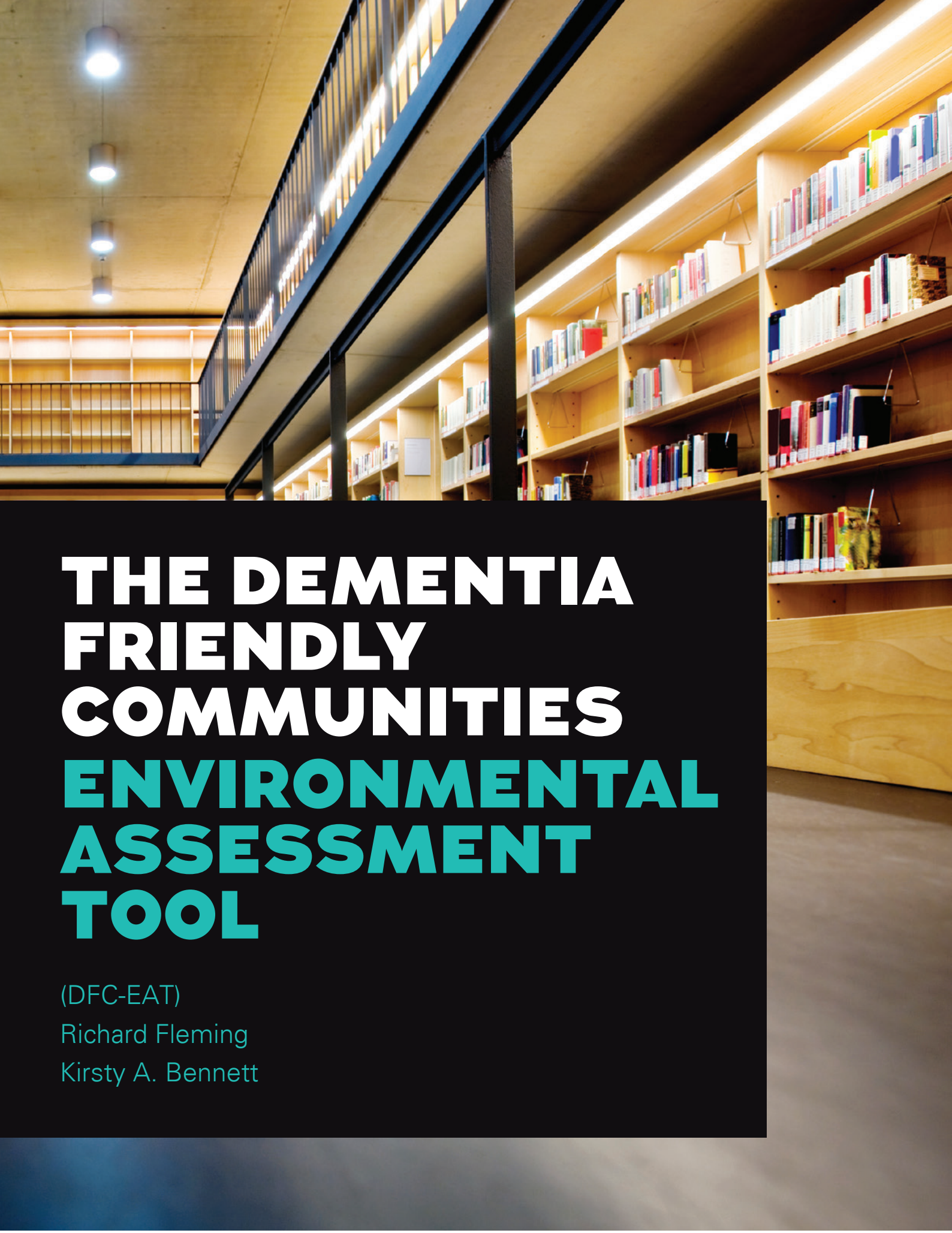

THE DEMENTIA FRIENDLY COMMUNITIES ENVIRONMENTAL ASSESSMENT TOOL

(DFC-EAT)

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Improving our understanding of the role of the built environment in supporting people with dementia is an essential component of the development of dementia friendly communities. The development of tools that measure the quality of the buildings used by people with dementia will help us to identify their strengths and weaknesses and help us to make them more supportive of people with dementia.

The development of the DFC-EAT involved a team of people with dementia, their carers, town planners, architect, graphics designer, psychologist, occupational therapist, physiotherapist and community development officers. They began their work by considering a large number of possible questions drawn from research on the evaluation of residential aged care facilities for people with dementia and the existing literature on evaluating public spaces and buildings used by people with dementia. Having decided which of these to keep they tested the first draft of the tool by walking through a building in Kiama and assessing it using the first draft of the tool. They then carefully considered the results of the assessment and the useability of the tool. This led to significant changes, not least being the recognition that a building is experienced in a variety of stages as we journey through it.

The draft was significantly revised and the process repeated, this time by walking through a shopping mall. This resulted in changes and these were evaluated by assessing a library and discussing the experience and the findings.

The draft tool was then ready for a careful examination of its properties, particularly its inter-rater reliability and its internal validity. These refer to the tool being able to be used in such a way that when two people use it they are likely to come to the same answers and whether or not the questions in the tool have a strong enough relationship with each other to be regarded as measuring the same thing.

This test of the tool involved two people carrying out independent assessments on 60 public and commercial buildings. Their results were then used to evaluate each question in the tool and the tool as a whole. This showed that the assessors came to different answers when they were assessing the journey from the car park and the space around the exit of the building. It also showed that one of the questions about an internal feature was not resulting in agreement. As a result this question was taken out and the tool was reformatted to focus on the journey from immediately outside the building, to the destination inside and back to the exit.

The DFC-EAT has been carefully constructed to help us understand more about how our buildings can support, or hinder, people with dementia. Your comments on your experience in using it, and the spreadsheet available here, would be very welcome.

ACKNOWLEDGEMENTS

This assessment tool was developed under the auspices of Alzheimers Australia by a team of people from the University of Wollongong, Kiama Council, individuals living with dementia and their carers. The testing and refinement of the tool was supported by a grant from the *Dementia Collaborative Research Centre - Assessment and Better Care* based in the University of New South Wales.

BACKGROUND

Across the world there is a growing recognition of the need to make our communities more supportive of people with dementia. If we are to succeed in doing this we need to be able to identify how public and commercial buildings help, or hinder, people with dementia to carry out the normal tasks of life; shopping, paying bills, visiting the doctor, etc. This assessment tool has been developed to help with identifying the problems that people with dementia may face in using buildings such as shops, banks, libraries, medical practices so that these settings may be improved and so that we learn how to design and maintain more supportive buildings in the future.

THE FOUNDATIONS OF THIS TOOL

There has been considerable research into the design of residential care facilities for people with dementia and a little research into the design of public and commercial buildings used by people with dementia. This has been reviewed and used by a team that included people living with dementia, their carers, a town planner, mapper, architect, graphics designer, occupational therapist, physiotherapist, psychologist and community development officers to develop this tool. The questions have been organised around eight principles of design:-

Safety: People living with a dementia require an internal and external environment that is safe and easy to move around if they are to make the best of their abilities. However, obvious safety features and barriers will lead to frustration so potential risks need to be reduced unobtrusively.

Seeing and being seen: An easily understood environment will help to minimise confusion. It is particularly important for a person living with a dementia to be able to recognise where they are, where they have come from and what they will find if they head in a certain direction. When they can see key places, they are more able to make choices and find their way to where they want to go. Being able to see and be seen opens up opportunities for engagement and gives the person with dementia the confidence to explore their environment.

Familiarity: The person with dementia is more able to use and enjoy spaces and objects that are familiar to them from experiences earlier in their life. The environment should afford them the opportunity to maintain their competence through the use of familiar design, furniture, fittings and colours.

Size: The scale of a building will have an effect on the behaviour and feelings of a person with dementia. The experience of scale is strongly influenced by three factors; the number of people that the person encounters, the overall size of the building and the size of the individual components, such as doors, rooms and corridors. A person should not be intimidated by the size of the surroundings or confronted with a multitude of interactions and choices. Rather the scale should help the person feel in control.

Provide opportunities to be alone or with others: People with dementia need to be able to choose to be on their own or spend time with others. This requires the provision of a variety of spaces, some for quiet conversation with one or two others, as well as spaces where people can be by themselves.

Support movement and engagement: Confusion can be minimised by providing a well-defined route that guides people past points of interest and information, giving them opportunities to engage in activities or social interaction.

Stimulus Reduction: Because dementia reduces the ability to filter stimulation and attend to only those things that are important, a person with dementia can become stressed by prolonged exposure to large amounts of stimulation. The environment should be designed to minimise exposure to stimuli that are not helpful. The full range of senses must be considered. Too much visual stimulation, for example, is as stressful as too much auditory stimulation.

Stimulus Enhancement: Enabling the person with dementia to see, hear and smell things that give them cues about where they are and what they can do, can help to minimise their confusion and uncertainty. Consideration needs to be given to providing redundant cueing i.e. providing a number of cues to the same thing, recognizing that what is meaningful to one person will not necessarily be meaningful to another. Cues need to be carefully designed, however, so that they do not become unhelpful stimulation.

HOW TO USE THIS TOOL

The assessment covers the journey to and from the destination where the person with dementia will complete their task (buy something, choose a book, pay a bill, etc.). It begins with the *approach to the entry*, then the *entry space*, continues along the *route to the destination*, examines the *destination* itself and then covers the *route from the destination* to the exit.

The assessment may be carried out by one person but as the purpose is usually to stimulate discussion about the strengths and weaknesses of the building, it is better carried out by two or more assessors who are involved in developing a plan to improve the useability of the building. Different perspectives will add value to the assessment. Whenever possible key stakeholders, e.g. users of the building who have dementia, managers who have the authority to bring about change or 'champions' who wish to stimulate a discussion about improvement, should be involved. Ideally all assessors should complete the tool at the same time to reduce the impact of changes in weather/other conditions.

The assessment is carried out by the assessors simulating a visit to the building to carry out a particular task. It involves walking up to the building, through it to the place where the task will be completed and then walking to the exit. It can be very useful to take photographs to illustrate the good and the bad points of the building. They will help to explain your findings to others.

GETTING STARTED

To complete this tool successfully you will need to define the purpose of the visit to the building, for example, going to choose a large print book in a library. This will define the destination of the journey. Next you will need to agree the specific route to be taken to and from the destination, and determine if column 2 'Entry space' is to be completed. You may wish to record the route as a sketch or with photos for future reference.

If the building provides a variety of destinations, as in a library, it may be necessary to repeat parts of the assessment for a number of different destinations to gain a full picture of the strengths and weaknesses of the building. If you decide to simulate choosing a large print book, for example, then the destination is likely to be different from going to seek some information. On the other hand, you may wish to only assess one part of the journey through the building: perhaps you only want to be sure that the person with dementia is enabled to get from the entry to a particular destination. In that case you would only use the 'Route to Destination' column.

Start the journey outside the building, at about 20 metres from the entrance. Complete each of the five columns in the assessment tool in turn as you travel on the journey to your destination, simulate the completion of the task and then walk to the exit.

As an assessor you are asked to record the extent to which you agree that a set of statements describe the building that you are assessing. Indicate your agreement with statements in the assessment tool by writing 0, 1 or 2 in each box where 0 = disagree; 1 =partially agree; and 2= agree. It may be helpful to think of these scores as representing a range of agreement (rather than a simple yes or no) with Agree indicating 66-100% of agreement, Partially Agree representing a band of agreement from 34% to 65% and Disagree not necessarily being totally disagree but representing a band of agreement from 0% to 33%.

Location

Date Time

Destination and purpose of visit

Weather

Unusual circumstances, e.g. building works going on

Assessors

Describe route to and from the destination: define specific travel route

(attach sketch/photos for record purposes)

DESCRIPTION OF COLUMNS

1. Approach to the entry:	The approach commences a maximum of 20m away from the entry. It includes the car park (if it is situated in front of/ to the side of the building), the streetscape, the footpath and the *outside* of the entrance door as viewed from the approach.
2. Entry space:	This space starts from *inside* the building at the entry door threshold. It may include an airlock space and/or a foyer. *In some instances there may not be a specific entry space, and the route to the destination (No.3) may commence from the entry door threshold. This column would not be completed when this occurs.*
3. Route to the destination:	The route commences at the end of the entry space (or at the entry door threshold if there is no entry space) and extends to the destination. The route may (or may not) be a specifically defined aisle/corridor/path.
4. Destination:	This is the place that is the purpose of the visit. It may be a specific room e.g. waiting room, or a specific area e.g. a counter. In this case the space immediately in front of and to the side of the counter should be considered as part of the destination.
5. Route from destination to exit:	This is the route taken from the destination (No.4) to reach the exit. It includes the *inside* view of the exit door and the entry space (where there is one). The route used in No 3 should be retraced in the opposite direction back to the exit, unless there is a more convenient or obligatory exit route.

	0 = disagree 1 = partially agree 2 = agree	Approach to the entry	Entry space	Route to the destination	Destination	Route from the destination
Safety	All areas are free from dark shadows or bright glare.					
	All areas are well lit.					
	All areas can be accessed without need to negotiate steps/stairs.					
	All changes in surface levels are safe. Consider clear marking of level changes, illumination, presence of handrails and non-slip surfaces. (Score 2 if no level changes)					
	Gradients of all ramped areas are safe for people using a wheelchair or walking aid. (Score 2 if no ramps)					
	The way to the next stage of the journey is clearly visible and safely accessible. Consider ease of access to path, trip hazards at the edge of the path, slipperiness, evenness, width sufficient for 2 people to pass, absence of obstacles on the path.					
	All manually operated entry doors /gates are easily operated e.g. have lever handles/push plates (Score 2 where gates/doors are automatic or not present)					
Seeing and being seen	The entry/exit can be easily identified					
	The way to a toilet can be easily seen					
	The next destination can be easily seen and identified e.g. enquiry desk, aisle, corridor, office, way back to exit.					
	The final destination allows the person with dementia to see all of the areas that they may wish to use.					
Familiarity	The space is welcoming.					
	The function of the space is obvious, e.g. a foyer, a thoroughfare leading to a destination.					
	Architectural design features, including landscaping and furniture, are familiar and easily understood by a person with dementia.					
	Colours and decor are familiar					
Size	The size and scale of the space allows a person with dementia to feel comfortable and at ease e.g. not too large or too confined.					
	The number of people present in the space allows the person living with dementia to feel comfortable and at ease					
Variety of spaces	Seating is provided to allow the person with dementia to sit quietly by themselves or with a small number of others					
	The space promotes easy and comfortable interaction with people of different ages and interests					
Movement and engagement	There are both shady and sunny areas along the journey.					
	The journey is pleasant.					
	Seating or nooks enable a person living with a dementia to sit and rest.					
	Spaces provide opportunities to participate in or observe activities of interest					

	0 = disagree 1 = partially agree 2 = agree	Approach to the entry	Entry space	Route to the destination	Destination	Route from the destination
Stimulus Reduction	The space is free from distracting visual clutter i.e. notices, advertisements, objects, street furniture that are irrelevant.					
	Signage provides simple, essential information at decision points.					
	Entry to areas where a person living with a dementia may be exposed to danger are not easily seen or accessed, e.g. they are the same colour as the wall.					
	Background noise is of a low level.					
	Public address systems are used minimally and only when necessary (Score 2 if not present).					
	There are no alarming or disturbing noises, e.g. flapping doors, noisy automatic doors.					
	There are no confusing odours, e.g. a bakery competing with a florist.					
	Floor finishes do not have patterns with a high level of contrast					
Stimulus Enhancement	Cues, such as recognisable images or symbols are positioned at decision points such as junctions and turnings along the journey to the next destination.					
	Signs assist the person with dementia to complete the journey and task.					
	Objects and/or furniture clearly show people that they are on the correct part of the journey.					
	The variety of materials and finishes present create an interesting journey to and from the destination and help the person with dementia identify the stages of the journey (e.g. brick, timber, concrete, stone, grass)					
	Olfactory cues are present that provide a variety of experiences and help identify the stages of the journey (e.g. smell of perfumed plants, bakery, cafe).					
	Auditory cues are present that provide a variety of experiences and help identify the stages of the journey.					
	Total Scores					

You may wish to use the spreadsheet available from **www.enablingenvironments.com.au** to calculate percentage scores and to compare your results with others.