB is also above 40/100,000. In particular, there are several boroughs in London and the Midlands that report an increased prevalence of TB. Further information can be obtained from

- Tuberculosis (TB) in England: surveillance data - GOV.UK (www.gov.uk) (3) last accessed 13/10/2021

The screening procedure for this group of new employees is summarised in Appendix 2.

Please refer also to the online version of the NICE pathway with detailed guidance.

- http://pathways.nice.org.uk/pathways/tuberculosis (4) last accessed 13/10/2021

Screening for latent tuberculosis in a new NHS employee who is not a new entrant from a high-incidence country, has not had a BCG, and will have contact with patients or clinical specimens

The screening procedure for this group of employees is summarised in Appendix 3.

4.3 Screening Staff with Mantoux

The table below shows the recommended action based on the Mantoux reading for a new NHS employee who is not a new entrant from a high-incidence country, has not had a BCG, and will have contact with patients and clinical specimens.

Mantoux Result	**Action**
No previous BCG <6mm	After individual risk assessment for HIV, Advise BCG
>= 6mm	IGT, Chest X-ray and discuss with doctor

4.4 BCG Vaccination

BCG should not be administered to previously vaccinated individuals, as there is an increased risk of adverse reactions and no evidence of additional protection.

Evidence of previous BCG vaccination includes

- Documentary evidence or
- A clear reliable history of vaccination or
- Evidence of a characteristic scar

Determining a reliable history of BCG vaccination may be complicated by

- Absent or limited documentary evidence
- Unreliable recall of vaccination
- Absence of a characteristic scar in some individuals vaccinated intradermally
- Absence of a characteristic scar in individuals vaccinated percutaneously
- Use of non-standard vaccination sites

Individuals with an uncertain history of prior BCG vaccination must have a Mantoux test before being given BCG.

Employees must be offered BCG vaccination whatever their age if they have contact with patients and/or clinical specimens, are Mantoux negative (<6mm) and have not previously been vaccinated.

BCG does not provide full protection against infection. Therefore the importance of reporting possible symptoms of TB must be re-emphasised.

4.5 HIV and BCG Vaccination

BCG is contra indicated in HIV or other conditions that cause immunosuppression. All HCW who are offered BCG will be counselled on the risk of BCG and HIV infection.

Groups that may be considered at increased risk of HIV may include but are not limited to the following;

- Anyone who has ever had sex with someone from a high HIV prevalence country (such as sub-Saharan Africa, parts of Asia and Eastern Europe)
- Anyone that has received a blood transfusion, transplant or other risk-prone procedures in countries that do not have strong screening for HIV
- People who inject drugs and share equipment
- Men who have unprotected sex with men

It is considered reasonably safe to give BCG vaccine without prior HIV test, to employees from low HIV prevalence countries who do not have any of the risk factors mentioned above.

Mantoux negative individuals from countries / groups with a high prevalence of HIV infection (e.g. sub-Saharan Africa, parts of Asia and Eastern Europe) will be asked to have a HIV test before BCG vaccination especially since Mantoux tests, in the presence of immunosuppression may be falsely negative. The final decision on whether to give BCG in these individuals will be made by the occupational health professional.

4.6 Refusal of BCG Vaccination

If BCG vaccination is refused, the risks will be explained and the refusal recorded in the Occupational Health records.

There may be a need to restrict the area of work of staff who refuse to be vaccinated; however, the employer will need to consider each case individually in consultation with Occupational Health.

4.7 Latent TB

Latent TB infection may activate in later life especially if an individual's immune system has become weakened, e.g., by HIV, chemotherapy, steroid treatment, or in old age.

A positive Mantoux and/or IGT suggests the presence of latent TB or active disease. Staff with a positive test should have a Chest X-ray and be referred by Occupational Health to chest clinic for exclusion of active disease and consideration of treatment for latent TB.

It is recommended that the HCW is counselled by Occupational Health and informed of the implications of the positive test, in particular the risk of developing active disease in the future especially in the presence of immunosuppression.

An asymptomatic employee with a positive Mantoux test and/or IGT and a normal Chest X-ray who is not treated for latent infection or refuses treatment will be advised that he/she has dormant infection with a small risk of possible reactivation to active disease in the future. The employee should be reminded of the prompt reporting of symptoms suspicious of TB. With consent the employees General Practitioner should be informed by Occupational Health.

4.8 Responsibilities of HCW

All HCW have an ethical and legal duty to protect the health of their patients and maintain confidentiality. Staff with symptoms compatible with TB must seek advice from Occupational Health or their own doctor so that they do not expose patients or colleagues to infection.

Occupational Health will issue an annual reminder, via the HR Department, of the symptoms of TB which shall be sent to all employees to maintain awareness of the symptoms suggestive of active disease, (this could be sent with the wage slips).

4.9 Exposure of Staff to TB at Work

On being notified of a positive case of infectious TB on a ward, occupational health will liaise with the ward / area manager who will identify all likely staff contacts so that Occupational Health can check vaccination records of staff and send one-off reminders of symptoms to staff, and take further action if appropriate.

5 References and Associated Documents

1. **NICE.** Tuberculosis - NICE guideline [NG33]. [Online] Last updated: September 2019. [Cited: 22 02 2022.] https://www.nice.org.uk/guidance/ng33.

2. **Public Health England.** Tuberculosis by country: rates per 100,000 people. [Online] Last updated 20/10/2020. [Cited: 15 11 2021.] https://www.gov.uk/government/publications/tuberculosis-tb-by-country-rates-per-100000-people.

3. —. Tuberculosis (TB) in England: surveillance data. [Online] Last updated 13/11/2020. [Cited: 15 11 2021.] https://www.gov.uk/government/publications/tuberculosis-tb-in-england-surveillance-data.

4. **NICE.** Tuberculosis Pathway. [Online] [Cited: 22 02 2022.] https://pathways.nice.org.uk/pathways/tuberculosis.

5. **Public Health England.** Immunisation against infectious disease (includes 'the Green Book'). [Online] Last updated 2 September 2014. [Cited: 22 07 2020.] https://www.gov.uk/government/collections/immunisation-against-infectious-disease-the-green-book.

6. **Department of Health and Social Care.** New healthcare workers: clearance for hepatitis B and C, TB, HIV. [Online] Published 16 March 2007. [Cited: 22 02 2022.] https://www.gov.uk/government/publications/new-healthcare-workers-clearance-for-hepatitis-b-and-c-tb-hiv.

7. **Public Health England.** TB Strategy Monitoring Indicators. [Online] 2020. [Cited: 22 02 2022.] https://fingertips.phe.org.uk/profile/tb-monitoring/.

Appendix 1: Information about TB and BCG for Health Care Workers

Tuberculosis (TB) is an infectious disease caused by a bacterium called Mycobacterium tuberculosis. It usually affects the lungs (pulmonary TB) but can affect other parts of the body.

Although the risk of a health care worker (HCW) contracting the disease in the course of their work is considered to be small, the risk still exists.

An infectious HCW can spread infection to patients. Some patients e.g., children and immunocompromised patients may be particularly vulnerable and become very seriously ill, even resulting in death.

Infection is usually acquired by breathing in the TB bacteria that have been coughed / sneezed into the air from the lungs of an infected person.

BCG vaccination does not provide 100% protection against infection. If you have not previously had BCG vaccination, the occupational health nurse will discuss this with you and if necessary, carry out appropriate tests to determine whether or not you require the vaccine.

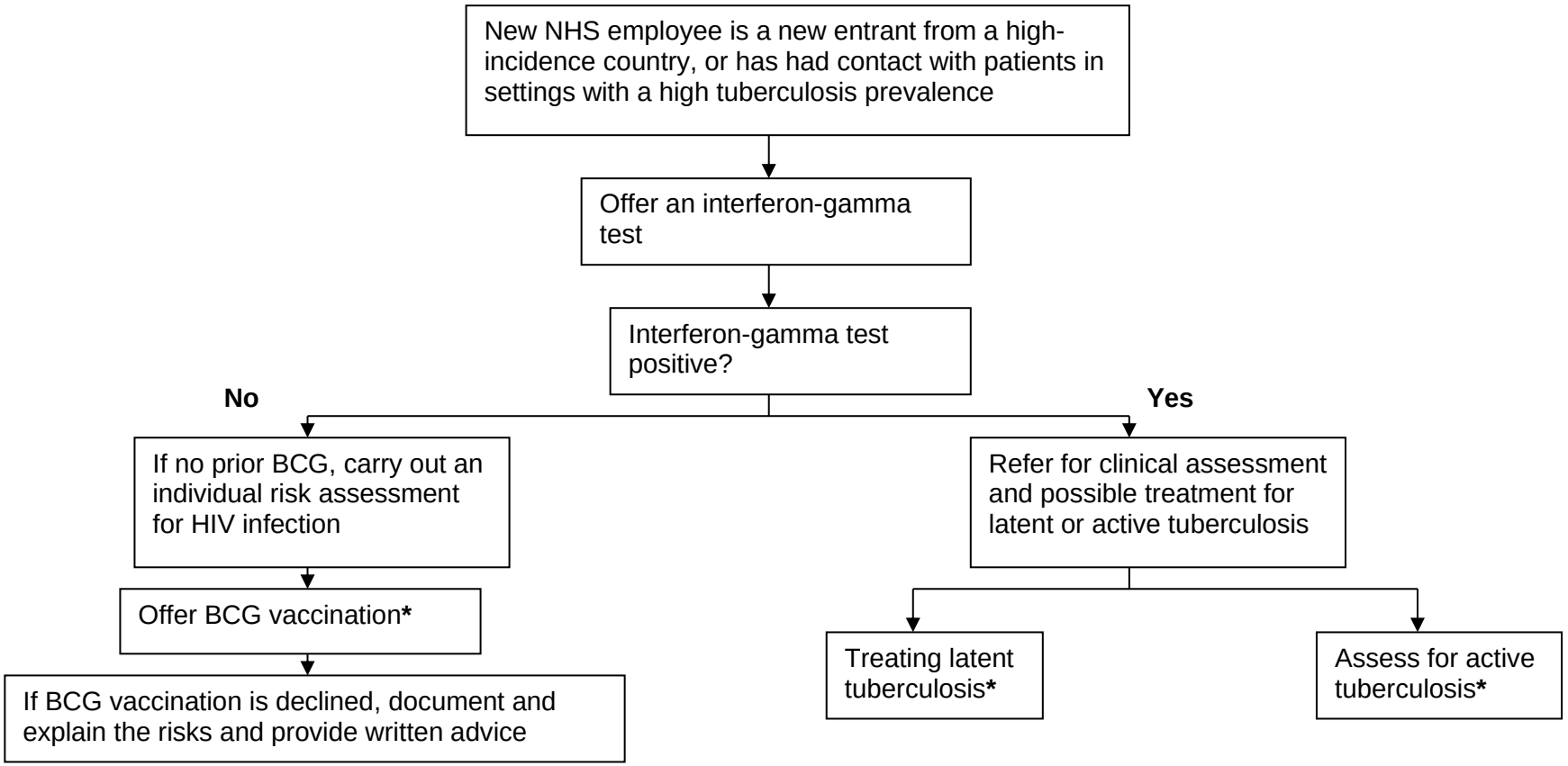
In the unlikely event that you contract TB, it can be treated with antibiotics taken over six months or more dependent on the type of TB and your response to treatment.

It is therefore very important that you should seek medical advice if you suffer from any of the following:

- Cough lasting more than 3 weeks
- Coughing up blood
- Chest symptoms including chest pain and shortness of breath
- Unexplained weight loss
- Intermittent or persistent fever or night sweats

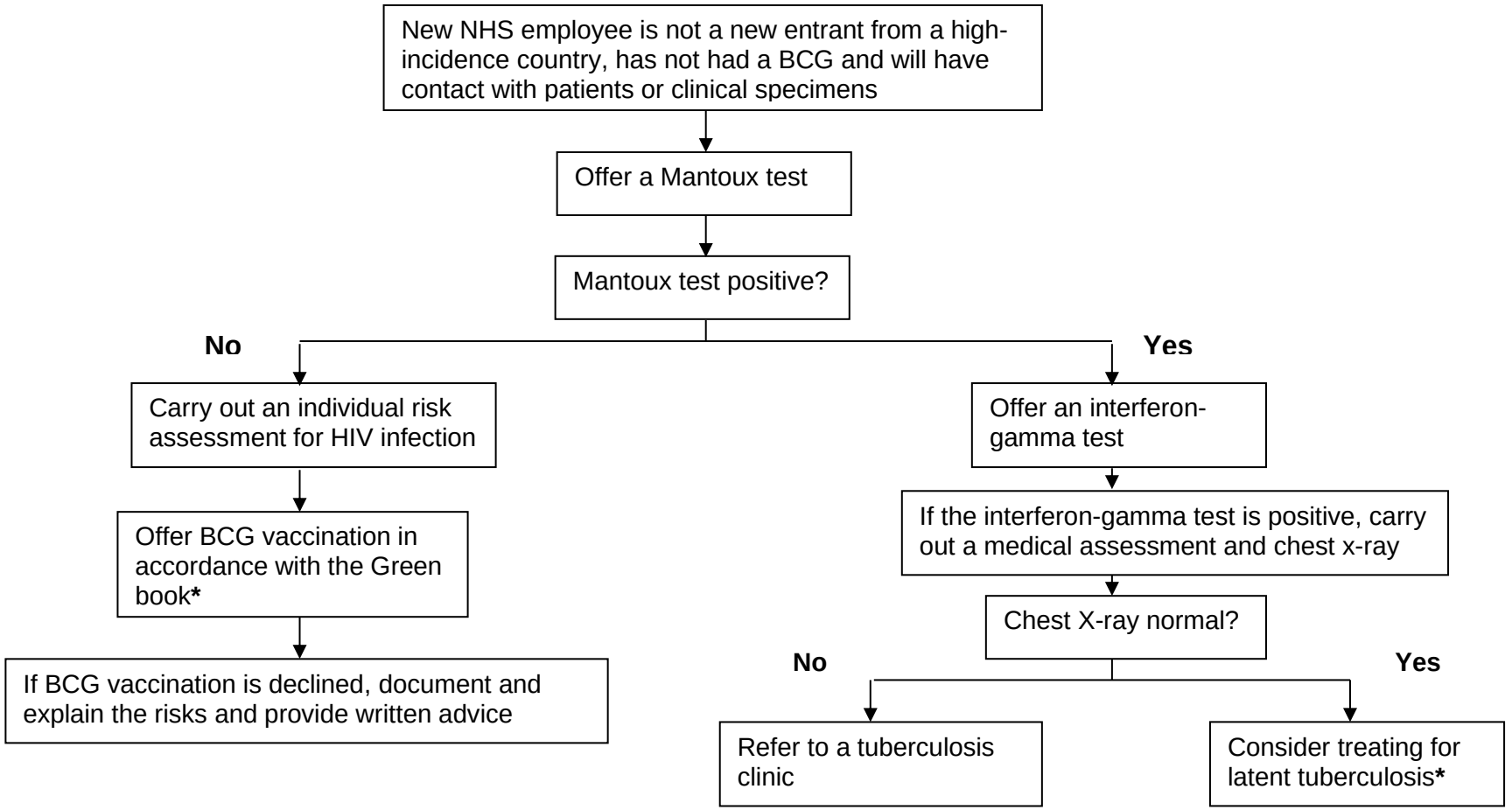
Please do not hesitate to contact the Occupational Health Department on ext. 57950 or if telephoning externally 01253 957950.

Appendix 2: Screening for latent tuberculosis in a new NHS employee who is a new entrant from a high-incidence country, or has had contact with patients in settings with a high tuberculosis prevalence



***** refer to the online version of NICE pathway with detailed guidance http://pathways.nice.org.uk/pathways/tuberculosis and follow the flow diagram through “prevention and screening in the workplace” and then “New NHS employees or Health Care Workers”. This takes you to the flow diagram above (Accessed 13/10/2021)

Appendix 3: Screening for latent tuberculosis in new NHS employees who is not a new entrants from a high-incidence country, has not had a BCG, and will have contact with patients or clinical specimens



***** refer to the online version of NICE pathway with detailed guidance http://pathways.nice.org.uk/pathways/tuberculosis and follow the flow diagram through “prevention and screening in the workplace” and then “New NHS employees or Health Care Workers”. This takes you to the flow diagram above (Accessed 13/10/2021)

Appendix 4: Equality Impact Assessment Form

Department	Organisation Wide	**Service or Policy**	Policy	**Date Completed:**	

GROUPS TO BE CONSIDERED

Deprived communities, homeless, substance misusers, people who have a disability, learning disability, older people, children and families, young people, Lesbian Gay Bi-sexual or Transgender, minority ethnic communities, Gypsy/Roma/Travellers, women/men, parents, carers, staff, wider community, offenders.

EQUALITY PROTECTED CHARACTERISTICS TO BE CONSIDERED

Age, gender, disability, race, sexual orientation, gender identity (or reassignment), religion and belief, carers, Human Rights and social economic / deprivation.

QUESTION	**RESPONSE**		**IMPACT**	
	Issue	Action	Positive	Negative
What is the service, leaflet or policy development? What are its aims, who are the target audience?	The Procedural Document is to ensure that all members of staff have clear guidance on processes to be followed. The target audience is all staff across the Organisation who undertakes this process.	Raise awareness of the Organisations format and processes involved in relation to the procedural document.	Yes – Clear processes identified	
Does the service, leaflet or policy/ development impact on community safety • Crime • Community cohesion	Not applicable to community safety or crime	N/A	N/A	
Is there any evidence that groups who should benefit do not? i.e. equal opportunity monitoring of service users and/or staff. If none/insufficient local or national data available consider what information you need.	No	N/A	N/A	
Does the service, leaflet or development/ policy have a negative impact on any geographical or sub group of the population?	Yes			Some countries have a high incidence rate therefore higher chance of positive results
How does the service, leaflet or policy/ development promote equality and diversity?	Ensures a cohesive approach across the Organisation in relation to the procedural document.	All policies and procedural documents include an EA to identify any positive or negative impacts.		
Does the service, leaflet or policy/ development explicitly include a commitment to equality and diversity and meeting needs? How does it demonstrate its impact?	The Procedure includes a completed EA which provides the opportunity to highlight any potential for a negative / adverse impact.			
Does the Organisation or service workforce reflect the local population? Do we employ people from disadvantaged groups	Our workforce is reflective of the local population.			
Will the service, leaflet or policy/ development i. Improve economic social conditions in deprived areas ii. Use brown field sites iii. Improve public spaces including creation of green spaces?	N/A			
Does the service, leaflet or policy/ development promote equity of lifelong learning?	N/A			
Does the service, leaflet or policy/ development encourage healthy lifestyles and reduce risks to health?	N/A			
Does the service, leaflet or policy/ development impact on transport? What are the implications of this?	N/A			
Does the service, leaflet or policy/development impact on housing, housing needs, homelessness, or a person's ability to remain at home?	N/A			
Are there any groups for whom this policy/ service/leaflet would have an impact? Is it an adverse/negative impact? Does it or could it (or is the perception that it could exclude disadvantaged or marginalised groups?	None identified			

Appendix 4: Equality Impact Assessment Form

Does the policy/development promote access to services and facilities for any group in particular?	No			
Does the service, leaflet or policy/development impact on the environment • During development • At implementation?	No			
ACTION:				
Please identify if you are now required to carry out a Full Equality Analysis		**~~Yes~~**	**No**	**(Please delete as appropriate)**
Name of Author: **Signature of Author:**	**Kerrie Chesters + Clare Partington**		**Date Signed:**	**October 2021**
Name of Lead Person: **Signature of Lead Person:**	**Kerrie Chesters**		**Date Signed:**	**October 2021**
Name of Manager: **Signature of Manager**	**Susan Wild**		**Date Signed:**	**October 2021**