Case Study Examples

Accessible London: achieving an inclusive environment Lifetime Homes



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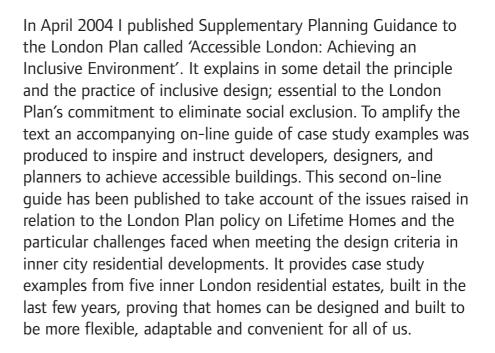
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foreword by Ken Livingstone, Mayor of London



Buildings are now being built in London to higher standards of accessibility and there is greater understanding and a growing commitment to meeting the principles of inclusive design, a process which helps to ensure that the needs of disabled people, older people and families with small children are integrated into designs from the outset. However, we still have a long way to go before all new homes are built and managed in a way that gives us all the same choices and opportunities, so we cannot be complacent about the need to promote the highest standards of accessibility and inclusion in all new developments. These examples should inspire others to provide inclusive access for all, helping to eliminate discrimination, promoting equality of opportunity and contributing towards the creation of sustainable and inclusive communities.



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Ken LivingstoneMayor of London

foreword by the Chief Executive of the London Development Agency

The London Development Agency is the Mayor's agency responsible for driving London's sustainable economic growth - it's our job to ensure that London remains a global success story - in the next year, the next decade and in the next century. We work to deliver the Mayor's vision for London to be a sustainable world city with strong, long-term economic growth, social inclusion and active environmental improvement. The first objective of our Economic Development Strategy is to support the delivery of the London Plan, and to promote sustainable growth and economic development. The LDA has a Corporate Plan housing target and plays a key role in facilitating the delivery of more housing in London, particularly more affordable housing.



Our recently published draft Disability Equality Scheme recognises our role in actively promoting disability equality in London and acknowledges the difficulties many disabled Londoners face as a result of living in unsuitable housing. We therefore, welcomed the opportunity to fund the production of this guide; not only will it help our development partners to understand and implement Lifetime Home standards, but it will help all involved in the development of new homes in London to recognise the benefits of housing designed, built and managed to be accessible, adaptable and flexible – a benefit to us all.

Manny Lewis

Chief Executive LDA

why Lifetime Homes?

London Plan Policy 3A.4: Housing Choice requires boroughs to include policies in development plan documents that seek to ensure that all new housing is built to Lifetime Homes standards. Homes built for general mainstream use but designed to meet the Lifetime Homes standards will contribute towards redressing the severe shortage of accessible housing in London. Meeting Lifetime Homes standards is a cost-effective way of providing homes that are adaptable, flexible, convenient and appropriate to changing needs. They enhance choice, enable independent living and help to create more balanced and inclusive communities.

The Joseph Rowntree Foundation developed the concept of Lifetime Homes in 1991. Lifetime Homes have sixteen design features that ensure a home will be flexible enough to meet the existing and changing needs of most households; the accent is on accessibility not on providing things a family may not need. The design features make the home flexible enough to meet whatever comes along in life, a teenager with a broken leg, a family member with a serious illness, or parents carrying heavy shopping and dealing with a pushchair. Lifetime Home standards provide accessible and convenient homes for a large segment of the population, from those with young children through to frail older people and those with temporary or permanent disabilities.

In 1999 the requirements of Part M of the Building Regulations were extended to include new housing. The aim is to increase the number of new homes built with design features that help all of us, but are of particular benefit to older people, children and their carers and people with physical impairments. Examples include electric sockets that can be reached without bending down, a downstairs toilet, additional space in the entrance hall which makes it easier to manoeuvre a pushchair or wheelchair, wider doorways and a level entrance instead of the traditional step at the front door. These and other features are now a requirement in all new homes. These minimum standards still however, fall short of making the home easily accessible for all our changing housing needs. The

Lifetime Home standards go a little further in their requirements for adaptability and flexibility. As these additions are minor, it is sensible and cost effective to design all new homes to meet all of these requirements.

Many older and disabled people still live in unsuitable housing without access to essential amenities, or must move or undertake expensive adaptations when needs change. Much of London's housing stock is old and difficult to adapt. The fact that some homes are not physically capable of accommodating the differing needs of disabled people as residents or visitors, leads to discrimination and social exclusion. Lifetime Homes provide residents with many advantages, giving private builders of new homes a marketing edge in relation to the second-hand stock with which they compete. Because Lifetime Homes are suitable for older people (whose numbers are increasing rapidly) and for the vast majority of disabled people, as well as non-disabled people, they will have a wider market of potential buyers and residents, probably increasing their value and the ease with which they can be re-sold.

When originally conceived the Lifetime Homes criteria were usually applied to modest semi-detached or terraced homes with their own front door to street or garden, adjacent parking space, and bedrooms upstairs. Today, particularly in London the vast majority of planning applications are for multi-storey dwellings, sometimes hundreds of units to a site. The challenge is to ensure that these too can be designed and maintained to the principles of Lifetime Homes, which inevitably means a reinterpretation of the original guidance.

issues and challenges

This study examined five London developments:

- · Eden Grove in Islington
- Grand Union Village in Ealing and Hillingdon
- Darwin Court in Southwark
- · Rubicon in Greenwich and
- · Pepys Estate in Lewisham

This report illustrates the design solutions the architects and developers found to each of the Lifetime Homes design criteria. Not all the solutions were entirely satisfactory but revealed interesting difficulties and innovative responses. Issues of contemporary interpretation and technical detail are explored below, but perhaps most telling are the comments made by residents who were generous enough to share their impressions and experiences with the researchers (see case studies on page 25).

The initial work to identify exemplary developments and discussion with the designers, developers, landlords and residents of the schemes illustrated in this report, established key areas where the brief 'to create higher density urban residential developments to satisfy the Lifetime Homes criteria' presented new challenges.

Parking provision was first among the challenges. Strictly speaking, interpreting the Lifetime Homes criteria literally, it is not necessary to provide any parking; only if parking is provided is guidance given on its size and location. But, with public transport still insufficiently accessible to disabled people, private cars remain essential to many residents and visitors. Obviously parking in multi-storey developments cannot be provided 'adjacent' to the individual dwelling but can be, and is in the schemes illustrated, provided within easy reach of the common entrance; on site or neighbouring streets, at ground level or within the basement, the latter served by a passenger lift serving all floors. See Section 1 below.

Common parts are also a relatively recent consideration in terms of Lifetime Homes. In some respects the approach to and treatment of a common entrance is simpler than that of many individual front doors to the street or garden. There is often more space within which to grade any change of level and the weatherproofing of a level threshold need only be achieved once. There are nonetheless new considerations. For instance, it makes sense to provide an opening that is equivalent to that provided in a public or commercial setting, in terms of its width and opening weight. Automatic doors are a real bonus and entry phones essential. Naturally these should be installed within reach of wheelchair users and should be accessible to people with visual and/or hearing impairments. See Section 3 below.

Inside it is again logical that corridors, doors, steps and lifts be designed and constructed for public rather than simple domestic use, given the weight of traffic they experience. At the same time, strictly speaking, a lift need not be installed. But, without one the visitability and adaptability of the apartments is much diminished, particularly when one considers the scale and complexity of the funding required to install one at a later date. All the developments examined in this report provide lift access to all floors, which have proved invaluable to the residents, not least those with small children and bikes. See Section 4 below.

There are new benefits and opportunities that these higher density developments can bring. Some of the schemes included in this study incorporate community facilities; health and fitness centres, communal gardens, and in one case even a restaurant. These, it might be assumed, where physically and economically accessible, are useful in combating social exclusion. They might also contribute to the work required of social landlords to meet the challenges set by the Disability Discrimination Act 2005 and the Disability Equality Duty to promote equality of opportunity between disabled and other people and eliminate harassment of disabled people.



Within individual dwellings there are some features of the contemporary brief that make meeting the Lifetime Homes criteria easier. Single storey and open plan living have clear advantages but it seems the provision of floor drains within bathrooms and/or toilets above ground level can be tricky; to achieve sufficient drainage fall within the floor slab without compromising its acoustic performance. Solutions, that have been adopted elsewhere, include a level access shower base that is waste pump compatible (just 22mm deep that can be set within the floor screed without affecting the integrity of the slab). Or, an alternative used in rented blocks where the bathrooms back onto a vertical duct (serviced by the landlord from the stairwell) is an edge detail shower drain, which effectively feeds a waste stack. See Section 7 below.

Another unanticipated challenge is to provide level thresholds to balconies. Some designers expressed doubt that any detail would satisfy building control but reassurance has been given by the National House Building Council and solutions developed that work well for some of the schemes included in this study. See Section 3 below.

All the residents the researchers met appreciated the sense of extra space and convenience built into the dwellings. Not all had mobility impairments but with children and increasing numbers of people working from home, all valued the flexibility of their space.

The findings of this research are encouraging. New challenges have been met and new opportunities opened up. The concept and the reality of Lifetime Homes have proved themselves relevant and appropriate for a new generation of residential development to meet the needs of Londoners in all sectors.

the Estates

Eden Grove



Architect:

Piers Gough - CZWG

Developer:

Taylor Woodrow and George Wimpey

Local authority:

Islington

Size: 500 units

Tenure:

35 per cent affordable

Grand Union Village



Architect:

Broadway Malyan

Developer:

Taylor Woodrow

Client:

Bryant Homes

Local authority:

Ealing and Hillingdon

Size: 705 units

Tenure:

35 per cent (including

key worker)

affordable Genesis

and Asra HA

Architect:

Jestico and Whiles

Developer: Walter Llewellyn & Sons

Client: Peabody Trust

Local authority:

Southwark

Size: 76 units

Tenure: General needs and supported housing for over 50s

Darwin Court



Rubicon

Architect:

Stock Woolstencroft

Developer:

Bellway Homes.

Local authority:

Greenwich

Size: 510 units

Tenure: An

integrated mix of all tenures. Social housing c/o Tower Homes, London & Quadrant and Ujima



Pepys Estate



Architect:

BPTW partnership

Developer: Hyde Housing Association

Local authority:

Lewisham

Size: 277 units

Tenure: 190 units are social rented; 87 are shared ownership

Awards: CABE Building for Life Silver Standard. Eco homes rating 'very good'

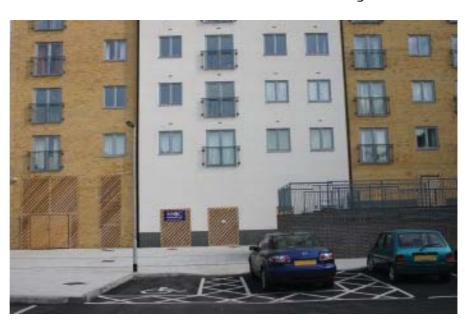
car parking

Lifetime Homes Standards

(Numbers refer to the Lifetime Homes Standards as set out in *Meeting Part M and Designing Lifetime Homes*, JRF 1999)

- 1 Where there is car parking adjacent to the home, it should be capable of enlargement to attain 3300mm width.
- 2 The distance from the car parking space to the home should be kept to a minimum and should be level or gently sloping.

Clearly the model layout for parking provision recommended by JRF is not directly applicable when it comes to multistorey living. However, spaces have been provided within easy reach of the main entrance at Grand Union Village.



Alternatively, as at Eden Grove, parking is provided in the basement with lift access to all floors (below).



Parking is provided for 60 per cent of units on the Pepys Estate (below), the planning and landscape design for which received high praise from the judges of the Building for Life Standard.



At Rubicon each home has its own allocated parallel parking bay on the street outside its front door (not shown).

approach

Lifetime Homes Standards

3 The approach to all entrances should be level or gently sloping.

On the Pepys Estate the design of the approach to the common entry points is bold and has a sharp contemporary appearance. It is clearly identified and the glass block wall provides a light and airy foyer.





Multi-storey, higher density developments in some respects lessen the technical challenge to provide a level approach. One approach route will serve numerous dwellings and can often be graded over a longer distance than would be available to an individual dwelling. At Eden Grove, level access to an existing historic building has been achieved by manipulating the levels across the site.



At Grand Union Village, the waterside approach thoughtfully incorporates accessible moorings for boating residents.



entrances

Lifetime Homes Standards

- 4 All entrances should:
 - a be illuminated
 - b have level access over the threshold and
 - c have a covered main entrance.

In blocks of flats it makes sense to treat the common entrance much as one would to non-domestic premises, in terms of width and weight. At Rubicon the main entrance is fitted with a video entry phone (below).



At Eden Grove the threshold to the existing historic building has been eliminated (right).

At Darwin Court the main entrance door is power operated (not shown), a post-completion adjustment made in response to the demands of residents.



Level thresholds at all entry points were not provided in every case and some doubt was expressed that, to balconies, any detail would satisfy building control. However, at Darwin Court, a gravel soak-away resolves the detail.

An added bonus of the level interface is the facility to drag furniture onto the balcony or, where the balcony is small (LTH standards stipulate no minimum size) to locate that furniture between the inside and outside spaces.



With correct detailing, level thresholds to balconies can be installed and still comply with NHBC Standards.

'Standards, Chapter 7.1 "Flat roofs and balconies": Clause 7.1 -D9, includes a diagram showing 150mm step below the threshold of the balcony door, down to the waterproofing surface. The step is a requirement, but we will accept drained decking or promenade tiles on suitable bearers, that are installed above the waterproofing layer, creating a raised traffic surface.' NHBC

Balcony on Pepys Estate, below.



Photo © Rydon Construction

On the Pepys Estate level access to the yard is widely appreciated.



Obviously weather sealing the doors to individual apartments is not a problem but there are additional considerations.

At Rubicon a video link entry phone and remote door release are located in the hallway of each apartment.



common parts

Lifetime Homes Standards

- 5 a Communal stairs should provide easy access.
 - b Where homes are reached by a lift, it should be fully wheelchair accessible.

Like common entrances, given the intensity of their use, it is sensible to treat foyers (in terms of scale) as public spaces.

Everyone benefits, as this mother at Grand Union Village demonstrates.



Similarly, even where a lift is provided, (like in nondomestic buildings) the value of providing steps suitable for use by ambulant disabled people has been recognised.



This lift at Grand Union Village has a car measuring 1300x1500mm. Apart from accommodating the vast majority of wheelchair users and scooters, it is handy for cyclists too.



These secure external walkways effectively reduce the number of lift cores necessary to serve a large block on Eden Grove

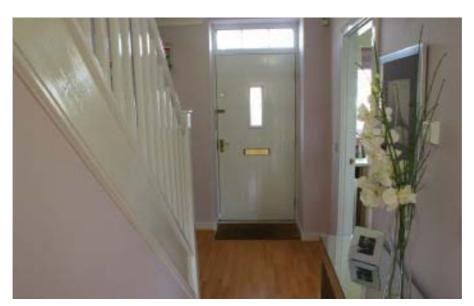


These corridors within Grand Union Village have been designed on a non-domestic scale and provide sufficient manoeuvring space to enable a wheelchair user to open the fire doors independently.

Unfortunately residents' doormats create an unwelcome obstruction or trip hazard, suggesting that recessed mat wells might usefully be specified in domestic settings.



Interestingly, also at Grand Union Village, a neat recessed mat well has been provided for those dwellings that open directly from the street. The detail could perhaps usefully be extended to internal entrances to take account of cultural norms.



circulation within the dwelling

Lifetime Homes Standards

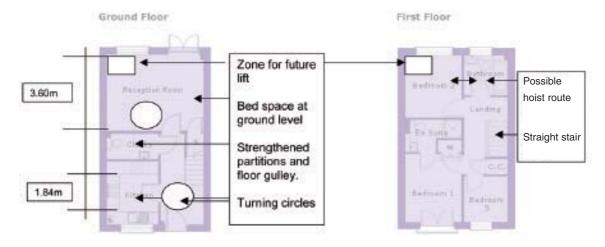
6 The width of the doorways and hallways should conform to the specification provided in this table:

Doorway clear opening width (mm)	Corridor/ passageway width (mm)
750 or wider	900 (when approach is head-on)
750	1200 (when approach is not head-on)
775	1050 (when approach is not head-on)
900	900 (when approach is not head-on)

12 The design should incorporate: (a) provision for a future stair lift (b) a suitably identified space for a through-the-floor lift from the ground to the first floor, for example to a bedroom next to a bathroom.



This house at Grand Union Village has 1050mm wide corridors and doors with a clear opening width of 775mm. The straight flight of stairs against a load bearing wall is capable of taking a stair lift and a location has been identified, where a throughfloor lift could be installed between the living room and master bedroom.



habitable spaces

Lifetime Homes Standards

- 7 There should be space for turning a wheelchair in dining areas and living rooms and adequate circulation space for wheelchair users elsewhere.
- 8 The living room should be at entrance level.
- 9 In houses of two or more storeys, there should be space on the entrance level that could be used as a convenient bed-space.
- 15 Living room window glazing should begin at 800mm or lower and windows should be easy to open/operate.

Not surprisingly many designers have decided that open plan is the most efficient way to provide the circulation space required within each habitable space.



The results, like this kitchen diner at Grand Union village, are bright and comfortable.

At Eden Grove the entire living area enjoys the light and ventilation the glazed end wall and French doors provide.

The doors also provide a view below 800mm affl to satisfy the LTH standard that might otherwise compromise health and safety or urban design considerations of the façade treatment.



In Darwin Court residents enjoy the extra space in their bedrooms for home study, hobbies and/or wardrobe space.



Taking away the walls and doors, as has been done in Eden Grove, eliminates unnecessary obstacles. It also builds in flexibility for the way a resident chooses to live and how those decisions might change over time.



The lack of storage space is a regular complaint levelled at modern housing design. In Rubicon the built in provision and the lower window-sills in the bedroom are welcome additions to the essential LTH standards.



bathrooms and toilets

Lifetime Homes Standards

- 10 There should be:
 - a a wheelchair accessible entrance level WC, with
 - b drainage provision enabling a shower to be fitted in the future.
- 11 Walls in bathrooms and toilets should be capable of taking adaptations such as handrails.
- 13 The design should provide for a reasonable route for a potential hoist from a main bedroom to the bathroom.
- 14 The bathroom should be designed to incorporate ease of access to the bath, WC and wash basin.



This ground floor toilet (left) at Grand Union Village has an outward opening door and is fitted with a floor drain to facilitate the future installation of a level access shower.

In none of the schemes were floor drains provided above the ground floor, except at Darwin Court where the falls proved inadequate when brought into use.

Solutions that have been adopted elsewhere, include a 'Level-Dec' (just 22mm deep that can be set within the floor screed without affecting the integrity of the slab) that is waste pump compatible.

An alternative, used in rented blocks where the bathrooms back onto a vertical duct (serviced by the landlord from the stairwell) is an edge detail shower drain, which effectively feeds a waste stack.



This bathroom at Rubicon has an outward opening door.



The arrangement of sanitary ware in this Eden Grove bathroom allows easy access to and between each facility.



services

Lifetime Homes Standards

16 Switches, sockets, ventilation and service controls should be at a height usable by all (ie between 450 and 1200mm from the floor).





Boilers and doing the washing at Eden Grove (left and above).



The boiler room at Grand Union Village (left).

Darwin Court switches and sockets (below).



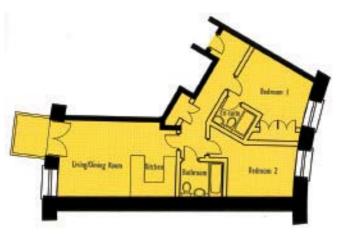
case studies



Eden Grove

Two bed show flat:

- Front door has clear opening width of 850mm with 350mm clear manoeuvring space beyond leading edge. All other doors provide a clear width of 760mm and a 300mm manoeuvring space is maintained throughout.
- The entrance hall is 1500mm wide.
- There is 1200mm clear space before the toilet rim.
- There is 1500mm clear width between kitchen units.
- Window sills are located at 800mm affl.
- Switches are located at 1150mm and sockets at 500mm affl.
- Boiler controls are at 1000mm but stopcock is still obscured and located at high level.



Monica lives with a fluctuating and deteriorating condition and was keen to accompany our photographer to explore what contemporary Lifetime Homes might offer. She was favourably impressed by their style and flexibility.



The only oversights appear to be the raised thresholds between living rooms and balconies and the absence of any floor drains in bathrooms that would make simple the conversion to provide a wheel-in shower facility.

Darwin Court



'It's beautiful... I love my flat... everything about it... I've got my own balcony and that's nice', Patricia says, and is particularly impressed by the location of switches and sockets.

'They're lovely up high. You don't have to keep bending down. I think that's where all wall sockets should be... Also I can't get out of the bath once I'm in, so they fitted handrails straight away and the side of the bath is low so you don't have to lift your leg right up.'





The only drawback she sees with the development is the limited parking on site, which is insufficient to meet the needs of the residents and their visitors, given the restrictions in the local area.

The scheme comprises 76 units for the over 50s age group, 40 of which are designed for supported living, plus a range of communal and community facilities including a swimming pool, restaurant, gardens, healthcare, training and workspace facilities. It has become a focus for local community groups and the pool attracts over 800 users per week, ranging from local school children to Muslim women and older people's groups.

Patricia moved here three years ago and had no regrets in leaving her Victorian basement, which was dark, damp and very cold. She was unable to heat the space adequately and the conditions were affecting her health.

In her new home she is comfortable and is less worried than she would have been anticipating a double hip replacement operation.

The entry phone and powered entrance doors are a particular bonus in her view, particularly now the timing has been adjusted to allow for the passage of wheelchair users.

The lift too is welcomed, not only by wheelchair users but also by every resident when moving heavy goods or transporting their bike from street level. Patricia has emphysema and for her the lift is invaluable and the availability of a second one is reassuring in case of any breakdown.

Pepys Estate

Betty has lived here for a year. She has osteoarthritis and needed somewhere without stairs.

'I like everything about it; the size of the rooms is lovely, particularly the kitchen which will fit a table and chairs. I have green out the back and the front and a little bit of green to sit in. The big windows let in a lot of light but we are warm in



A tactile map of the estate

the winter. I have a space in the car park but will get my own bay outside the door now I have a Blue Badge.'

The scheme replaces several blocks of 1960s corridor access council flats. Key among the scheme's objectives was to improve the personal safety of residents and visitors to the estate at ground level. This has been achieved by adopting principles that prioritise pedestrians, cyclists and social use and dramatically calms traffic in the area.

Consultation with tenants was extensive and directly resulted in the addition of more internal storage, private gardens and large balconies.

With the nearest underground station over 1km away, 60 per cent parking has been allowed. It is located in front of the buildings so that it is overlooked at all times and thoughtful landscaping divides the parking areas into small pockets.

The timber frame construction of the building at a height of five storeys pushes the limits of the technology but has delivered considerable energy savings.



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Chinese

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Vietnamese

Nếu bạn muốn có văn bản tài liệu này bằng ngôn ngữ của mình, hãy liên hệ theo số điện thoại hoặc địa chỉ dưới đây.

Greek

Αν θέλετε να αποκτήσετε αντίγραφο του παρόντος εγγράφου στη δική σας γλώσσα, παρακαλείστε να επικοινωνήσετε τηλεφωνικά στον αριθμό αυτό ή ταχυδρομικά στην παρακάτω διεύθυνση.

Turkish

Bu belgenin kendi dilinizde hazırlanmış bir nüshasını edinmek için, lütfen aşağıdaki telefon numarasını arayınız veya adrese başvurunuz.

Punjabi

ਜੇ ਤੁਹਾਨੂੰ ਇਸ ਦਸਤਾਵੇਜ਼ ਦੀ ਕਾਪੀ ਤੁਹਾਡੀ ਆਪਣੀ ਭਾਸ਼ਾ ਵਿਚ ਚਾਹੀਦੀ ਹੈ, ਤਾਂ ਹੇਠ ਲਿਖੇ ਨੰਬਰ 'ਤੇ ਫ਼ੋਨ ਕਰੋ ਜਾਂ ਹੇਠ ਲਿਖੇ ਪਤੇ 'ਤੇ ਰਾਬਤਾ ਕਰੋ:

Hindi

यदि आप इस दस्तावेज की प्रति अपनी भाषा में चाहते हैं, तो कृपया निम्नलिखित नंबर पर फोन करें अथवा नीचे दिये गये पते पर संपर्क करें

Bengali

আপনি যদি আপনার ভাষায় এই দলিলের প্রতিলিপি (কপি) চান, তা হলে নীচের ফোন্নস্বরে বা ঠিকানায় অনুগ্রহ করে যোগাযোগ করন।

Urdu

اگر آپ اِس دستاویز کی نقل اپنی زبان میں چاھتے ھیں، تو براہ کرم نیچے دئے گئے نمبر پر فون کریں یا دیئے گئے پتے پر رابطہ کریں

Arabic

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Gujarati

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