

Dementia Inclusive Design Audit

A Dementia Inclusive Audit of key areas within the Primary Care Centre Clonbrusk, Athlone

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Foreword

It gives me great pleasure to present this Dementia Inclusive Design Audit of the Primary Care Centre Clonbrusk, Athlone. The centre was used as a pilot to examine the accessibility and usability of the primary care setting environment for people living with dementia and others with sensory, cognitive or physical impairment. The report and its findings will be important to inform the future implementation of dementia inclusive design in other primary care centres and address the often negative experience a person with cognitive and/or sensory impairment may experience when attending a health care centre.

This report follows the 2018 publication of the Dementia Friendly Hospital Guidelines (Grey et al 2018). The guidelines which support the implementation of the National Dementia Strategy have a central theme that the care environment should be accessible, inclusive understandable, and easy to use for the person with dementia; ensuring that the whole experience of attending a care setting is comforting and free from stress and anxiety.

I would like to thank the authors of the report Fiona Walsh and Greg Walsh of DDS Architects and Global Brain Health Institute fellows for producing a very thorough and accessible report. Also to Anne Naughton, Centre Manager and Kate Egan, Assistant Director of Public Health Nursing at the Primary Care Centre in Clonbrusk for facilitating the audit; Alice Corbett, Age Friendly Programme Manager, colleagues in the National Dementia office Pauline Lee, Dementia Project Officer for CHO 8 and Fiona Foley, National Coordinator of Dementia: Understand Together in Communities for participating in this project, and to extend my particular thanks those living with dementia who voluntarily gave up their time to contribute to this valuable report.



Mary Manning

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1. Overview

Dementia: Understand Together, the national dementia awareness campaign (National Dementia Strategy Implementation Plan 2014) led by the Health Service Executive, aims to raise a better awareness and understanding of dementia and to inspire people to take actions to support and include people with dementia and their families in their communities.

Primary Care services are an integral part of community as they cover many of the health or social care services in the community, outside of the hospital setting. This includes GPs, Public Health Nurses and a range of other Health and Social Care Professionals services provided through the Local Primary Care Centres.

To ensure that all primary care centres in Ireland are accessible for people with dementia and other people with cognitive, sensory or physical impairments, the campaign commissioned a project, examining the walkability of a centre, namely the Clonbrusk Primary Care Centre in Athlone.

The audit was carried out by Fiona Walsh, of DDS Architects Ltd., specialists in inclusive design, who provide design and consultancy services to create 'enabling inclusive environments' for people living with dementia, people with cognitive, sensory and/or physical impairments and the elderly.

A steering group was formed with representatives of the Clonbrusk Primary Care Centre, the National Dementia Office, Age Friendly Ireland and Dementia: Understand Together to support the audit and dissemination of findings. (See appendix 2)

Age Friendly Ireland, a shared service of local government hosted by Meath County Council, is a key partner to the campaign and promotes walkability audits across the country. In conjunction with the HSE estates they are developing a toolkit and guiding document for the walkability of Primary Care Centres. Findings of the Primary Care Centre dementia inclusive design audit in Athlone will inform this toolkit.

We would like to acknowledge Anne Naughton PCC, centre manager, and the staff members who work in the PCC for their time and support to the project team to undertake the audit.

2. Brief

This dementia inclusive design audit was commissioned by the HSE's Dementia: Understand Together campaign to assess the Clonbrusk Primary Care Centre's accessibility for people living with dementia and those with cognitive, sensory and/or physical impairments.

The audit looked at the journey a service user would take and the different elements they would encounter approaching and entering the building, and on their journey through the building to the desired service area. The approach, set down, entrance, reception, horizontal and vertical circulation, toilets, signage, and furniture and fittings were all considered as they affect the accessibility of an environment and the ease with which a person can use it.

This report describes the accessibility and inclusivity of the centre based on inclusive design principles. It identifies areas of best practice and areas where adaptations to the environment will make the centre more accessible and inclusive for people living with dementia.

Fiona Walsh spent two days in the Clonbrusk Centre, 12th and 13th November 2019, assessing the environment and observing how it is used by staff members and service users on a day to day basis.

Inclusive design principles recognise the different ways people use the built environment and the impact the environment may have on individuals. Good design aims to provide dignified, equitable and independent use of a facility/environment by everyone, from childhood to old age, regardless of health or impairments.

A dementia inclusive environment supports people to live with greater dignity, independence and autonomy. People can remain active and valued members of their community and participate fully in all aspects of life for longer. Inclusive design goes beyond meeting minimum standards or legislative requirements. An inclusive environment with improved accessibility works better for everyone. Beside the physically impaired, older people, or families with small children, the cognitively and/or sensory impaired members of our community should also benefit from inclusive design. Well-designed and managed built environments are inclusive and benefit everyone.

This audit report is not a technical specification document. Information is included as guidance only, to help put matters discussed in context. Information given on any subject is not a comprehensive set of specifications but key design notes to demonstrate best practice compliance or noncompliance. Before any building work recommended is commissioned or actioned, professional guidance and advice must be sought to ensure it is built to comply with current building legislation standards and best practice guidance.

Please note, this is not a health and safety audit.

3. Dementia

In Ireland today 55,000 people are living with dementia, with two thirds living in the community. This number is expected to increase to 141,200 people by 2050.

Dementia is a syndrome, an overarching term used to describe a wide range of symptoms associated with the deterioration/disease of the brain. Symptoms differ from person to person and change as the underlying disease progresses. People with dementia can experience physical, cognitive and sensory impairments. To design and build to support their needs we must first understand the challenges they may face in built environments.

3.1 Cognitive impairments

Dementia reduces cognitive ability; memory, reasoning, judgement, planning, focus, decision making etc., can all be affected. This can lead to a person with dementia experiencing difficulties in finding their way around and engaging with their environment and the people within it. The result is a reduced ability to navigate and find their way in unfamiliar settings. As the disease progresses even familiar settings can become challenging. We can support cognitive function through good design. We can design intuitive, predictable, legible and familiar environments. We can also provide cues, prompts and signage to support memory, orientation and wayfinding. Being aware of the challenges that cognitive impairment poses for people we can design to support their needs and reduce the stress and anxiety they may experience otherwise.

3.2 Sensory impairments

Dementia can reduce the ability to see, hear, taste, smell and touch. This affects how a person experiences and interacts with their environment. For example: Blind and partially sighted people rely on other senses to compensate for their visual impairments- sound, touch, smell, taste to make sense of the world and to help navigate it. They use aids such as canes, guide dogs etc. to extend their cognition. 80% of the visually impaired can use their remaining sight to interpret spaces if they are designed to support visual access and understanding. Through inclusive dementia design features, we can support all the senses to assist understanding. People with sensory impairments can find it difficult to understand and filter multiple simultaneous sensory stimuli and become confused. Our primary goal should be to deliver relevant information without creating auditory or visual clutter which will confuse, distract and ultimately lead to frustration and withdrawal. We can use design interventions including light, colour, contrast, signage etc, to compensate for lost abilities and support people to better understand and read their environment. We can edit out the irrelevant and emphasise what is important, thus supporting understanding and remaining abilities.

3.3 Physical impairments

People living with dementia can experience reduced mobility and difficulties with balance. Day-to-day activities such as walking, standing and sitting become increasingly difficult as the disease progresses. We understand the barriers to inclusion for people living with physical impairments and we design to support their needs. Wider doors, ramps and accessible WC are now common features we see in our built environment. It is important that facilities are built to meet current building guidance standards, otherwise we may be excluding the very people we are looking to support and enable.

Building Regulations 2010, Technical Guidance Document Part M, Access and Use¹ guidance is a minimum design standard we should apply when designing and building new facilities. Accessibility is the foundation on which we can start to build inclusive environments. Every environment should be designed to support the needs of people living with cognitive, sensory and physical impairments. The guidance given in this report is based on existing building legislation and internationally recognised best demonstrated inclusive design principles. If we design our environment for the most vulnerable members of our community, we design well for everyone.

4. Summary

Established in the 1950's, the health centre served the community in Athlone and its surrounding areas for over 60 years from the original premises in Garden Vale. In December 2013, the centre moved to its new purpose built premises in Clonbrusk Primary Care Centre. The centre has a clear visual presence due to its scale and prominent location. It offers many essential health and social services to the surrounding community including occupational therapy, GPs, language and speech therapy, physiotherapy, pharmacy, dentistry etc. The building is bright, well maintained and the circulation areas are very generous in scale. The colours and materials selected for the building elements in the main support independent use and access.

The building (interior and exterior) layout, wayfinding and interior architecture is designed to support abled body people and people with physical impairments. There is a wide offering of services and facilities in the building which benefits and supports the majority of the local community. There are opportunities through inclusive design interventions that could improve access and better support older people and those living with cognitive and/or sensory deficits, especially dementia, to avail of the services provided.

For example;

Providing clean and well maintained toilets for the public is enabling, however, to support more inclusive access they could be upgraded to comply with current building technical guidance. Providing the recommended contrast between elements and the recommended grab rails will additionally support people with visual and physical impairments.

Signage can be designed to support inclusive use of the building when combined with a robust wayfinding strategy. The existing signage should be augmented to support independent use for people living with cognitive and sensory deficits. Signage which does not support their needs can result in confusion, frustration, disorientation, and ultimately reduce a person's confidence in their ability to cope. People withdraw and stop using services if they find the experience too stressful.

The reception staff members offer a warm welcome and information to visitors. Currently the reception is located in an inner hall. This is a non-intuitive location i.e. not adjacent to or in close proximity to the entrance and without direct visual access on entering the building. This may create confusion and uncertainty, even frustration and anxiety, for the less able people using the facility. The spacious entrance hall has ample space to provide a reception to welcome and guide service users on arrival. There is also space for seating which would support people waiting for assistance from a companion having been dropped off or waiting to be collected.

The long open corridors give a great sense of space, clarity and lack of clutter but without appropriate seating at regular intervals along their length accessing a service can become difficult for older adults and people with cognitive and/or physical frailty. There is space to accommodate seating on corridors and it would be a great addition to assist some service users.

As primary care centres are designed and commissioned to provide essential services, facilities and build capacity to improve the health and wellbeing of our communities we should be mindful that buildings can be either enabling or disabling for the older person and people with cognitive and/or sensory impairments. There is now a body of knowledge, both in building guidance and in best practice that allows us to design more inclusive buildings supporting the needs of our older population and those living with dementia. Inclusive design does not add additional cost, as it is knowledge, awareness and informed choice that makes the difference.

The findings from the dementia audit highlights the impact design decisions can have on people living with dementia, and if recommendations are acted upon, they will improve accessibility of older people, people with cognitive and/or sensory impairments and those living with dementia in our community. The audit findings can be used to inform the layout, design and detailing of the next generation of inclusive primary care centres.

5. Dementia Inclusive Design Audit

The purpose of this audit is to look at the existing built environment and assess its accessibility and inclusivity of people with dementia. We have analysed the environment and recommended changes that will make the centre more accessible to people living with dementia and others with cognitive, sensory and/or physical impairments. Although current building legislation gives clear and comprehensive guidance for design for the physical impairments people may experience, the best practice guidance for cognitive and sensory impairments is not comprehensive. However, even the physical impairment guidance is not always fully adhered to, and this report identifies these instances.

The information and guidance given in the following sections is a combination of national technical guidance documents' recommendations, international standards and best practice inclusive design guidance.

Design principles in the following sections have been included as they relate to designs issues that were encountered during the audit. They are for guidance only, to help put the findings in context. They are brief and in no way cover any subject in its entirety. They are not design specifications and it is recommended that advice is sought from a qualified and registered design specialist, in the required field, before any remedial works are carried out. The scope and breadth of legislation, design standards and best practice guidance cannot be fully covered in an audit report.

Each section has been structured to give key design principles, impact, local audit findings and recommendations for upgrades and improvements.

5.1 Legibility and Way-finding

Design principles

Our built environment should be designed and managed to include and support the needs of people living with cognitive and/or sensory impairments. We should aim to design and build environments that are easy to navigate and understand. Familiarity and predictability support wayfinding and orientation, as does an intuitive layout and architectural clarity. A person with dementia requires an environment that is safe, secure and easy to move around, so they can make the most of their remaining abilities.

(See Appendix 1 for Legibility and Wayfinding Design Principles)

Impact

When people find an environment too challenging to navigate, they will withdraw. The fear of getting lost can be overwhelming for a person with a cognitive or sensory impairment. Not being able to navigate through a space because elements are not clearly visible or can be misinterpreted due to lack of visual clarity can prevent independent and dignified use. This results in loss of independence and autonomy.

Findings

The building sits on a prominent site and has a clear visual presence due to its scale and location. As a first-time visitor with no prior knowledge of the appearance or location of the facility it was easy to identify.

If travelling by car or on foot and approaching along Arcadia Road from the east the entrance is not obvious or visible. The pharmacy has a prime location on the street façade and the main entrance to the building, on the west façade, is only visible upon entering the site to park.

The main entrance is not visible and is not adequately signposted if you approach from the east. Patients using public transport or walking to the facility will not easily find the entrance. The pedestrian access and path at the front of the building leads you to a locked emergency exit. It is not intuitive to have a public facility with its entrance to one side and not facing the main thoroughfare.

The signage in and around the centre should be reviewed and a new inclusive wayfinding strategy is required. People living with cognitive and sensory impairment require cues and prompts at decision points/changes in direction to find a required destination. They require clear and concise information, displayed in prominent locations, without the distraction of visual clutter. Good signage will benefit all members of the community. Please see section 5.9 Signage below for further guidance. Inclusive signage is not currently provided.

Recommendations

- I. Thought should be given to providing clear signage to direct visitors, approaching from all direction and by all means of transport to the main entrance. The pedestrian route/path off Arcadia Road has no directional signage to the principle entrance. This should be provided.



Figure 1. View as you approach, entrance not visible from the road.



Figure 2. Arrival information.

5.2 Access Route

Design principles

Wayfinding and legibility must be supported by the physical environment. Our footpaths and roads must be safe and secure for all users. We must understand that small details we may take for granted or may consider irrelevant can present real challenges for people with cognitive and/or sensory impairments. By considering the details, we can eliminate many of the barriers and reduce the levels of stress and anxiety experienced by people when navigating our external environment.

(See Appendix 1 for key relevant design principles for access routes)

Impact

If footpaths are not kept in good repair and free of obstacles, they are a risk to all in the community. The fear of falling can have a major impact on an older person's confidence. If they do not feel safe and confident using the pedestrian routes, they will stop using the services provided. This will ultimately result in loneliness, social isolation and poor health. A well-maintained environment offers a sense of security and safety, and this is what we need to offer people who find their built environment challenging due to cognitive and/or sensory impairments.

Findings

The structural integrity of the footpath surfaces and kerb edges within the curtilage of the centre were generally in good repair. The site was well maintained and was neat and tidy. Paths were clear of street furniture and there were no permanent physical obstructions. (Pharmacy bins being the exception on the day of the audit)

The path at the front of the centre had an area of standing water on the day of the audit. This could be perceived as a slip hazard or be an actual slip hazard in cold weather.

Signposts and lampposts on access routes did not have contrasting bands at 1500mm above finished ground level. This is recommended to enhance visibility.

Blister paving was provided on the crossing point outside the pharmacy, but not on other dropped kerbs within the grounds of the centre. This poses a risk for people who are visually impaired as they may not be aware they are approaching an area with moving vehicles.

The distance from the public footpath to the main entrance and the CADS/MIDOC entrance exceeds 50m. There is adequate space to provide seats along the route. If accessible seating is provided it assists the very people who require it most to access the services provided.

A few small areas of path had visible growth of weeds and grass beginning to show through. This should be checked and remedied as the integrity of the brick interlocking paving will be damaged and the organic material on the footpath may present a slip and trip hazard for some users.

Recommendations

- I. Continue to maintain the pedestrian routes to a high standard and remove grass or weed growth from the footpath areas as and when needed.
- II. Provide contrasting strips on signposts and lampposts to enhance visibility.
- III. Review the use of blister paving and install at dropped kerbs that lead into the line of moving vehicles.
- IV. Provide accessible seating adjacent to access route footpaths leading to entrances.
- V. Inspect areas of path with standing water and carry out remedial work as required.



Figure 3. Standing water, and weeds.



Figure 4. No blister paving at crossing point.

5.3 Set Down Area

Design principles

A set down area is a necessity for a busy primary care centre. Not all visitors and patients will have the ability to walk from the parking area. The intention is to provide a convenient drop off point in close proximity to the principle entrance. A person can be dropped off while a carer/companion goes to park. A set down area may be used for a variety of reasons: convenience, inclement weather, inability to walk the distance from the car park due to ill health, age, physical impairment or frailty.

(See Appendix 1 for key relevant design principles set down area)

Impact

If used for any reason other than convenience a set down area may be a necessity for a visitor to access the service in the centre. Even a short walk may be a barrier to access and inclusion.

Findings

The existing set down area is not working. The majority of people using the zone ignore the no right turn sign. It is not intuitive to drive past the turn into this area and it is not apparent there is a roundabout just ahead.

The set down area is too narrow for a car to pass a parked or stopped vehicle, so the tendency is for people to park partly on the pedestrian footpath. Over the course of two days, a number of cars fully mounted the footpath to park.

Cars mounting the footpath are a hazard to pedestrians using the access route. They cause an obstruction and block free and unimpeded access to the main entrance. Footpaths are not designed to take vehicular traffic and ultimately kerbs and footpaths surfaces will be damaged.

The existing layout does not put people at ease to accompany a patient to their desired destination or to a convenient safe location/seating area where they can wait in comfort.

The set down area does not provide any protection from the elements. It can take a considerable amount of time to assist someone to get in or out of a car if they are frail, unwell or have an impairment.

The dropped kerb directly in front of the principle entrance is not highlighted with blister paving.

Recommendations

- I. Protect the pedestrian access routes by installing bollards to prevent cars from mounting the footpaths.
- II. Provide weather protection for people using the set down area.
- III. Assess the set down area layout to see if the design can be improved and if it is adequate for the number of visitors who need to use it.
- IV. Providing a suitable safe seating area in the entrance hall would reduce the time some drivers need to spend parked in this zone.

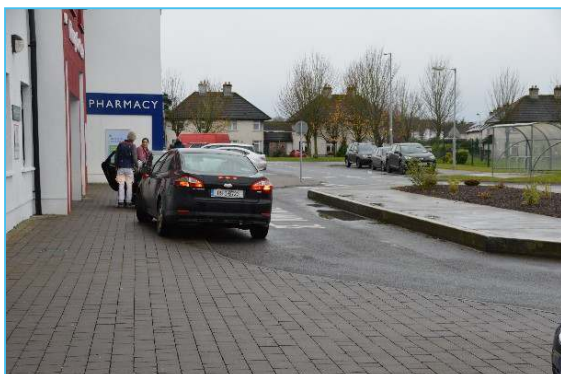


Figure 5. Cars parked on the footpath and obstructing the entrance.



Figure 6. No right turn, roundabout ahead.

5.4 Entrance and Reception

Design principles

The entrance to a building can be a barrier to access and services if it is not suitably designed. The entrance should have a prominent visual relationship to its surroundings, both internally and externally. Entrance areas can be challenging environments for people with cognitive and sensory impairments as they have additional needs over and above those required for people with physical impairments.

(See Appendix 1 for key relevant design principles for entrance and reception)

Impact

Dementia can lead to a reduced ability to find a desired destination (wayfinding). This can seriously affect a person's confidence, autonomy and impact their quality of life. People living with dementia tend to operate on a sequential basis, moving from one decision point (reference point) to the next. Disorientation can lead to anxiety and confusion.

The building should help people living with dementia recognise where they are, where they have come from and what they will find when they head in a certain direction. Direct visible access and transparency for example using glazed screens etc. is recommended. We should provide as much transparency as possible in the environment so that people with dementia do not have to remember or guess what is behind a door.

Findings

The aluminium exterior threshold, the matwell and the entrance hall flooring all contrast visually with each other and could be misinterpreted as changes in levels.

You enter the building into a large empty room. There are four sets of doors but no direct visual access or signage directing you to a reception area. There is no seating. The signage provided is ambiguous and does not indicate the location of key facilities such as reception, toilets, stairs, lift etc. It is not clear how or where to proceed to. The room is devoid of clues, prompts, orientation and wayfinding support. It is a challenge for the abled bodied among us to orientate themselves on entering but could be particularly disabling for people living with cognitive or sensory impairments. To reach reception and check in you must navigate a heavy set of double doors and walk in excess of 25 metres.

The floor in the entrance hall has bold contrasting shapes in orange and green against a grey background. The design is creating visual clutter and could be viewed as physical obstacles by a person with impaired vision.

The GP practices are not clearly identifiable. They require more prominent signage and a clear identifiable presence in the entrance space.

Recommendations

- I. The large spacious entrance hall could accommodate a reception desk and accessible seating. This would assist people dropping off service users and provide immediate access to help and information on entering the building.
- II. GP practices should be visually highlighted within the entrance area. This would reduce the number of unnecessary journeys to reception.
- III. Signage should be reviewed and replaced or augmented with new inclusive signage see section 4.9 below for further detail.
- IV. Flooring and entrance matting, when replaced, should be designed to meet inclusive design standards, reducing visual clutter and LRV contrast differential between materials



Figure 7. Main entrance is prominent on the west elevation. If doors contrasted with surrounding fenestration it would improve visual access.



Figure 8. CADS and MIDOC entrance at rear of building. If doors contrasted with surrounding fenestration it would improve visual access.



Figure 9. Threshold contrast, illusion of a step.



Figure 10. Entrance hall, no visual access to reception and no seating.

5.5 Surface Finishes, Materials and Colours

Design Principles

The surface treatment and finishes of major building elements, floors, walls, doors and ceilings in a building can enable or disable a visitor as they use a building. These elements can support use and give visual and auditory clues and prompts to help a person orientate themselves and find their way around. The design of building elements can support autonomy, dignity and independence.

(See Appendix 1 for key relevant design principles for surface finishes)

Impact

For a person living with cognitive or sensory impairment they require additional support to orientate and navigate our environment. Entering a room and not being able to read the size and volume of the space can cause unnecessary stress and anxiety. Through design we can give clear cues and prompts to help read a space and the elements within it. If a sense is impaired a person will rely on their remaining senses to understand and decode their environment. If the design is not supportive people will withdraw, which results in loneliness and social isolation.

Findings

The choice of colours used for floor, wall, door and ceiling in the building, in the main, give good spatial definition and supports orientation. The exception being in toilet facilities, see section 5.7 Toilets below for more detail.

The timber veneered doors contrast well with the wall in which they sit. Architraves and skirting offer good contrast with walls and floor finishes. Coved skirting, where they are used, do not exceed the 100mm maximum height recommended. If they exceed 100mm they can give the illusion the room is larger than it actually is.

The use of pattern on surfaces in the building is very limited. Chairs in the large meeting room on the first floor have pattern on the upholstery but it is very subtle. Pattern is problematic when colour pallets are bold and contrasting.

Floors are maintained with a high gloss finish. This is a practice that should be ceased. The reflection and glare create a difficult environment for people living with cognitive and sensory impairments. Floors with a gloss finish can be perceived as being slippery which could cause a person to change their gait which can lead to trips and falls. The glare can be blinding, and reflection can be misinterpreted. If the surface polish is removed the glare will be greatly reduced.

The contrast in colour and tone of floor finished between rooms and circulation areas could in some instances be misinterpreted as a change in level.

The contrasting floor patterns inset into the floors in the entrance, reception and inner halls are very striking. They add to the visual complexity of the environment and may be challenging for people with cognitive and/or sensory impairments. Although two dimensional they may be perceived as physical obstacles or changes in levels by a person with reduced visual acuity, contrast perception and/or depth perception. They are an unnecessary additional element that requires understanding and decoding to navigate the space.

The large glazed floor level window panels in the reception areas are not highlighted with manifestations that contrast visually with the background against which they are viewed. The reflective surface and lack of visual clarity may be dangerous and a hazard to people with cognitive and sensory impairments.

The glazed screens in reception areas are highly reflective. If a screen is necessary, glass with low light reflectance should be used.

The sound attenuation between rooms was not adequate in all areas. When standing in a room you could hear the consultation in the adjoining room.

Recommendations

- I. General areas, painted walls should be maintained with matt finishes. The existing paint colours offer suitable contrast with floor, doors and ceilings to create good spatial definition. Any changes to colour selection should be selected to give similar colour contrast values between elements.
- II. In toilet and washroom areas, the walls in the toilet facilities could be changed to offer better visual contrast between walls, sanitary fitting and grab rails.
- III. The gloss floors polish should be removed to reduce glare and reflection. As and when floors are replaced during maintenance cycles it is recommended unnecessary patterns are removed and colour and tonal differences between areas are eliminated. This will improve inclusive access.
- IV. Large glazed window panels should have manifestations added that contrast against the backgrounds against which they will be viewed.
- V. Where there is an issue with sound attenuation between areas where confidential consultations take place sound proofing should be upgraded.



Figure 11. Glare can cause anxiety and fear of falling



Figure 12. Contrasting floor pattern, in entrance and reception areas adds unnecessary visual clutter, could be misinterpreted as obstacles and changes in levels



Figure 13. High gloss floor polish, excessive glare is disabling

5.6 Internal Stairs

Design Principles

By their very nature changes in level present a hazard. It is important stairs are designed and built to provide safe access to all users. To not comply with recommended standards and guidance is excluding members of our community from independent and inclusive access and use of facilities.

(See Appendix 1 for key relevant design principles for stairs)

Impact

If stairs are provided and do not comply with basic building guidance, they are not accessible to all users. They exclude people with cognitive and sensory impairments and will not meet the needs of some people with physical impairments. It is important when designing and specifying building elements which in themselves present a heightened risk of injury during use that they are built to the highest possible access standards.

Findings

The main stairs has a glass guarding and is positioned adjacent to a glazed wall. The glare and reflections in the glass and the lack of visual contrast between elements make the environment hard to read. It is not a good environment for people with cognitive and/or sensory impairment. Spatial orientation and depth perception are not supported. The ability to tolerate glare and interpreted reflection is compromised with cognitive and sensory impairments. They add to the visual complexity of an environment which can lead to stress and anxiety.

At the main stairs at ground level, the soffit is below 2100mm from finished floor level and should be protected with a continuous barrier.

On the main stairs the handrails do not terminate in a closed end, in a manner that reduces the risk of clothes catching. This could be achieved by returning the handrail to the floor or wall. One emergency exit stair was inspected (ref zone 9 on attached floor plan). On the first floor landing the handrail did not extend 300mm beyond the top step, and the first step is in line with the wall that shields visual access to the stairs.

There is no prior warning that you are on the step edge. Handrails are provided on one side only. Signage on the first-floor landing is placed directly below a light fitting. Dementia can result in a reduced ability to adjust to light conditions and tolerate glare. This placement is not ideal.

Recommendations

- I. Install a continuous barrier to prevent a person colliding with the underside of the stair soffit in the main reception hall.
- II. Investigate replacing glass panels on stairs and landing with non-reflective and opaque panels to help support spatial orientation and reduce glare and reflections.
- III. If space permits (means of escape requirements cannot be compromised, escape widths) the emergency escape stairs should be upgraded to improve safety and visual access. Signage should be moved from below the light fitting on first floor landing and placed in a suitable location.



Figure 14. Low soffit under stairs ground floor



Figure 16. Stairs reflection in glass guarding and open-ended handrails.



Figure 15. Glass guarding offers lack of visual clarity

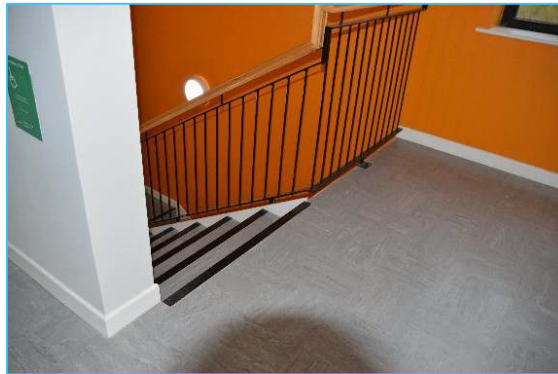


Figure 17. Unprotected top step, no handrail to warn of change in level.



Figure 18. Light fitting directly above signage, glare

5.7 Toilets Facilities

Design Principles

For dementia inclusive environments we should aim to provide independently accessible toilet facilities that meet the needs of people with a wide range of abilities. If a person suffers the humiliation of not accessing a toilet in a timely manner or the fear of not finding one in time, they will lose their confidence and withdraw from using a facility or service. Ease of access to appropriately designed and maintained toilet facilities is essential to support dignity and independence.

Visual contrast between elements to support visual access and clarity is a key design consideration when designing these facilities. Toilet facilities should be easy to find and clearly identifiable, as people with difficulty communicating may prefer not to ask directions and should therefore be able to rely on signage. Dementia inclusive design principles should apply to all toilets in a facility and not just wheelchair accessible toilets.

(See Appendix 1 for key relevant design principles for accessible toilets)

Impact

Lack of access to suitable accessible WC facilities will result in people being excluded from the centre and its services. To build WC facilities and not provide contrast as required by Building Control Regulation, Part M, Access and Use is preventing inclusive access to those with cognitive, sensory and physical impairments.

Findings

The building does not have adequate signage to guide you to sanitary facilities. Additional inclusive signage is required to augment the signage provided.

The wheelchair accessible facilities provided were locked on the days we audited the facilities and you had to request a key from reception to gain access.

The wheelchair accessible WCs do not comply with Building Regulations 2010 Technical Guidance Document M Access and Use. 'The surface finish of sanitary fittings, grab rails and doors, should contrast visually with their background.' This contrast was not provided in all wheelchair accessible facilities. Grab rails and fittings should have a 30+ LRV point difference with the colour of the supporting walls. This visual contrast was not present.

No provision is made for ambulant disabled users in the main WC facilities. The required contrasting grab and outward opening doors are not provided. They should be added to meet building control Part M, Access and Use 2010 guidance. Contrasting toilet seats would improve accessibility and visual clarity for visually impaired users.

Recommendations

- I. Toilet facilities must be clearly signposted so they can be found with ease and without having to request assistance.
- II. Ensure the grab rails and fittings in all the toilet facilities have the required visual contrast with the background wall against which they are viewed.
- III. Ensure designers, specifiers and the maintenance department are aware of the visual contrast requirements.
- IV. Upgrade general toilet facilities to comply with ambulant disabled requirements. Clear guidance is given in Building Regulations 2010 Technical Guidance Document M, Access and Use
- V. Toilet seats should be replaced to give visual contrast with the WC pan and cistern. Please note red is not a recommended colour option. Red is widely recommended by sanitary suppliers for use in dementia friendly facilities however a grey, blue or charcoal colour would be a more acceptable alternative.
- VI. Providing a unisex 'Changing Places' toilets facility, for use by people with complex and multiple impairments, should be considered.



Figure 19. Accessible toilet locked and poor signage to all toilet facilities



Figure 20. No ambulant disabled grab rails and lack of contrast



Figure 21. Lack of visual contrast in accessible toilets

5.8 Seating

Design Principles

Seating provides somewhere to stop and rest and can be an essential facility for some service users. The design and location of seating in a building is important if people are to use the building independently. People with impaired mobility or reduced physical stamina may require a place to rest. If a seat is too low and/or does not have arm rests some users may require assistance to rise from a seated position.

(See Appendix1 for key relevant design principles for seating)

Impact

If accessible seating is not provided it excludes the very people who require it most to access services. It is an essential amenity for some service user if they are to have independent and dignified access to services.

Findings

The entrance hall does not have seating provided. This is an area that requires seating for people who are waiting to be collected or waiting for assistance from a companion after being dropped off in the set down area.

The benches and chairs located in the reception areas, hallways and first floor conference room (F38) and multipurpose room (F77) do not contrast visually (LRV difference +30 points) with the floor on which they sit. They do not have arm rests and are all a uniform height.

In waiting areas seating does have arm rests but does not contrast visually (LRV difference +30 points) with the floor on which it sits. Space has not been allocated for wheelchair users in waiting areas.

If seating does not contrast visually there is potential for a person to miss sit and fall. Contrast improves visual access and therefore reduces the potential for accidents. Arm rests support independent use. Varied seat heights provide for people of short stature, transfer from a wheelchair and use by a person who requires a higher seat.

Recommendations

- I. Accessible seating should be provided in the entrance area.
- II. Waiting areas should have seating with a variety of seat heights and with arm rests. Space should be provided for wheelchair users in waiting areas.
- III. To improve visual access and clarity seating should contrast visually with its surrounding and against the floor on which it sits.



Figure 22. Seating with arms supports independent use.

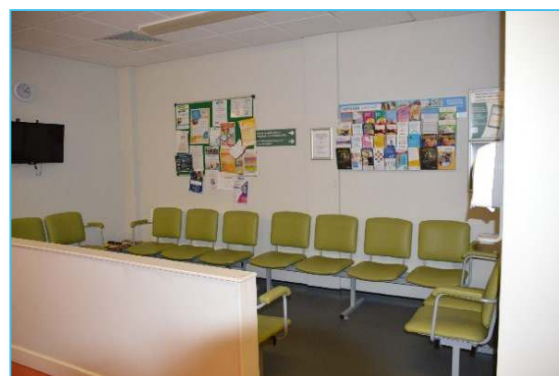


Figure 23. Provide space for wheelchairs and seats of different heights

5.9 Signage

Design Principles

A fundamental principle of inclusion is to be able to find your way around without assistance. Asking for and following directions can be challenging for a person with cognitive or sensory impairment. Without inclusive signage people living with dementia find it difficult to navigate a building, identify and find services and know they have reached their desired destination. As we age reduced upper body and neck strength result in people concentrating their vision within 1200mm from the floor. Signage places above this height may not be accessible and noticed. Signage design for people living with cognitive and sensory impairments is a science that has advanced in understanding in the last couple of years. There are a small number of experts working in the field to advance the knowledge and awareness.

(See Appendix 1 for key relevant design principles for signage)

Impact

People with cognitive impairment can find wayfinding and orientation particularly challenging and have a fear of getting lost even in familiar environments. This can result in a loss of confidence and withdrawal from the community. Clear and appropriately designed inclusive signage assists with staying independent and actively engaged in the community for longer. Good signage is beneficial to all, it will assist all staff, visitors and patients using the centre.

Findings

The existing signage scheme is not effective. This is apparent when you see the number of photocopied A4 sheets of paper that are used in the building to give visitors and staff additional information and guidance to find their way around. The use of temporary signs to assist wayfinding creates unnecessary visual clutter. The design of the building offers poor visual access and it does not have an intuitive layout which make the provision of good signage essential.

The centre would benefit greatly from an inclusive signage scheme and wayfinding strategy. This would assist people with cognitive and sensory impairments to navigate the building and would also aid other visitors to find facilities and services with ease.

Recommendation

- I. Clonbrusk PPC should commission a review and assessment of the existing signage and commission a new dementia inclusive signage scheme and wayfinding strategy.
- II. Remove all unnecessary advertising and information notices. Consider necessity, placement and management of all information boards to reduce visual clutter.
- III. Regular clearing and maintenance of notice boards and information displays is necessary to ensure that they remain clearly legible and up to date.
- IV. Signage when provided must be placed and maintained in a clear, obstructed and uncluttered environment.



Figure 24. Signage above line of vision and too discreet



Figure 25. Signage surrounded in visual clutter



Figure 26. Visual clutter is distracting and overwhelming.



Figure 27. Visual clutter, original signage not adequate.



Figure 28. Signage not prominent, requires more visual impact.

6. Conclusion

There is an opportunity for the Clonbrusk Primary Care Centre, and future primary care centres that are planned, to be more inclusive for older people and those living with dementia. Implementing the recommendations from this audit will enhance Clonbrusk PCC and improve accessibility for all, e.g. signage, wayfinding, toilets, set down areas, floor maintenance, seating and reception etc.

Some recommendations can be actioned immediately and will incur no cost. Removing unnecessary posters and managing notice boards would result in an immediate reduction in visual clutter. Seating removed from waiting areas to make space for wheelchair users could be placed on corridors or in the entrance hall.

Upgrading toilet facilities to provide the required contrast and ambulant disabled provision to comply with Part M, Access and Use, would improve facilities and safety for all service users. Removing the high gloss floor polish would greatly reduce the glare in the circulation areas and is highly recommended.

A signage scheme and wayfinding strategy should be a priority to improve accessibility and inclusivity of the centre. If developed the designs and guiding principles can be adopted and used in other services and facilities. This project will require funding, research and development but would be a very worthwhile and valuable endeavour.

For new primary care centres, we would recommend developing a new masterplan and interior architecture guidance to ensure that the buildings are more patient centric and support people with cognitive, sensory and physical impairments. Inclusive accessibility should be core and central to the design concept. We should ensure all future facilities are designed with evidence based guiding principles at the forefront of our decisions making process and aim to make the environment as supportive and enabling as possible, using best demonstrated inclusive design principles to optimise outcomes for patients, visitors and staff. Designing more inclusive enabled environments supports people living with dementia to live with dignity, autonomy and independence for as long as possible.

Appendix: 1

Key relevant Design Principles

1. Legibility and wayfinding

- The design and layout of the building and its entrance/s must be considered in relations to all directions of approach and means of transport that may be used to reach the destination: car, cycle, public transport, mobility scooter, pedestrian etc.
- People should be able to independently orientate themselves and find their way to an entrance with no prior knowledge of the site or building layout.
- A building should be designed to enable ease of navigation around and within the building, without confusion and avoid unnecessary physical or mental effort. Logical and familiar layouts and arrangements with clearly identifiable routes, entrances and elements support understanding.
- Accessible areas should be designed to provide a clear legible framework, with unobstructed lines of sight and be free of physical obstacles and visual clutter.

2. Access routes

- Pedestrian footpaths should have a sound, firm, slip-resistant and reasonably smooth surface.
- Paths should be free of physical obstructions or hazards.
- Free standing posts, signposts and lampposts should visually contrast with the background against which they are viewed. It is recommended they have a 150mm band at a height of 1500mm above finished ground level that contrasts with the post.
- Standing water on pedestrian footpaths is a hazard. Footpaths should drain freely so water does not pond or puddle. Standing water in certain light can be reflective and give off glare. People can change their gait or leave the safety of the path when faced with uncertainty.
- On regularly used pedestrian routes seating should be provided at 50 metre intervals. Seating should be approached on a level and even surface, and with no visual contrast or level change between the path and the platform on which a seat is provided. Space should be provided for a wheelchair user to be accommodated in a seating area. Seating should contrast visually with the background against which it is viewed and have both correctly specified arms and back supports.
- Dropped kerbs are provided to assist wheelchair users at pedestrian crossing points. The addition of blister surface is to provide a warning to visually impaired people who would otherwise, in the absence of a kerb upstand >25mm high, find it difficult to differentiate between where the footpath ends, and the carriageway begins. The blister surface is therefore an essential safety feature at pedestrian crossing points, where the footway is flush with the carriageway to assist wheelchair users to cross unimpeded. The kerb directly in front of the blister surface adjoining the road should be painted white to improve visible access.
- Litter on paths and in public areas is not just unsightly but for people with cognitive and sensory impairments it adds additional visual complexity to an environment. It is another element in the environment that needs to be interpreted/identified, it is unpredictable and can distract from the task in hand. Litter control is important when managing the visual environment.

3. Set down area

- Provide weather protection from the elements for people to exit or enter a vehicle and exit or enter the building.
- Set down area should have adequate space to facilitate the number of people wishing to use it.
- Should be designed so the companion can accompany the patient to their desired destination or a safe location to wait for further assistance.
- Use of the set down area should not obstruct or hinder access for other users.

4. Entrance and reception

- The entrance should be visually prominent from its surrounding and be easily identified.
- If there is more than one entrance it is important to ensure that all pedestrian entrances are accessible.
- The threshold should be level and step free. Colour contrast should be considered to ensure that any colour or tonal contrasting between elements in the entrance zone could not be misinterpreted as a step or change in level.
- Entrance doors should contrast visually and be distinguishable from their surrounding fenestration. Handles should visually contrast with the door on which they are mounted.
- Full height glazing panels adjacent to doors should have clearly highlighted manifestations which contrast against the background against which they are viewed. They should be within two zones 850mm to 1000mm and 1400mm to 1600mm above finished floor level. They should cover a minimum of 10% of the glazed area in each zone.
- The entrance area should offer direct visual access to the reception area, it should be easily identified from the point of entry. Reception should have a direct and unobstructed accessible route from the entrance.
- The entrance hall should have concise signage provided with pictograms indicating the location of WCs, stairs, lifts and circulation routes and other services provided in the building
- Intuitive and predictable layout would be to provide key facilities prioritises around an entrance/reception hub and along main axial routes.
- Unambiguous signage is key to supporting good visual access and wayfinding.
- Pre-arrival information should be provided. It can be in the form of printed literature sent with appointment letters or online information. Many people seek out information online prior to beginning their journey, particularly information on accessibility

5. Surface finishes

- Colour should be used to enhance the visual acuity and clarity of all areas. Light reflective value differences between surfaces can be used to enhance the three-dimensional appearance of a room to support depth perception and orientation.
- Patterned surfaces can add to the visual complexity of an environment and can be misinterpreted. They should be used sparingly and with caution.
- Shiny, polished, reflective and gloss finishes should be avoided. Reflection and glare can be misleading and confusing. People with cognitive and sensory impairments can have a lower tolerance of glare. Reflections add to the visual complexity of an environment and have to be interpreted and decoded, it can be difficult to differentiate between the physical and reflected environment.

- The acoustic environment is important. Auditory overload can occur in busy crowded space and can be overwhelming for people with cognitive and sensory impairments. It can hinder or prevent communication.
- Sound insulation between rooms is important to support communication and protect patient privacy. Dementia can reduce the ability to filter out background noise and to focus on the task in hand.

6. Stairs

- Where a soffit is at a height of less than 2.1m from finished floor level the area should be protected with a continuous barrier to prevent the risk of a person colliding with the underside of the stair.
- A handrail should extend in the horizontal plane beyond the top and bottom of a flight of steps. This allows an individual to steady or to brace themselves before ascending or descending. The change in slope also signals the start or finish of a flight to a person who is partially sighted.
- Handrails should terminate in a manner that reduces the risk of clothes catching. This can be achieved by returning the handrail to the floor or wall.
- A handrail should be provided on each side of a flight of steps, throughout its length, including on intermediate landings. The double handrail assists people who may not have equal strength on both sides and may require additional support on one side.
- For dementia inclusive environments a glass guarding is not recommended. The glare and reflections add to the visual complexity of the environment and may be distracting and cause confusion.

7. Accessible toilets

- Provide dementia inclusive signage to enable people to find toilet facilities with ease and without having to ask directions.
- Ensure facilities are accessible without having to request assistance and they are maintained in a clean and tidy condition.
- People living with cognitive and sensory impairments need additional support for spatial orientation, access and use. The use of colour and contrast play a key role in helping them to interpret and read a space and to identify its fixtures and fittings. When designing a dementia inclusive facility, surface finishes and their relative visual contrast (LRV difference) to each other help people to identify key objects within sanitary accommodation. Support and grab rails should contrast visually with the walls and doors to which they are attached. The WC seat and cover should contrast visually with the WC pan and cistern. Sanitary fittings and accessories should contrast visually with the background against which they are viewed. Floor and walls should contrast to support 3D orientation and aid depth perception.
- Door handles and signage should contrast with doors.
- Large areas of shiny floor and wall surface should not be used as they can produce reflections and glare. Matt and not gloss finished are preferred.

8. Seating

- Accessible seating should be provided at frequent intervals throughout the building. Waiting areas should have accessible seating to provide for people who need additional support to sit and to rise from a seated position.
- Space should be provided for a wheelchair user to be accommodated in the general seating and waiting area.

- Seating should contrast visually with the background against which it is seen, LRV 30+ differential, and should not be manufactured from highly reflective materials.
- Where one bench only is provided or in an area with other less accessible seating is provided, it is recommended one bench meets accessible requirements: Seat height between 450 mm and 480 mm, back support at least 300mm high and arm rests at a height of 200 mm from the surface of the seat and extend from the back-support forwards to cover at least 80% of the depth of the seat. Arm rests should contrast visually with the remainder of the seat. Seat width between arm rests of at least 500 mm.
- Where more than one seat is to be installed in an area a variety of seat heights should be provided, with at least one each with a seat height of 380 mm, 480 mm and 580 mm from ground level.
- Accessible toilets are desirable in easy reach of waiting areas.

9. Signage

- Signage should be part of an integrated wayfinding strategy. Signage should be a consistent style and designs in a building.
- Directional signage should be provided at all decision points and changes of direction. Location signage should be provided for all services and waiting areas. Rooms should have signage placed on the door and on the adjacent wall if the door will remain open.
- The font, colour, size, position, height, position, frequency, contrast with the surrounding etc. are all key to a successful signage scheme design. A systematic and consistent approach is required. It requires a specialist knowledge and understanding of current best practice.
- Signage should not be placed within the pedestrian route where it might cause an obstruction but should be placed adjacent to the pedestrian flow that allows for people to stop and study without blocking the route.
- Signage should not be placed in positions where it may be missed or obscured, for example surrounded by notice boards and information displays. It should be viewed against a clear and unobstructed visual background.
- Signage should not create or contribute to visual clutter.

Appendix: 2

Steering group members

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