

# CARDIFF DESIGN GUIDE

# **FOREWARD**

**(Lynda & Sarah)**

## **CONTENTS:**

- **THE COUNCIL'S AMBITION**
- **OUR VISION**
- **PURPOSE OF THIS DOCUMENT**
- **KEY PRINCIPLES**
- **HOW THIS DOCUMENT WILL BE USED**

## **MAKING A HOME**

**SUSTAINABLE DESIGN – Moving Towards Zero Carbon**

**THE NEIGHBOURHOOD – Making a positive Impact**

**WORKING WITH NATURE**

**LEGACY**

# OUR DEVELOPMENT AMBITION

Cardiff Council has implemented an exciting and ambitious development programme which will deliver in excess of 2,500 new council homes and affordable homes for sale in the longer term.

Our award winning development programme currently represents one of the largest council housing build programmes in Wales and will see around £800 million invested into delivering affordable homes in volume and at pace.

Our programme will deliver a wide range of new homes for all types of residents ensuring that we start to 'fill the gaps' and address our housing need. We will deliver the homes that are very much needed in the right areas close to services and facilities.

We are doing this in order to address some of the very specific challenges we face in the city.

- Up to 8,000 people on our waiting list and a continuing shortfall in the number of new build affordable homes across all wards.
- A range of housing needs including homelessness, overcrowding, older persons, accessibility and medical needs.
- A lack of truly affordable homes for local communities
- A third of existing households and over a quarter of young people under 20 years of age living in poverty.
- Responding to the 'One Planet Cardiff' strategy moving us rapidly towards Zero Carbon developments by utilising on-site renewable technologies, sustainable forms of construction such as Passivhaus or enhanced building fabric to reduce carbon and tackle fuel poverty and assessing the upfront and embodied carbon through the design & construction phases.

The importance of place-making and urban design in developing high quality new homes that help promote health and wellbeing and will adapt around our residents changing needs whilst making a positive impact within our communities

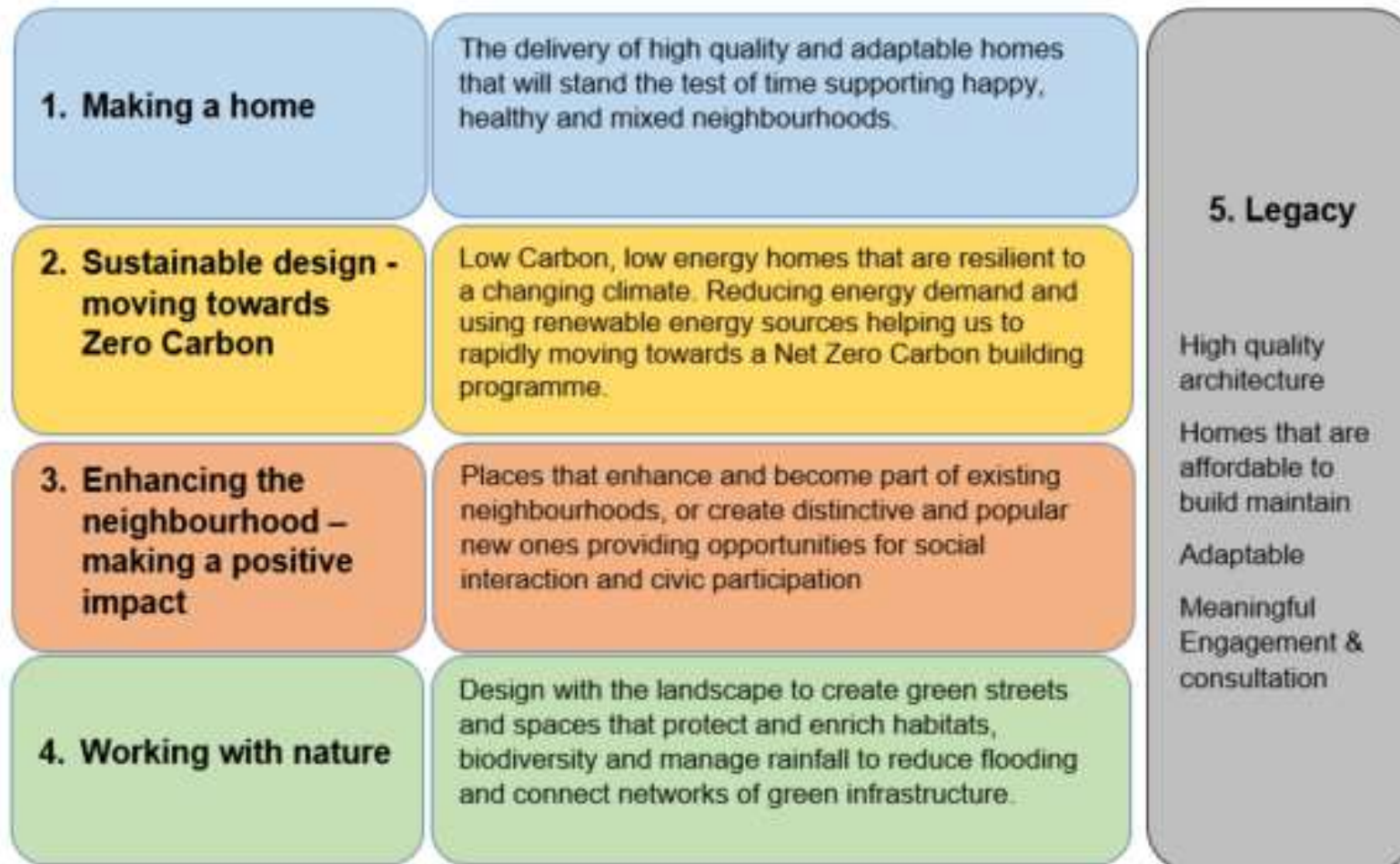
## **VISION**

**Our vision is to create a long lasting legacy of attractive, timeless homes and inclusive neighbourhoods built to meet the demands of the 21st century for low impact, low carbon developments. Providing safe, healthy places where people can be proud to live. We will endeavour to have a positive impact within the communities in which we build our homes.**

# THE PURPOSE OF THIS DOCUMENT

This document focuses on the importance of quality in the creation of our new homes and the places we make. To achieve this, we have reviewed the Council's policy framework and other best practice guidance to define 5 clear, simple and practical principles that should be delivered through the design and delivery of our new build programme.

Using these design principles we will provide clarity on what matters to the Council, focusing on outcomes, by explaining what our new developments must do or be, rather than being too prescriptive or subjective about what they must look like.



# KEY PRINCIPLES

## 1. Making a home

### Design principles:

- Meeting DQR (2021)
- Space standards & comfort
- Storage
- Daylight & ventilation
- Privacy – visual / noise
- Private outdoor spaces
- Adequate home working spaces
- Tenure neutral
- Accessible and adaptable homes

## 2. Sustainable design – towards Zero Carbon

### Design principles:

- Adopt Fabric first approach & Robust detailing
- Optimise Solar gain
- Design in renewable energy
- Minimise Operational Carbon
- Consider net-zero carbon through design
- Achieve EPC A (SAP92 or greater)
- Reduce the performance gap
- Reduce Waste
- Encourage the use of MMC, modular & Timber frame
- Include an overheating strategy
- Electric Vehicle charging points

## 3. Enhancing neighbourhoods & making a positive impact

### Design principles:

- Meaningful Community engagement
- Responding to character
- Movement & wayfinding – making it easy to get around
- Create safe, animated streets & public realm
- Opportunities for social interaction
- Play & active lifestyles
- Community growing spaces
- Consider the wider impact

## 4. Working with nature

### Design principles:

- Multifunctional green spaces
- Sustainable drainage principles designed in from the start
- Protect & enhance biodiversity
- Green streets
- Enhanced planting
- Green roofs
- SUDs features that provide a positive impact and improve the public realm

## HOW THIS DOCUMENT WILL BE USED

This document will be used to brief design teams & consultants to ensure that our design principles are embedded throughout all stages of the new build programme.

Our design principles should be followed through the entire bidding, design and implementation process; acting as a key reference point, underpinning decisions at every stage and remaining the test of a successful scheme.

We will be reviewing all new proposals against these principles and will expect the design teams we appoint to carry out and submit an audit against the full set of design requirements at each of our stages up to making a planning application.

This document forms part of a suite of other important documents and should be read in conjunction with Welsh Government's Development Quality Requirements (2021) Beautiful homes & places, Lifetime Homes, the Council's Care-Ready standard for accessible homes, Local Development Plan, Residential Design Guide SPG and Green Infrastructure SPG.



# 1 MAKING A HOME

**A legacy of high quality and adaptable homes that will stand the test of time supporting happy, healthy and diverse neighbourhoods regardless of health, age or disability.**

The quality of our homes help shape the quality of our lives. Put simply, our new homes should be designed as places where people want to live. Meaning, homes that are attractive, healthy, adaptable, inclusive, and secure.

Our homes will be designed to make the most of every useable space – meeting our minimum space and accessibility standards – to make sure every home functions well for a wide range of people and rooms are spacious, flexible and adaptable for people to relax, socialise, work or study.

We expect every home to be carefully designed to ensure ample amounts of daylight and sunlight with easy access to useable private outdoor space. Homes must be safe, comfortable and practical with sufficient and well placed storage built in and able to accommodate a range of renewable technologies.

Every home should be designed to meet the Welsh Government Development Quality Requirements 2021 – Creating Beautiful Homes and Places, as a minimum. We share the Welsh Government vision that living well in a quality home brings a wide range of benefits to health, learning & prosperity.

Our design guide focuses on the enhancements that we want to deliver above the DQR 2021 standard, across all tenures of homes that we build.

## Key Design principles

- Meeting DQR (2021)
- Space standards
- Storage
- Daylight & ventilation
- Privacy – visual / noise
- Private outdoor spaces
- Dedicated home working spaces
- Tenure neutral
- Accessible and adaptable homes

## Meeting DQR 2021

This is a minimum requirement and the current Welsh Government document is provided in appendix A.

## Space Standards & storage

We will expect our homes to reflect our *minimum* space standards and designed to accommodate flexible layouts. We have chosen to slightly exceed the DQR space standards to ensure that adequate storage is not compromised by the inclusion of renewable technology into all of our homes.

Property Details		WG DQR 2021		2021 Cardiff Design Standard	
Designation	Home Type	DQR floor area (GIA) m2	Storage m2 (within GIA)	CCC floor area (GIA) m2	Storage m2 (within GIA)
8P5B	3 Storey house				
7P4B	2 Storey House	114	3	115	3
6P4B	2 Storey House	110	3	110	3
5P3B	2 Storey House	93	2.5	95	2.5
4P3B	2 Storey House	88	2.5	88	2.5
4P2B	2 Storey House	83	2.5	85	2.5
3P2B	2 Storey House	74	2	75	2
3P2B	Bungalow	58	2	60	2
2P1B	Bungalow		2	52	2
3P2B	Flat - walk up	65	2	67	2
2P1B	Flat- walk up	53	1.5	55	1.5
3P2b	Flat - common access	58	2	60	2
2P1B	Flat - common access	50	1.5	52	1.5
3P2B	Older persons flat			68	2.5
2P1B	Older persons flat			53	2

Secure and useable bin storage facilities should be incorporated thoughtfully into the design to avoid clutter detracting from the overall street scene and providing a welcoming entrance to the home. This will be particularly important for mid terrace properties.

Accessible, effective and usable places to store bicycles need to be included. Semi-detached properties may utilise rear gardens with space to the side of homes. However, mid terrace homes will require integrative solutions to avoid or limit the use of external gullies.

Adequate internal storage for recyclable materials should be provided.

2 bedroom homes should be future proofed to incorporate the plumbing, electrical and mechanical ventilation connection to allow for a future installation of a level access ground floor shower. This space should be initially designed to provide an additional storage cupboard to be removed should a shower be installed at a later date

3, 4 and 5 bedroom homes should include for the level access ground floor shower to be installed during the build.

## Dedicated home working spaces

Every home should provide a dedicated home working space adequate for the property type. The space should be well lit and comfortable with suitable power sockets, preferably with an openable window close by. The space should allow an occupant to regularly work from home.

## Daylight and ventilation

Our homes should benefit from high levels of natural daylight and good ventilation throughout. The use of larger floor to ceiling windows in key positions is welcomed.

Each home should have a light, welcoming entrance.

Through the positioning of windows, habitable rooms and gardens, each home should be designed to consider the inside/outside relationship to maximise natural light into the home and making the best of views out.

## Tenure neutral development

Many of our schemes will deliver homes for sale as well as social rented homes. All of our schemes should be tenure neutral in their design achieving the same design standards and energy performance standards. Different tenures should be truly integrated throughout the scheme.

## Private outdoor space

Providing adequate and private outdoor space suitable for each property type is a key requirement. Private gardens are to be provided for all houses providing a safe place for children to play, have the potential for food growing and are easy to maintain. Level access should be achieved from the rear door to the garden.

## Flats and Apartments

Blocks of flats should be designed with ideas of space and creating communities, meaning: entrances that are welcoming, secure and visible from the street; communal spaces that are secure, encourage chance encounters and neighbourliness; flats that benefit from good orientation, dual-aspect, balconies or patios providing usable private outdoor space; and, shared facilities such as bins and bike stores that are secure and well lit.

Ground floor flats should be designed to be more accessible with their own front doors and well-designed circulation space and a level access shower room. They should also incorporate a rear door from the lounge providing direct and level access to a private patio area. Making these properties flexible and adaptable for tenants who are less mobile.

## Older Persons Housing

Responding to our Older Persons Housing Strategy, we have identified the need to provide new housing that meets the specific needs of older people in the city. In particular, we aim to ensure our new homes for older people are places that cultivate a sense of privacy, independence, sociability, homeliness, belonging and connectedness with the wider community.

Furthermore, these homes should be attractive to those residents considering down-sizing to a property more suited to their needs.

A detailed older person design standard is appended to this document.

# 2 SUSTAINABLE DESIGN –

## TOWARDS ZERO CARBON

**Low Carbon, low energy homes that are resilient to a changing climate. Reducing energy demand and using renewable energy sources helping us to rapidly move towards a Net Zero Carbon building programme.**

Directly delivering against the commitments of the One Planet Cardiff Strategy we will move swiftly to a net-zero carbon development programme regardless of tenure. Ensuring that our new homes meet energy and decarbonisation requirements set out in this document.

From scheme inception consideration must be made by our design teams to maximise the opportunities for solar gain, the integration of solar PV panels and the use on on-site renewable technologies.

Our focus will be on making the building fabric work as hard as possible to reduce energy demand and minimise the operation carbon of our homes. Full consideration should be made for our schemes to be delivered using Modern Methods of Construction, Modular build systems or through low-carbon build methods such as Passivhaus.

We will also ensure that our homes are resilient to a changing climate by developing an overheating strategy for each scheme.

Design teams will be evaluated on their approach to meeting these standards and their ability and desire to deliver innovation throughout the design process.

### Key Design principles:

- **Adopt Fabric first approach & Robust detailing**
- **Optimise Solar gain**
- **Design in renewable energy**
- **Minimise Operational Carbon**
- **Consider net-zero carbon through design**
- **Achieve EPC A (SAP92 or greater)**
- **Reduce the performance gap**
- **Reduce Waste**
- **Encourage the use of MMC, modular & Timber frame**
- **Include an overheating strategy**
- **Electric Vehicle charging points**

# 3 ENHANCING NEIGHBOURHOODS &

## MAKING A POSITIVE IMPACT

### Key Design Principles

- **Meaningful Community engagement**
- **Responding to character**
- **Movement & wayfinding – making it easy to get around**
- **Create safe, animated streets & public realm**
- **Opportunities for social interaction**
- **Play & active lifestyles**
- **Community growing spaces**
- **Consider the wider impact**

# 4 WORKING WITH NATURE

**Design with nature to create green streets and spaces, protect and enrich natural habitats, connect networks of green infrastructure and manage rainfall to reduce flooding**

Our new developments will be green, meaning, tree-lined, climate resilient with open spaces that are rich in biodiversity creating attractive settings for new homes, encouraging people to spend more time outdoors and allowing healthy ecosystems to develop.

Each one of our developments should be seen as an opportunity to enhance and reinforce Cardiff's green infrastructure. By working with the natural environment, opportunities to link together green spaces should be maximised, helping wildlife get about, creating attractive neighbourhoods and improving people's health and wellbeing by bringing nature closer to where people live.

Every opportunity should be taken to create green streets by planting trees and creating green spaces where native plant species will be used to support and enhance biodiversity, creating an attractive landscape.

Sustainable Urban Drainage Systems (SuDS) will also be made an integral part of the landscape; integrating rainfall management with amenity and biodiversity.

## Key Design principles:

- Multifunctional green spaces
- Sustainable drainage principles designed in from the start
- Protect & enhance biodiversity
- Green streets
- Enhanced planting
- Green roofs/Green Walls
- SUDs features that provide a positive impact and improve the public realm

## **Multifunctional Green spaces**

Where suitable and where possible green spaces should serve a variety of purposes and recreational needs such as exercise and relaxation. The public realm we introduce into our schemes should be encourage their use by residents and provide informal play opportunities, community growing spaces or informal areas to support community cohesion.

## **Sustainable drainage principles designed in from the start**

Sustainable Urban Drainage systems should be made an integral part of the design process from day one – integrating rainfall management with the use of the development. This means integrating SuDS design with amenity, biodiversity and site layout to use land efficiently and provide multi-functional benefits in terms of environmental, community and cost.

All drainage designs must meet the requirements of the SuDs Approving Body (SAB).

The use of a green roofs can be considered for constrained sites that do not provide sufficient space on the ground for SUDs.

## **Protect & enhance biodiversity**

We want to create wildlife friendly neighbourhoods demonstrating a net gain for biodiversity overall by protecting, linking and creating habitats at the level of the neighbourhood and the home.

Thought should be given to the protection and enhancement of the existing habitats and areas of woodland and where possible enhancing these with green corridors and within the public realm we introduce.

Where it is deemed appropriate the ability to integrate greenery into the architecture can be explored as a way to complement well designed green areas.

## **Green streets**

Streets should be people places, highly vegetated and attractive. Every scheme is an opportunity to plant new trees, making boundaries green and providing a variety of landscaped spaces to encourage people outdoors.

Consideration should be made for:

- A green street providing a green buffer between the pedestrian and the car.
- A green street also providing local storm water management & integrated with the SUDS strategy.
- Shrub planting at ground level creating a successful buffer or threshold between the private dwelling and the public street.
- Landscaping used to obscure car parking
- Green 'islands' that separate parking spaces and act as traffic calming devices

## **Enhanced Planting**

In order that our schemes create a strong character and a pleasant setting from handover, planting should be mature in nature providing good coverage.





