DISABILITY ACCESS IN LABORATORY ENVIRONMENTS FINAL REPORT

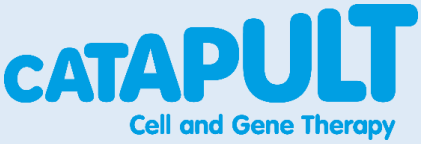
January 2026

Cite as: Deane KHO, Gauntlett M, Tufal A, Burrill B, and the DALE Steering Group. “Disability Access in Laboratory Environments. Final Report.” January 2026. University of East Anglia.

Led by:

Funded by:

Created in partnership with:



Contents

1. Executive Summary 6

1.1 Work package 1: Review of disability access records and processes in shared resource laboratories. 6

1.2 Work package 2: Assessment of the disability access of shared resource laboratories. 6

1.3 Work package 3: Interviews with staff and students on the experiences of the accessibility of shared resource laboratories. 6

1.4 Discussion 7

1.5 Dissemination plans 8

2. Introduction 9

2.1 Project Aims 10

2.2 Project Team 11

2.2.1 Project Collaborators 11

2.2.2 Partners 11

3. Methods 15

3.1 Co-Design 15

3.2 Adverse Event Reporting 16

3.3 Participants 16

3.4 Invitations and Adverts 17

3.5 Inclusion Criteria 17

3.6 Gatekeepers for accessing participants 17

3.7 Sense of Obligation to Participate 18

3.8 Payment for interviews 19

4. Results 20

4.1 Work package 1: Review disability access records and processes in shared resource laboratories. 20

4.2 Work Package 2: Assessment of the disability access of shared resource laboratories. 22

4.3 Work package 3: Interviews with staff and students on the experiences of the accessibility of shared resource laboratories. 24

4.4 Structural Access 28

4.5 Highly accessible UEA facilities 29

5. Dissemination 40

5.1 Dissemination events 2025 40

5.2 Dissemination events planned for 2026. 41

5.3 Planned publications 41
References 42

Associated DALE Documents

- DALE Structural Access Assessment
- DALE Equipment Access Assessment
- DALE Protocol

See edicaucus.ac.uk/dale to view and download.

Our Mission:

To remove the barriers from accessing life,

so people can express their brilliance.

1. Executive Summary

Disability access in labs is generally poor due to a historic assumption that disabled scientists could not be accommodated safely in such environments. However, improving this state is complex and detailed. It also requires a common language and criteria in order for everyone to understand what an "accessible" lab really looks like. The Disability Assessment in Laboratory Environments (DALE) project aimed to address the challenge of creating a generic assessment of lab disability access for a wide range of lab types. We also examined the impact on disabled staff and students of laboratories designed to a highly accessible standard after 6 years of use.

1.1 Work package 1: Review of disability access records and processes in shared resource laboratories.

The four universities were able to provide policies and processes for implementing disability accommodations and ensuring safety. However, we were unable to gain access to specific anonymised examples of these documents due to uncertainty about where these documents were stored and concerns about confidentiality.

1.2 Work package 2: Assessment of the disability access of shared resource laboratories.

The DALE team created three iterations of the access assessment. This resulted in electronic assessments for structures and equipment access, informed by UEA's access guidelines and numerous perspectives and tested in four different institutions and in labs with multiple purposes. We believe this is a solid starting point for a sufficiently generic access assessment relevant to a wide range of lab types.

1.3 Work package 3: Interviews with staff and students on the experiences of the accessibility of shared resource laboratories.

We conducted seven semi-structured interviews with people with an interest in or experience of disability access exploring their experience of the shared resource facilities in the context of disability access, positive and negative experiences, impact on inclusion, lab culture, workload, accidents and near misses etc. The interviews also examined the experiences of six years of use of UEA's highly accessible New Science and Productivity East the design of which were informed by UEA's access guidelines.

These interviews highlighted a number of themes. The lab staff found the process of

completing the access assessment was an intervention in itself, raising awareness of disability accommodation needs, deficits in processes (e.g. lack of Personal Emergency Evacuation Plans for temporary disabilities), and promoted a different way of thinking about the design of the labs and future equipment purchases. However, the system was recognised as fragile with limited training and key access advocates feeling unsupported and at risk of burn out. The interviews also highlighted the systemic and interconnected character of disability access. Design flaws, e.g. a lack of signs naming a building, could cause students to get lost and waste energy travelling to the wrong building, this problem is compounded for disabled students by the building's location at the bottom of a hill. Positive design features e.g. the provision of sound baffles that reduce noise transmission and so aid ease of conversations, and this benefit is compounded for some neurodiverse students who now use the space preferentially for studying.

The interviewees agreed that UEA's access guidelines were mostly correct, improved access, and were easy to maintain. Suggestions were made for minor improvements which have been incorporated into the guidelines and assessments. There were significant wash over benefits of the design that positively impacted everyone that used the labs. The accessible environment was even perceived as having an impacted on culture. "*It does actually embolden people. It feels like it is literal, inclusive practise in action. And I think we are increasingly seeing students who are happier to talk about their additional needs. And as a cohort I think they are very supportive of each other in terms of people that might not look like them*"

1.4 Discussion

This project has validated the utility and positive impact of the UEA access guidelines regarding the design of labs. We believe this is some of the first evidence of the long term (6 years) impact of such guidelines in practice in technical spaces such as laboratories. The access guidelines were the core to the design of the access assessments which were then refined with advice from multiple perspectives. The access assessments have been created for structures and equipment in laboratory environments and tested in four institutions across labs for multiple subjects and purposes. We are therefore confident that the access assessments are robust and generic enough to be used in a wide variety of laboratory

settings. We believe these assessments will allow benchmarking of accessibility across and between institutions. We believe even conducting the assessment can raise awareness of disability needs and promote improved purchasing decisions and safety protocols.

The project has highlighted the challenge of assessing the less tangible aspects of disability access e.g. reasonable accommodations, safety adaptations, training, and the interconnectedness of accessibility. Future work is needed to create useful ways to identify and assess good and poor practice in these areas.

1.5 Dissemination plans

The DALE project has had substantial interest from a wide range of universities, research institutions, funders, and learned societies. The team expect to be able to publish a couple of peer-reviewed papers on the development of the assessments and the evaluation of the utility of access design advice after six years of use. The DALE Protocol, DALE Structural Access Assessment, and the DALE Equipment Access Assessment can all be found at https://edicaucus.ac.uk/dale/. The team have already delivered a number of talks and workshops implementing the lessons learned from this project into cohesive advice on how to make research environments more accessible with a view to enhancing the inclusivity and accessibility of research overall. There are plans to continue to present this work at conferences, seminars, and workshops. The team have been invited to provide advice to EPSRC on their ongoing agenda to improve the accessibility of national shared facilities and grant application processes. We hope to work with a number of learned societies in order to get these assessments adopted and promoted for use with their memberships.

2. Introduction

There is an under-representation of disabled researchers. Approximately 20% of the UK's working population is disabled, but only 3% of UK academics self-identify this way (Joice 2021). Disabled researchers face systemic and transient barriers to access, particularly in science, technology, engineering, maths, and medicine, (STEMM) (Royal Society, 2020). The lack of a diverse workforce reduces the quality, responsiveness, and relevance of research outputs (Swartz 2019). There is a clear need for a social model of disability informed and co-created assessment of the accessibility of laboratory design and use.

Laboratories have often been designed without consideration to disability access due to the historic assumption that disabled scientists could not work safely in such environments. The Access All Areas in Laboratories (AAAiLabs) team completed a recent survey of laboratory access and identified many structural, procedural, and attitudinal barriers for disabled researchers accessing labs (Deane 2023). The survey also asked about access solutions, and these informed a suite of access guidelines (AAAiLabs 2023).

Currently there is no consensus on what constitutes accessibility within laboratory environments. Current legally required building standards are lacking in aspiration, e.g. Document M (Gov.UK 2015) does not have requirements for any internal powered doors. They also do not have the level of detail required for a disabled scientist to be able to assess whether they could complete a research protocol e.g. whether a control panel can be read or operated from a seated position. Provision of laboratories and equipment which can be booked and shared by researchers from other institutions is a cost-effective way to utilise costly specialist equipment and facilities. Using these shared resource laboratories is a particular challenge to visiting disabled staff as reasonable accommodations may not be able to be implemented in the usual way, or at all. It is essential for institutions to assess their accessibility in order to share access information with disabled researchers, and to let institutions plan a program of access improvements.

This project assessed the accessibility of shared resource laboratories, their structures, equipment, and the protocols for their booking and use. We had access to shared facilities in four universities of the Eastern Academic Research Consortium (EARC; University of East Anglia (UEA), University of Essex, University of Kent, and University of Sussex). They have created the

EARC Imaging Platform Alliance (EARC IPA) that allows researchers to access a wide range of highly specialist imaging equipment hosted across the four institutions. UEA also has two facilities designed to meet highly accessible guidelines (UEA 2016). These are a new build (New Science Building) with biology, chemistry, physics and electronic labs, and a refurbishment (Productivity East) with engineering labs, which have been in use for over six years.

2.1 Project Aims

1. To characterise how shared resource laboratories in universities currently accommodate disabled staff and students.
2. To create an assessment to allow shared resource laboratories for any subject to describe their accessibility.
3. To examine the impact on disabled staff and students of laboratories designed to a highly accessible standard after 5 years of use.
4. To create a list of possible access improvements for the surveyed laboratories.

2.2 Project Team

This project was led by a multi-disabled researcher mentoring a multi-disabled ECR research associate and technician in research and leadership skills. We partnered with a range of institutions and learned societies in order to have diverse and intersectional perspectives on this challenge. The project amplified the voices of and experiences of disabled ECRs throughout. The project had a particular focus on technician's role in facilitating disability access in these laboratories, providing evidence to the Technician's Commitment.

2.2.1 Project Collaborators

Individual	**Organisation**	**School or department (or relevant equivalent)**	**Role**
Katherine Deane	University of East Anglia	Associate Professor, School of Health Sciences	Principle Investigator (PI)
May Gauntlett	University of East Anglia	School of Health Sciences	Research associate (RA)
Anisha Tufal	University of East Anglia	2nd year psychology student, Norwich Medical School.	Volunteer RA
Joanna Semlyen	University of East Anglia	Professor of Psychology and Equity, Norwich Medical School	Co- investigator (Co-I 1)
Jeff Banks	Lightyear Foundation	CEO Lightyear Foundation	Co-investigator (Co-I 2)
Brendan Burrill	University of East Anglia	Honorary Teaching Fellow	Co-investigator (Co-I 3)

2.2.2 Partners

Organisation	**Involvement**
Partner 1: (P1)University of East Anglia — Representatives from UEA Eastern ARC IPA, New Science, Productivity East	Provided access to shared resource imaging labs, New Science, Productivity East, their documentation, and relevant people for interviews. Provided representation on the steering group from these facilities. Attended the monthly steering group, and aided in the co-creation of the design of the project, the interpretation of the data, and the dissemination of the findings.

P2 Phil Ward Chair of Eastern ARC IPA	Provided oversight on the use of the shared resource imaging facilities. Attend steering groups when appropriate.
P3 Eastern ARC IPA – University of Sussex	Provided access to labs, staff and students.
P4 Eastern ARC IPA University of Essex	Provided access to labs, staff and students.
P5 Eastern ARC IPA University of Kent	Provided access to labs, staff and students.
P6 Catapult Cell and Gene Therapy, Jacqueline Barry	Attended the monthly steering group, and aided in the co-creation of the design of the project, the interpretation of the data, and the dissemination of the findings.
P7 Royal Society of Chemistry (RSC), Ilaria Meazzini	Attended the monthly steering group, and aided in the co-creation of the design of the project, the interpretation of the data, and the dissemination of the findings.
P8 Institute of Biomedical Science (IBMS), Zoe Andrews	Attended the monthly steering group, and aided in the co-creation of the design of the project, the interpretation of the data, and the dissemination of the findings.
P9 Hamied Haroon, Chair of National Assoc of Disabled Staff Networks (NASDN)	Attended the monthly steering group, and aided in the co-creation of the design of the project, the interpretation of the data, and the dissemination of the findings.
P10 Vania Dimitrova, Louise Jennings, EDI Hub leads, Leeds University,	Attended the monthly steering group, and aided in the co-creation of the design of the project, the interpretation of the data, and the dissemination of the findings.
P11 The Wellcome Trust, Sophie Demellweek and Shomari Lewis-Wilson	Attended the monthly steering group, and aided in the co-creation of the design of the project, the interpretation of the data, and the dissemination of the findings.

P12 The Engineering and Physical Science Research Council (EPSRC)	Attended the monthly steering group, and aided in the co-creation of the design of the project, the interpretation of the data, and the dissemination of the findings.

- PI, Dr Katherine Deane, is a multiply disabled wheelchair user. She is based at UEA, one of the Imaging Platform Alliance (IPA) universities. She conducts research on the co-created management disabilities and is the University's Access Ambassador. She led the Access All Areas in Labs (AAAiLabs) project and the creation of the Lab Access Guidelines. She is Access Ambassador to the Wellcome Trust's expansion of the Sanger Institute. She is the Disability Access Champion on the £2.5 million EPSRC funded EDI Hub, and the £1 million Wellcome Trust funded Increasing Diversity and Equity of Access (IDEA) project.
- Co-I 1 Prof Joanna Semlyen leads the £1 million IDEA project. Unfortunately due to long term sickness JS was unable to contribute to this project,
- Co-I 2 The Lightyear Foundation is a small disability-led educational charity with the almost unique aim of increasing access to STEM for disabled students. We paid for their time due to the charity's small size.
- Co-I 3 Mr Brendan Burrill is an Honorary Teaching Fellow at UEA. He was Co-I on this grant and played a key role in the training of the RA and the assessment of lab access. He was part of the AAAiLabs project team as an electronics teaching lab technician with experience of supporting disabled students. He has an IIMS Diploma in yacht and small craft surveying and an IOSH Certificate in Managing Safely. He was mentored by the PI to develop his research and project management skills.
- May Gauntlett was the RA appointed to this project after external adverts. They were trained and supported in particular by Co-I 3 BB. They were also mentored by the PI to develop their research and project management skills.
- Anisha Tufal applied for the RA post but was not appointed. She had just completed her 2nd year as an undergraduate in psychology. She volunteered to act as an additional RA. She helped update the Access Guidance and assisted in assessing some of the labs. She was trained and supported in particular by Co-I

3 BB.

- Our partners in the shared resource imaging collaboration (Partners 1-5) were able to provide access to labs, staff and students. Partners and Co-Is attended the monthly steering group. They aided in the co-creation of the project design, the data interpretation, and the dissemination of the findings.
- Partner 1 (P1): The University of East Anglia is member of a 4 university IPA. They will provide representatives to the steering group for these labs and the other facilities being assessed in this project, a new build highly accessible suite of labs (covering biology, chemistry, physics and electronics) (New Science), as well as a refurbished highly accessible engineering lab (Productivity East). They ensured access to the labs, documentation, and relevant people for interviews.
- P2, Phil Ward, is IPA chair. He supported the use of the IPA facilities for this project.
- P3, P4 and P5 provided access to shared resource imaging labs, documentation, and relevant people for interviews.
- P6 Cell and Gene Therapy Catapult funded the Access All Areas in Labs project, designed and assessed a highly accessible clean room pharmaceutical lab. They have a mandate to catalyse and facilitate growth between academic and industrial partners.
- P7 and P8 are The Royal Society for Chemistry and The Institute for Biomedical Science, learned societies with approx. 69,000 members with an interest in chemistry, and biomedical science, respectively.
- P9 Dr Hamied Haroon has personal experience of disability, researches biomedical MRI, and is chair of a super- network that connects and represents disabled staff networks.
- P10 Prof Louise Jenning and Prof Vania Dimitrova are co-leads of the EDI Hub+ project. They have extensive experience in EDI in engineering, maths, and physical sciences.
- P11 Sophie Demellweek and Shomari Lewis-Wilson from The Wellcome Trust which supports discovery research into life, health and wellbeing with a £36.8 billion investment portfolio.
- P12 EPSRC is the main funding body for engineering and physical sciences research in the UK awarding £800 million in grants per year.

3. Methods

Detailed methods are provided in the DALE Protocol https://edicaucus.ac.uk/wp-content/uploads/2026/03/DALE-Protocol.pdf . This was approved by UEA ethics, reference ETH2425-2405.

3.1 Co-Design

This proposal embedded co-design and co-creation at every stage of development and delivery. Two members of the AAAiLabs team worked on this project which draws on their experiences of and research into lab accessibility and research culture, and the creation of access guidelines (AAAiLabs 2023). KD and JS are working on a Wellcome Trust funded project to improve the EDI aspects of research culture. They ensured the recruitment of interviewees is intersectional across protected characteristics, lab hierarchy, and roles.

We had permission from partners 1-5 to assess their facilities, share anonymised documents, and ask relevant staff and students to participate in interviews. Recruitment for the interviews aimed to identify a wide range of expertise and experience. The interviewees were disabled or supported disabled people, and held a range of roles (technicians, lecturers, researchers, lab managers, and union representatives) and work in a range of STEMM subjects, in a variety of contexts (teaching, research, support, innovation). In this way we hoped to amplify previously under- served populations' voices and ensure the access assessment is generic enough to be applied to most STEMM lab settings, but comprehensive enough to evaluate access needs for a wide variety of impairments (physical, mental, sensory, neurodivergent).

We recruited a wide range of expert partners in lab accessibility to participate in our steering group. Partners attended monthly steering group meetings, and commented on emailed documents as needed. Partners shared the project as it developed with their membership for their feedback e.g. refinement of the design of the lab assessment. This allowed a wide range of STEMM subject expertise and disability experience to feed into the project. Our partners to co-created with us;

- The content of the lab access assessments including advice on which documents to identify and evaluate. They ensured our assessment criteria were relevant to as wide a range of subject areas and lab types as possible.

- The semi-structured interview guides and their associated ethics application.
- The analysis and interpretation of all results.
- The dissemination of all findings. This will include publishing usable summaries of the access assessments for each facility on their web page so future disabled researchers can view this.

This project generated a co-created consensus assessment of lab accessibility, alongside suggestions for solutions that improve or reduce the identified barriers. This access assessment is in high demand, with many of the partners and other STEMM research funders already requesting use of it once created and piloted.

3.2 Adverse Event Reporting

It was predicted that this project represented a low risk of adverse events. This was found to be true with no adverse events reported.

3.3 Participants

- Participant Group 1: Access Assessment Reviewers
- Participant Group 2: Staff demonstrating lab accessibility
- Participant Group 3: Interviewees with disability access experience of the shared resource facilities.

Access Assessment Reviewers were recruited by advertising the project on social media, web sites, press releases etc. Partner organisations and other relevant organisation whose members are likely to be eligible shared the link to comment online on the access assessment.

Staff demonstrating lab accessibility were recruited and showed the DALE team around the labs assessed for access. This was staff from the EARC Imaging Platform Alliance (EARC IPA) in the Eastern Academic Research Consortium (EARC) i.e. the University of East Anglia (UEA), University of Essex, University of Kent, and University of Sussex), and staff running the New Science and Productivity East laboratories at UEA.

Interviewees with disability access experience of the shared resource facilities (EARC IPA, New Science, Productivity East) were recruited by advertising the project by email, internal newsletters, social media, web sites, etc. Interviewees included those who currently or historically (within last 6 years) work or study within the shared resource facilities. This included students, technicians, lecturers, researchers, research administrators or managers, human resources, and union representatives. Whilst students will be eligible (i.e. a disabled scientist working in a lab/ someone with an interest in lab access) we do not anticipate more than a few students to have relevant expertise and interest.

3.4 Invitations and Adverts

The text of the proposed invitations and advertisements are provided in the DALE Protocol document.

3.5 Inclusion Criteria

All participants were adults (over 18 years old).

1. Access Assessment Reviewers will have an interest in disability access.

2. Staff demonstrating lab accessibility will be members of staff at EARC Imaging Platform Alliance (EARC IPA) i.e. the University of East Anglia (UEA), University of Essex, University of Kent, and University of Sussex) and the New Science and Productivity East laboratories at UEA.

3. Interviewees with disability access experience of the shared resource facilities will have experience or knowledge of disability access within the EARC IPA, New Science or Productivity East facilities.

3.6 Gatekeepers for accessing participants

1. The gatekeepers for Access Assessment Commentators were relevant learned

societies (e.g. The Royal Society for Chemistry), networks (e.g. National Association of Disabled Staff Networks), unions (eg Student Union, University and College Union), and social media groups. In all cases the research team did not access membership contact details directly. Instead, the gatekeepers advertised the projects to their membership and provide a link to the web pages with details of the project and links to the review of the access assessment.

2. Staff demonstrating lab accessibility were contacted by email by the management of EARC IPA, New Science, and Productivity East facilities. Many of these staff were already named partners on the grant.

3. Interviewees with disability access experience of the shared resource facilities were contacted via email, social media, internal newsletters, posters etc by the relevant university departments that use the facilities and the university alumni teams. Some of the interviewees were already named partners on the DALE project but excluding these individuals the research team was not given direct access to potential participant's contact details.

4. The projects were advertised generally on social media, and through contacts known to the project team.

We gained gatekeeper agreements once ethics was obtained. It was possible that some groups may have advertised our project without our knowledge.

3.7 Sense of Obligation to Participate

There was no obligation to participate in groups 1 and 3.

Group 2 were staff demonstrating their lab's accessibility. The facilities they are showing the research team around are partners on the DALE project. Individual staff members were able to refuse to participate or withdraw, but none did. As we recognized that these staff may have felt a sense of obligation to participate, Phil Ward, Director of the Eastern ARC, wrote a letter (Appendix 5 of the DALE Protocol) which was sent by email direct to the staff in all of the facilities involved in this project. A similar article will also be published in staff

newsletters (Appendix 6 of the DALE Protocol). This letter and newsletter article explained the voluntary nature of staff's involvement and emphasised that managers must find alternate willing staff should anyone indicate that they did not wish to participate. The letter and article provide web links to all of the relevant information sheets and consent forms.

These staff were asked to demonstrate how the lab facilities and protocols work and are adapted for disabled users. They also commented on the comprehensiveness and usefulness of the lab access assessment. They did this as part of their normal role as technicians/ researchers working in the participating facilities.

3.8 Payment for interviews

Groups 1 and 2 will not receive any payment.

Group 3 Interviewees with disability access experience of the shared resource facilities will receive a £100 payment in recognition of their time and expertise.

4. Results

4.1 Work package 1: Review disability access records and processes in shared resource laboratories.

We attempted to review anonymised disability-related records and processes from the shared resource labs.

4.1.1 Booking facilities

We investigated whether a visiting researcher would be able to book space in the labs. Whilst some policies were in place, generally visiting researchers would have to find contact details of an appropriate person to make a booking request.

UEA	Not available (N/A)
Kent	N/A (but there is a Lab booking policy for psychology labs)
Sussex	N/A (but there is a Lab booking policy for psychology labs)
Essex	Booking facilities for life science facilities

4.1.2 EDI policies

Whilst we were able to identify many policies publicly online, some policies are only available on internal web pages. Many policies are aimed at students. Whilst EDI policies often ensure similar disability access provision for staff, it is often unclear how to access these provisions and reasonable accommodations (RA) as a member of staff.

	EDI policies	Disability Access Info	Requesting RA	RA Passports
UEA	EDI Policies	Student disability support	Disabled student checklist	N/A
Kent	EDI policies	Student access and participation	Inclusion passport	Inclusion passport
Sussex	EDI strategy Inclusion strategy	DEI update	Student RA	Workplace adjustment toolkit
Essex	EDI policies Dept EDI policies	Access and disability information and support	Staff disability disclosure Occupational Health RA Disabled students RA	RA passport

4.1.3 Fire safety

All institutions had fire safety policies, however finding the information to create appropriate personal emergency evacuation protocols (PEEPs) was less easily identifiable. UEA provided extensive information on the fire evacuation access status of the rooms in the university. Essex provided prompts for how to create PEEPs for people with impairments in mobility, vision, hearing, dexterity or weakness and cognition. However technicians rarely know which people (staff or students) working in their labs have a PEEP. They do not feel confident asking whether people have one. They are particularly unlikely to ask people with temporary disabilities whether they have a PEEP.

	PEEPs
UEA	Making a PEEP
Kent	N/A
Sussex	Making a PEEP
Essex	Making a PEEP

4.1.4 Health and safety

Again, all of the institutions had relevant policies on how to ensure the safe working of the laboratory spaces. This included how to make risk assessments and report incidents. However, there was limited additional information on how to make adjustments to protocols to safely accommodate disabilities. Additionally, whilst accidents and near misses were reported, there was no feedback of information such as common risks or mitigations associated with disability-related incidents.

	Risk Assessments	Incident reporting
UEA	Guidance on risk assessments	Incident reporting
Kent	Health and Safety web page	Incident reporting
Sussex	Risk assessments	Incident reporting
Essex	Risk assessments Research risk assessment	Reporting a health and safety incident

4.1.5 Disability-specific learning

All of the institutions were unable to provide anonymised PEEPs, reasonable accommodations, or safety incident reports associated with disability. Most of the lab teams were unsure who to contact who would have this information. Even if the

people who had access to this information were known, there were concerns about confidentiality and data protection. This was despite the request having UEA ethics approval and the request specifying that the documents provided to the DALE team should be anonymised. Whilst it was frustrating to not be able to analyse the data from these documents in terms of frequency of impairments, accommodations, safety concerns, root cause analysis for incidents etc., the very fact that the technical teams faced these information barriers is an important finding.

4.2 Work Package 2: Assessment of the disability access of shared resource laboratories.

We co-created an accessibility assessment. (See edicaucus.ac.uk/dale to view both assessment templates.) This was informed initially from our structural and equipment access guidelines (AAAiLabs 2023) and was refined with input from our research partners and from experience of implementing it as the DALE team assessed the accessibility of all of the facilities where we had permission. This assessment included relevant spaces associated with laboratories e.g. corridors, stairs, break rooms, toilets, lifts, fire escapes, entrance foyers. Staff at the facilities were asked to show the DALE team around and demonstrate how they are used by visiting researchers. The DALE team used force gauges, light and sound meters to assess the facilities against a checklist.
The first version of the assessment was paper-based and was used to assess the accessibility of New Science and Productivity East at UEA. This version was advertised widely as being available for comments regarding its completeness, practicality etc. We got a few informal responses, some comments from the steering group members, comments from staff as their facilities were assessed, and comments from the DALE team. Overall it was determined that we needed an electronic version as the paper-based one was cumbersome and impractical. However no one identified any significant omissions in the areas assessed. The DALE team identified a very small number of tools were needed to complete the assessment e.g. tape measure, force meter, light meter, microphone, camera.
The second version was turned into a survey hosted on the JISC server. All items were assessed against a 5 levels Likert scale for compliance.

1. **Optimal Accessibility**

- The feature is fully accessible, with no barriers present.
- All users can navigate effortlessly and comfortably without assistance.

2. **Minimal Barriers**

- The feature is largely accessible, with very few obstacles.

3. **Moderate Barriers**

- The feature presents some accessibility challenges affecting certain users.
- Accommodations can be made but may require planning and extra effort.

4. **Significant Barriers**

- The feature poses several challenges, making it largely inaccessible for many users.
- Many essential accommodations are missing, making navigation difficult for individuals with mobility or sensory impairments.

5. **Critical Barriers**

1. The feature is predominantly inaccessible and severely restricts access for users with varying needs.
- Essential accommodations are largely absent, making it extremely challenging for individuals with disabilities to navigate the space.

Th third and final version was reviewed by the DALE team. We determined that the 5 point Likert rating was not always appropriate, and that it sometimes led to subjective judgements being made; for example as to whether a feature demonstrated minimal or moderate barriers. The team went through all of the items and determined if a 5 point Likert was appropriate, or whether a 3 point Likert scale (No barrier, Moderate barrier, Critical barrier), or a 2 point Likert scale (No barriers, Critical barrier) were more appropriate. The team also ensured all items were objective and the criteria were clear to non-experts. Duplications and more minor accessibility issues were removed, and the sequence of the assessment was redone so as to be in a logical order to the assessor.

4.3 Work package 3: Interviews with staff and students on the experiences of the accessibility of shared resource laboratories.

Semi-structured interview questions were co-created with our partners and approved by UEA ethics. The interviews explored people's experience of the shared resource facilities in the context of disability access, positive and negative experiences, impact on inclusion, lab culture, workload, accidents and near misses etc. For UEA's New Science and Productivity East, the interviews examined the experiences of 6 years of use of these facilities designed to be highly accessible. Despite offering £100 for people's time, just seven people participated (five from UEA). Interviewees included those with an interest in or experience of disability access, including technicians, lecturers, researchers, lab managers, and union representatives.

Inevitably the interviews were not as systematic or comprehensive as the access assessments. However, they did often highlight compounding factors and system wide issues. In particular, whilst structural access is often one of the first aspects of disability access considered, the interviews highlighted that disability access was often impacted by working practices, knowledge, skills, and attitudes. These less tangible aspects of access were often harder to identify or document in the access assessment checklists.

4.3.1 Assessment as intervention

Just going through the process of the DALE assessment prompted a different way of thinking. *"I think this project has really helped open our eyes to what we should be doing… For future projects, we'll become much more mindful of that aspect [i.e. disability access]" (Lab manager).* In particular changing what expectations we have of staff to lift heavy equipment, struggle opening doors etc. *"it then becomes if you can have like a soft touch open or whatever, why doesn't that become your standard?" (Lab manager).* Overall, the process of conducting the access assessment was positively received *"I should say I thought the way the visit went, I just thought it was really good. I found it very positive. We had some fantastic discussions." (Lab manager).*

4.3.2 Identifying needs

The interventional impact of an assessment was also seen in one university's school, which asks the entire student cohort about their assistance needs. This results in a high level of declaration (approx. 30%). *"We have a pre arrival survey where we ask the students. Is there anything that they're, you know, nervous about? What are they not just focusing the negatives like you know what things are you looking forward to any issues you have in terms of you know, do you identify as having a disability? If so, does the university know about it?" (Lecturer).* It also allows staff to reassure students with less common disabilities (e.g. immunocompromise, or seizures) about the less visible accommodations already in place (e.g. high level of ventilation, or fire evacuation procedures). *"Being able to talk about things like safe evacuation was really important to them" (Lecturer)*

4.3.3 Accommodations focussed on students

However all of the universities highlighted that many of the current disability accommodation processes and policies are focussed on students, which could mean making accommodations for staff was less easy. *"I think the focus is on students because that's where the money is…I think again, that's some something where the mindset has to change. Of course, you know we are here for the students, but we also have however many other people here." (Lab manager).* There was a recognition that access processes needed to be consistent irrespective of who they were aimed at or their location or activities "*the same ways of dealing with things should be done across the whole campus in respect of whether it's research, students, or estates, or catering" (Lab manager).*

4.3.4 Limited expertise

The interviewees knew of just a few disabled people (mostly students) who had used the labs for whom equipment or protocols had to be adapted. It was noted that often the disability accommodations suggested 'as standard' by student support or occupational health were not always appropriate to lab protocols. This meant that the staff were often creating reasonable accommodations on their own for each disabled person. *"To be honest, I've basically made it up as I go along with the best support possible from the DLO [Disability Liaison Officer], but I absolutely would love these to have been informed and centrally supplied documents." (Lecturer).* The

accommodations could be being created with limited advice or knowledge, which raised concerns about optimisation and safety. In one case "*a visually impaired student… who had their own lab assistant… but they were not someone who'd ever been in a lab, and so they didn't even come dressed appropriately. They were wearing a skirt and not covering skin." (Technician).* This led to the student feeling like they were having to provide support (to the assistant) rather than being in receipt of a useful assistant.

4.3.5 Training

Multiple interviewees stated that training on disability access and EDI in general was very limited. Staff had to seek out additional training, and it was very *"hit and miss" (Lecturer)* as to whether they were supported by their institution to take it up. It was common for budgetary restrictions to limit how many staff could access such training. Some staff had even paid out of their own pocket to access training. This led to concerns about the lab team having sufficient knowledge to create suitable accommodations, or respond safely to first aid emergencies etc. "*I think it puts everybody at risk" (Lecturer).*

The lack of training and support negatively impacts the culture of inclusivity *"I think in defence of the hesitant colleagues it's because they don't see the resource there and they feel under trained and they don't feel equipped to be able to competently meet any perceived challenges. And I think it is a perceived challenge rather than an actual one, 19 times out of 10, and but it's that shift that is needed." (Lecturer).*

4.3.6 Lack of system resilience

Many of the interviewees were concerned that unless access was built into the systems of everyday working then structural access was insufficient. *"There is not an ethos of inclusive practice, not even close. And so in that sense, I think it's very fragile." (Lecturer).* This placed substantial load on staff (particularly technicians) to advocate for best practice and create innovative but safe access solutions. This had substantial negative impact on staff wellbeing, *"I wouldn't say I've got burnout, but it's been bloody hard." (Technician).* Staff discussed feeling overwhelmed about the expectation that they know about rarer or complex medical conditions, and how to create relevant and safe accommodations from scratch for these.

4.3.7 Lack of appropriate information sharing

One clear area where current systems did not work in any of the universities surveyed was clear and appropriate information sharing. As mentioned in Work Package 1, despite ethically approved protocols for sharing anonymised information on reasonable accommodations, PEEPs, and safe incidents, none of these documents were shared with the DALE team. Interviewees highlighted that this information was also rarely shared within the institutions. This led to repeated incidences where staff were not informed of a disabled person's needs in advance. This led to delays in provision of accommodations. *"I just don't get that information and it's not until there's a problem that then you can kind of address it" (Lecturer).* It also means that accommodations could be inappropriate or irrelevant (as mentioned above). Even where access solutions had been created in one lab, they were rarely shared across the institution in a way that could help inform making accommodations for another disabled person in a different lab.

It also meant that lessons were not systematically learned from medical or safety incidents. Whilst reports were made, none of the universities had identifiable processes to highlight disability-related incidents and examine them for common themes and root causes. There were no clear processes to feedback lessons learned to the lab teams. There were no centralised resources to support the creation of protocol variations to prevent or manage these risks.

Staff did not know who, working in their labs, needed a PEEP, and what might be needed to assist in the event of evacuation. Additionally, they rarely felt confident enough to ask a visibly disabled person about these issues. Temporary disabilities such as a cast on a leg, were rarely considered as requiring a PEEP to be created. However, once this omission was highlighted by the DALE research process, this was regarded as an action point for a number of the labs assessed. *"I will assure you, if somebody comes back to work with a cast on, I will do something other than just say 'grand you can get back to work now'" (Lab manager)*.

4.4 Structural Access

4.4.1 Use of space

There is a tendency to cram as much equipment into a lab space as possible *"we can get 50 microscopes {in a lab], but actually nobody can really move in there" (Lab manager).* This can make the space less flexible and less accessible. And there is a tendency to hang onto equipment which further clutters the space. *"The latest bit of kit doesn't always mean the previous model gets made redundant, so you then end up with duplication. If you look at utilisation, you might have one microscope that's only used 10% of the time, the other one was probably 90% and I would question if I [should] keep the 10% one." (Lab manager).*

4.4.2 Equipment and consumables

It was common for equipment and consumables to be stored in an inaccessible manner. This included high locations, on shelving with narrow walkways in between, or just away from the work bench. If someone is unable to reach them, and/or carry them to the workbench, then assistance from a technician or lab partner was often required. This meant that the technicians needed to know about this in advance.
It was also common for equipment to be inaccessible. Equipment was often located on static height benches which meant they could not be reached into from a seated position, or the control panel was not visible from a seated position. This could be aggravated by the benches having cupboards underneath or a *"crossbar at the front" (Lab manager)* preventing wheelchair users from being able to sit up tight to the edge of the bench as there is no knee nook space. In these cases, technicians or lab partners were often required to provide assistance. However, it was noted that many modern pieces of equipment have some aspects of access built in which can mitigate this challenge e.g. remote access controls on a separate computer or digital screens for microscopes etc.

Other positive aspects of equipment design included colour contrast D-shaped handles on easy open doors. But again it commented on that the availability of such accessible features on equipment depended on its age and also whether the person purchasing it knew to specify them.

People with limited strength or dexterity often needed specialist equipment e.g. an ergonomic pipette. Commonly requested accessible equipment was usually available but could be delayed if the technicians did not have information on access needs.

4.4.3 Sensory access

Sensory access was rarely mentioned spontaneously. The acoustic environment was usually considered in terms of planning to locate all the noisy equipment together in a separate annex away from the main workspace i.e. *"next door is where your pumps and the chillers are all located separately." (Lab manager).* Little consideration was given to the acoustic environment of the spaces in which people worked for most of the time.

Visual access solutions were highlighted by one technician. *"We were able to produce large print large size labels for all our chemicals"* for a visually impaired student. They worked with the student to identify a suitable font size and colour contrast and did "*that for every practical they were in" (Technician).* This was done in time as disability services let the technical team know with sufficient time in advance.

4.5 Highly accessible UEA facilities

New Science was completed 2019 and Productivity East was refurbished 2021 in line with access guidelines (UEA 2016). These guidelines focussed on structural access, and these interviews represented an opportunity to determine whether or not they were effective in creating a highly accessible set of labs. The DALE team had the advantage that KD assisted in the design of both facilities, so some of the commentary provides insight into some of the design decisions and whether they have held up to real world use.

4.5.1 Universal design

It was generally agreed that the structural design of New Science and Productivity East at UEA was effective in creating a highly accessible environment. This reduced

the need for accommodations to be implemented as the facility was already highly accessible. *"A student who transferred from computing… physically getting in and out of rooms was tricky for them in other buildings. Whereas New Sci was perfect." (Lecturer)* and *"there aren't many students that have a medical condition that mean they can't access those labs" (Lecturer).* This increased the capacity of the facilities to accommodate disabled staff and students without further adjustments being required.

There was also substantial wash over effect i.e. what was put in as a disability accommodation was valued by everyone who used the facility *"that building is a sanctuary and it is just a nice place to work" (Lecturer).* It was noted that the facilities were particularly helpful in encouraging students to return to campus working after Covid. *"You have the state-of-the-art labs. Oh, and by the way, you know, the lights aren't going to trigger your migraines. It's a quiet place. You're not going to find it overwhelming. The air conditioning is phenomenal. There're lifts that you can use at any time, even in the event of a fire. You know, there's the adjustable height benches. It was such a gift to be able to have that and that absolutely formed part of the encouragement to get students to come into campus, was that there is this literal, safe and accessible space." (Lecturer).*

4.5.2 Structure impacting culture

There was a recognition that having an accessible environment impacted culture and people's inclusive behaviours*. "It's so hard to collect data on, but I think that it does actually embolden people. It feels like it is literal, inclusive practise in action. And I think we are increasingly seeing students who are happier to talk about their additional needs. And as a cohort. I think they are very supportive of each other in terms of people that might not look like them" (Lecturer).* The provision of an accessible environment also could appear to reduce symptoms with reports of less anxiety and seizures. *"The student hasn't actually had a seizure whilst at UEA, they're still having seizures at home. And the mother says that she puts this down to the fact that the student feels comfortable, like she hasn't got an additional stress from her surroundings." (Lecturer).*

Unfortunately few people know about the accessibility of these facilities as it is not advertised either internally or externally *"I would just love us to be so loud and proud about that… we can accommodate your additional needs." (Lecturer).*

4.5.3 Location

The location of the New Science building at the edge of main campus and at the bottom of a hill were barriers to access that are likely insurmountable but still significant. *"Getting yourself there is a challenge in itself because it's at the bottom of campus at the bottom of a hill" (Technician).* When combined with issues such as the lack of clear signage of the building, similarity of names of two separate facilities, and only static map provision, this could lead to students heading to the wrong building and wasting time and energy. This could have particularly negative impact on students with mobility impairments or energy limiting conditions.

4.5.4 Mobility access features

The step free access with powered doors to all areas of the facilities was agreed to be very helpful. The doors have clear colour contrast with push pad activation. A few of the locations of the push pads were not intuitive (where there were space restrictions for the pad's location). There are a few unpowered doors leading into the toilet blocks but these were adjusted to ensure they require less than 30N to open. The choice to not install doors held open on magnets (e.g. in the corridors) was to reduce drafts and noise transmission. It also allowed some doors (e.g. to labs) to be card operated for security when staff are not available.

The provision of more than one lift in New Science removed concerns about access when a lift was out of action for repairs or maintenance. (Productivity East is all on the ground floor). Both lifts are sufficiently large to accommodate a wheelchair user and a carer. The lighting was diffuse, the buttons had clear symbols and braille, and a mirror was provided to aid reversing.

Stairs and handrails have handrails both sides. Those on the main staircase internally have downlighters embedded in the handrails which ensures great lighting on the steps. There is a contrasting colour strip on the nosing of these steps.

The external steps have handrails both sides which creates a slightly segregated area from the rest of the steps which sweep around the courtyard. This provides a protected space for people with impaired mobility. Unfortunately, the colour contrast strips in the steps are set back from the actual edge of the steps. This leads to visual confusion and risks being a trip hazard as you ascend and skinning your ankles as you descend these stairs.

4.5.5 Signage

Signage was mostly good, with the large numbers on the glass surrounding room doorways being helpful. However, the New Science building did not have a large label externally which caused navigation problems. Also the sign for the changing place accessible toilet was criticised for being small and for not highlighting that it was an accessible toilet.

However, the co-location of the push pad for the doors with a lot of other controls and signs (including the emergency power cut off and emergency door release) was agreed to be potentially confusing, particularly for visually impaired people.

4.5.6 Sensory access

The whole building had good use of colours – clear contrast and matt surfaces. Sockets and light switches had either of a contrasting colour fascia or a surrounding contrasting outline. The lighting was bright but diffuse. The room lights could not be adjusted but task lighting was available. The fire alarm was dual alert (audible and visual).

Hearing loops were provided in all teaching spaces. Whilst microphones linked to speakers were available in teaching spaces it was noted that lecturers were quite unlikely to use them.

The widespread use of sound baffles hung from the ceiling led to the whole building being “quiet.” This also led to the foyer and vestibule areas being preferentially used by neurodiverse students as a quiet study space.

4.5.7 Dexterity and strength

Taps throughout the facilities are lever type or occasionally sensor operated. This includes water and gas taps in labs, taps in all toilets, and in staff kitchenettes. The only exception was the taps within the fume hoods, as no manufacturer could be identified to provide lever taps in these hoods at the time of purchase.

Door handles (for doors and cupboards) are D-type and have good colour contrast. Door locks in all toilets are large lever type or automated locks. It is noted that the automated locks on the accessible toilets on the ground floor foyer area tended to need more repairs than others due to high usage, and likely some misuse of these doors (as evidenced by the need for large signs in these toilets highlighting how to use the automated doors).

4.5.8 Workbenches

The benches were light grey in colour, with a dark grey edging and a matt surface, so good visibility and colour contrast. They were spaced out with at least 1800mm between rows. This allowed good access for everyone working in the labs, even when seating was in use. It was noted that this reduced accidents from people being knocked into, and allowed staff to respond rapidly to requests for assistance or accidents.

Height adjustable benches were provided in all labs, at each end of the lab. These

were usually used by wheelchair users. The location did ensure there was plenty of space to reverse a wheelchair, and that the person using the bench was highly visible so support could be offered. However, *"the students that are working there are working often in isolation." (Technician).* Additionally, sight lines to lecturers were often compromised; either they could only be viewed from an acute angle, or lecturers would move down the lab to where the majority of the students were located. It was suggested that height adjustable benches should be provided across more rows or even every row.

4.5.9 Toilets

Generously sized accessible toilets were provided at both ends of the building on every floor. However many students were unaware of those at the far end away from the main entrance, as they were next to the fire evacuation stairs, and they were not well signposted.

The Changing Place accessible toilet was larger than the 12m^2 space required and fully fitted out with shower as well as the required toilet, bench, and hoist. It was also used by disabled students with larger wheelchairs and/or rigid legs as it provided a generous space for toileting. It was deliberately located in the ground floor foyer area so that it could be a resource used by the community. It's location was listed on relevant web pages and the Sainsbury's Centre for Visual Art's access information page as the Centre is only a short distance away and only has standard accessible toilets.

The blocks of standard toilets on each floor were mostly gender neutral, with one female and one male toilet provided to accommodate religious requirements. These were designed

to be as accessible as possible, so lever taps, good colour contrast, good non-glare lighting were all inserted into their design.

4.5.10 Resilience and maintenance of access features

Overall, there were few complaints about the resilience and maintenance of accessible features in the labs. Minor issues such as handles coming off the crank for height adjustable benches, or screws becoming loose on the adjustable seating (and so the backs not staying up) were easily identified and often maintained by the lab technicians themselves. However, if the need for an accessible structure was not clear then routine maintenance could inadvertently degrade its standard of accessibility. For example, an external contractor (electrician) replaced the grey fascias on the electrical sockets with white ones. They were not aware of the access standard. It was only because a member of staff with detailed knowledge of the building's access features queried this that they were changed back to grey fascias. Some higher technology access solutions (electronic locks on accessible toilet doors) can fail relatively easily, particularly if misused. Whilst signs on the walls with instructions for use probably help, they do highlight the fragility of this technology. If the lock fails then the accessible toilet is now out of order, and so effectively the electronic lock's fragility become an access barrier.

5. Dissemination

The project has a webpage https://www.uea.ac.uk/groups-and-centres/projects/access-all-areas-in-labs/DALE/DALE. It will host the access assessments and updated access guidelines. There are no plans for any commercial exploitation of any intellectual property rights and results generated during the Project. Discussion with the DALE steering group and others identified that charging for access to the DALE access assessments would be counter-productive as it would likely reduce up take. Discussions are ongoing with the project's partners about adoption and promotion of the DALE access assessment.

5.1 Dissemination events 2025

1. Lightyear Foundation – SEND in STEM. KD presenting a talk on access to labs and science for disabled students. 3rd Sept Online https://www.eventbrite.co.uk/e/send-in-stem-network-making-labs-accessible-tickets-1549600559989
2. Institute for Technical Skills & Strategy Autumnfest 2025 11/09/2025 BB presented "Accessibility in Technical Workspaces: How Technicians can Drive Change" https://itss.org.uk/free-learning-and-development-workshops-at-autumnfest/
3. Institute of Science & Technology. Annual conference. Innovating and Evolving in a Changing Landscape. DB attended to discuss lab access. 18th September, Birmingham University. https://istonline.org.uk/technical-conference-2025/
4. CannaFriends conference. DB attended to discuss lab access, and how to support staff requiring prescribed cannabis. 26-28th September, Gebläsehalle Ilsede, Germany https://canna-friends.de/en/
5. Disability Matters online town hall circus. KD member of panel discussing inclusion and diversity in research. 19th Sept Online https://sheffield.ac.uk/ihuman/events/disability-matters-online-town-hall-circus
6. Institute of Cancer Research, London – Accessible labs workshop 14th October run by KD and DB.
7. UEA Student Union Disability Week – KD, DB and MG ran a stand to highlight lab accessibility and KD delivered a talk entitled "How to make labs (and science) accessible" – 17th October
8. Women in Manufacturing 2025. Beyond Barriers: Leading with Inclusion. KD was part of a panel discussing diversity of staff in engineering etc. 23rd October, Coventry https://engage-events.ifm.eng.cam.ac.uk/WomeninManufacturing2025. Additionally the "Guidelines for inclusive events" Deane KHO 2023 is an appendix in "Women in UK Manufacturing 2025: leading with inclusion. A review of best practices for advancing inclusive leadership." The Institute for Manufacturing. 2025. http://bit.ly/4oM7cib
1. EDICa Symposium. 20th November Hybrid at Heriot Watt University, Edinburgh. KD presented findings of DALE project https://edicaucus.ac.uk/symposium/

2. Royal Marsden NHS Foundation Trust. 15th December. KD presented online seminar "Accessible research. Why would you do it? How would you do it?"

5.2 Dissemination events planned for 2026.

1. EPSRC. London. 3 February 2026. National Research Facilities' Directors and co-Directors Event. KD "Assessing and creating accessible shared research facilities."
2. EPSRC. Swindon. 10th March 2026. EDI Strategic Advisory Team. KD "Leveraging infrastructure accessibility to improve research quality and impact."
3. Health Protection Research Units Group Meeting. Liverpool University. 11-12th March 2026. KD "Research inclusion in practice in public health research."
4. EDI Hub+ Conference. Shaping the future of research through inclusion. Leeds University. 24 March 2026. KD to present DALE project. https://edihubplus.ac.uk/event/edi-hub-annual-conference-shaping-the-future-of-research-through-inclusion/
5. Association of University Directors of Estates (AUDE) annual conference: Industrious and Wise. 20-23 April 2026. Leeds University. KD and BB have offered to present a workshop on implementation of the DALE access assessments. https://www.aude.ac.uk/events/annual-conference/
6. Institute of Science Technicians. Liverpool University. 16 October 2026. BB has offered to run a workshop on the implementation of the DALE access assessments. https://istonline.org.uk/ist/conference/

5.3 Planned publications

1. Creation of disability access assessment for laboratories. Deane KHO, Gauntlett M, Tufal A, Burrill B. In preparation for a peer reviewed journal.
2. Highly accessible laboratories. Does the advice stack up after 6 years of use? Deane KHO, Gauntlett M, Burrill B. In preparation for a peer reviewed journal.
3. DALE Lab Access Assessment: Structural Access. Deane KHO, Gauntlett M, Tufal A, Burrill B. https://edicaucus.ac.uk/wp-content/uploads/2026/03/DALE-Structural-Access-Assessment.pdf
4. DALE Lab Access Assessment: Equipment Access. Deane KHO, Gauntlett M, Tufal A, Burrill B. https://edicaucus.ac.uk/wp-content/uploads/2026/03/DALE-Equipment-Access-Assessment.pdf
5. Access All Areas in Labs Access Guidelines. Version 2. Deane KHO, Gauntlett M, Tufal A, Burrill B. In preparation for web pages.

References

- AAAiLabs (2023). Deane KHO and the Access All Areas in Labs Team. Access All Areas in Labs: Access Guidelines. Version 1.1. July 2023. University of East Anglia, Norwich. www.AccessingBrilliance.org
- DAISY (2022). Diversity and Inclusion Survey (DAISY) Question Guidance (Version 2), Equality Diversity and Inclusion in Science and Health Group. https://edisgroup.org/resources/practical-tools-and-guidance/diversity-and- inclusion-survey-daisy-question-guidance-v2/
- Deane (2023) Deane KHO and the Access All Areas in Labs Team. 2023. Access All Areas in Labs: Final Report. University of East Anglia, Norwich.
- DPA (2018). The Data Protection Act. https://www.legislation.gov.uk/ukpga/2018/12/contents
- EARC IPA (2024) The Eastern Academic Research Consortium; Imaging Platform Alliance https://easternarc.ac.uk/ipa/
- Equality Act 2010. The National Archives https://www.legislation.gov.uk/ukpga/2010/15/contents
- ICMJE (2024). Defining the Role of Authors and Contributors. International Committee of Medical Journal Editors. https://www.icmje.org/recommendations/browse/roles- and-responsibilities/defining-the-role-of-authors-and-contributors.html
- Joice W, Tetlow A. 2021. Disability STEM data for students and academic staff in higher education 2007/08 to 2018/19. The Royal Society. https://royalsociety.org/-
- /media/policy/topics/diversity-in-science/210118-disability-STEM-data-for-students-and-staff-in-higher-education.pdf
- Gov.UK 2015. Access to and use of buildings: Approved Document M. https://www.gov.uk/government/publications/access-to-and-use-of-buildings-approved-document-m
- Royal Society, 2020 Qualitative research on barriers to progression of disabled scientists. Report for the Royal Society by the Careers Research & Advisory Centre (CRAC). https://royalsociety.org/-/media/policy/topics/diversity-in- science/qualitative-research-on-barriers-to-progression-of-disabled-scientists.pdf
- Swartz TH, Palermo AS, Masur SK, Aberg JA. (2019) The Science and Value of Diversity: Closing the Gaps in Our Understanding of Inclusion and Diversity. J Infect Dis. 220(Suppl 2):S33-S41. https://pubmed.ncbi.nlm.nih.gov/31430380/
- UEA (2016). The Accessible Principles for the Design and Use of the University Estate. University of East Anglia.
- UEA (2019) Research Data Management Policy. University of East Anglia. https://www.uea.ac.uk/documents/20142/130807/RINopen-researchresearch-data-management-policy.pdf/f1b1f3d6-4b8e-d2f7-2dfc-8512d6249bd8?t=1590588842221
- WAI 2019 Web accessibility standards. Web Access Initiative. World Wide Web Consortium (W3C) https://www.w3.org/WAI/fundamentals/accessibility-principles/