

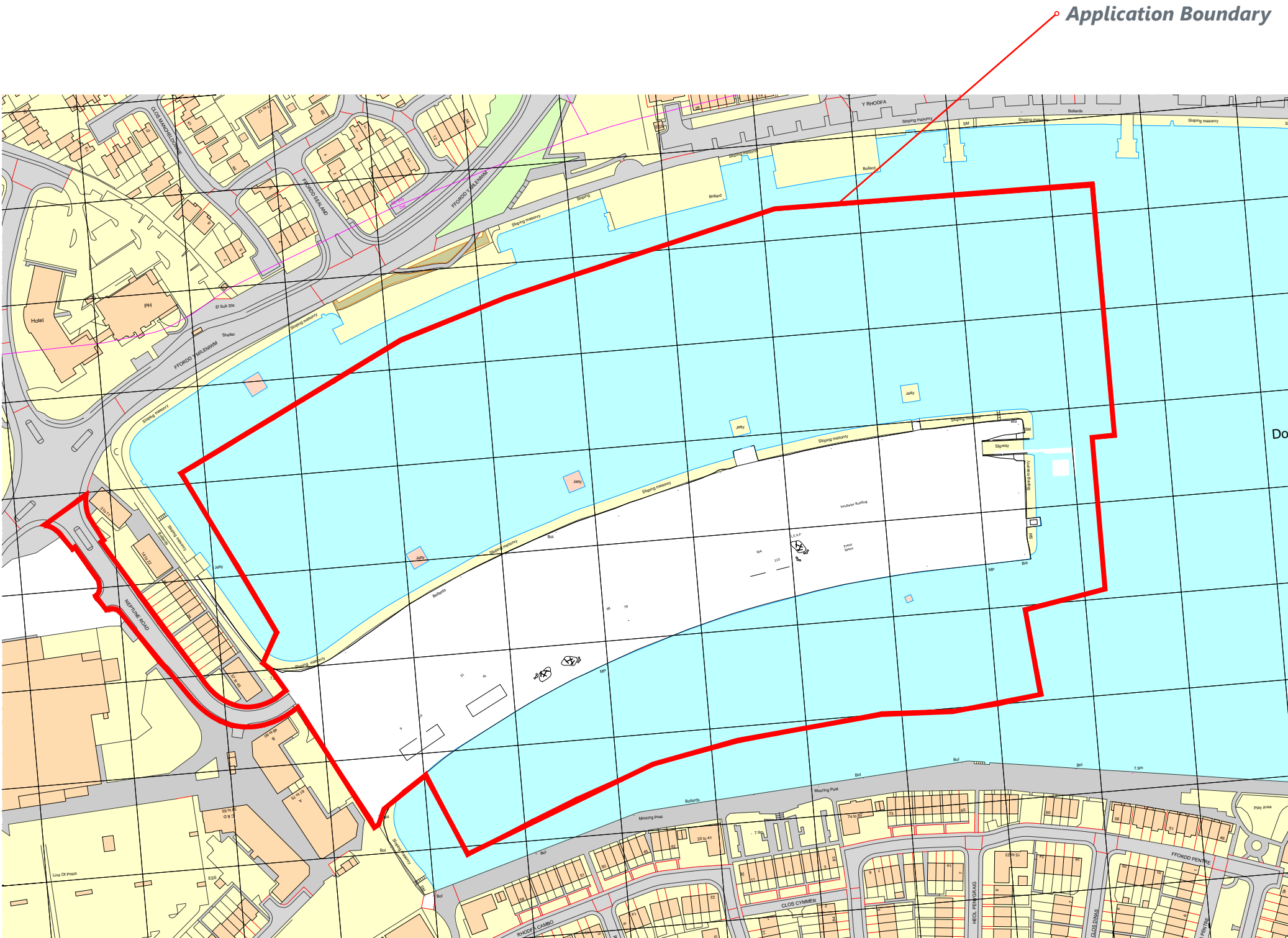
3.1 Site Description

The 2.9 hectare site has a long history of industrial use, forming part of the strategic landscaping of Barry Docks from as early as 1900. The peninsular of land was formed from made-ground, either moved to site or building from aluvial silts retained from the deepening of the dock basin itself. 'The Mole' and its existing concrete 'dolphins' were initially used to load ships in the dock itself, and the site was criss-crossed with a network of rail-lines that tied back to the wider South Wales valleys mining infrastructure.

During the inter-war periods the rail lines were removed, and the ground re-stabilised to accommodate storage of various types of raw materials required in near by war-time manufacturing facilities in the docks. To support these large storage tanks, several substantial concrete pad foundations were placed across the site (and remain to this day, covered by topsoil).

In modern times as the dockside landscape has been regenerated, ABP have allowed the Ocean Watersports Trust in Barry to use the end of the site as a storage and launching area for a variety of activities in the docks including sailing, w, canoe polo, and stand up paddleboarding. This has seen a new access spine implemented along 'The Mole's' northern edge, along with additional hard standing and storage containers.

Due to its industrial heritage the site is mostly level, covered in about 1m of topsoil and rubble and now overgrown with turf and shrubs. This environment is suitable for many species of plants and birds to thrive, but in reality the site has little ecological value and provides very little visual amenity. Also at present access to the site is controlled so the general public cannot enjoy the full extent of the site.



Site Location Plan. Scale 1 : 1500

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3.3 Constraints and Opportunities

Constraints

Listed below are some of the constraints that need to be considered when designing the masterplan for the development:

- **Access and Utilities** - The single point of vehicle access and utility connection is via Powell Duffryn Way, and access across the site to the commercial development, marina facilities building, and associated car parking will have to be maintained at all times, but not impact the residential development.
- **Flood Risk** - In order for the site to support residential development, the ground levels across the site will require raising by at least 0.5m. A technical report on this accompanies this submission.
- **Ecology** - The site has the potential to support habitats for both birds and reptiles, along with protected plant species, so further investigation may be required.
- **Ground Conditions** - The existing site is mainly made ground and contains several buried concrete pads used to support previous industrial storage tanks. Remediation and stabilisation will be required, including battering down the raised site level towards the existing sea walls, which reduces develop-able area.
- **Drainage** - Consideration needs to be given to the discharge of surface water drainage in line with the SAB process, however the site is roughly level and water may be discharged into the dock.
- **Contamination** - There is some evidence of minor contamination connected to the site's industrial history, and excavation risk assessments may be needed due to minor risk of unexploded ordinance.
- **Visual Impact** - The site projects into the historic environment of Barry Docks and is surrounded by residential and commercial properties who may object is the scheme isn't sensitively designed.

Opportunities

Following consideration of the constraints the following opportunities have been identified:















- Excellent location affording views out over the water to both the south, west and north. There is little-to-no overlooking from existing properties and excellent solar aspect.
- The site is well located within Barry, sitting next to a recently regenerated area containing new housing, apartments, commercial spaces, and a supermarket. It is within easy walking distance of both the train station, existing commercial centre of the town, and the new F&B cluster at the Goodsheds development. There is also a new school under construction nearby.
- The site is easily accessed by an existing highway; and has many opportunities to encourage sustainable travel.
- It has the potential to deliver a well-needed mixed use development which compliments the surrounding land uses with additional commercial space for smaller businesses, housing for families, and amenities for the wider community.
- Allows an existing underutilised ex-industrial site to be brought back into use
- Opportunity to create a variety of public open spaces, including a linear park and boardwalk around 'The Mole' itself. This will be a benefit for the wider community and help improve ecological habitats around the dock.
- Opportunity to integrate sustainable drainage features into the public open spaces in order to use the water conveyancing across the site as a visual feature and for play to create a successful sustainable urban drainage development.

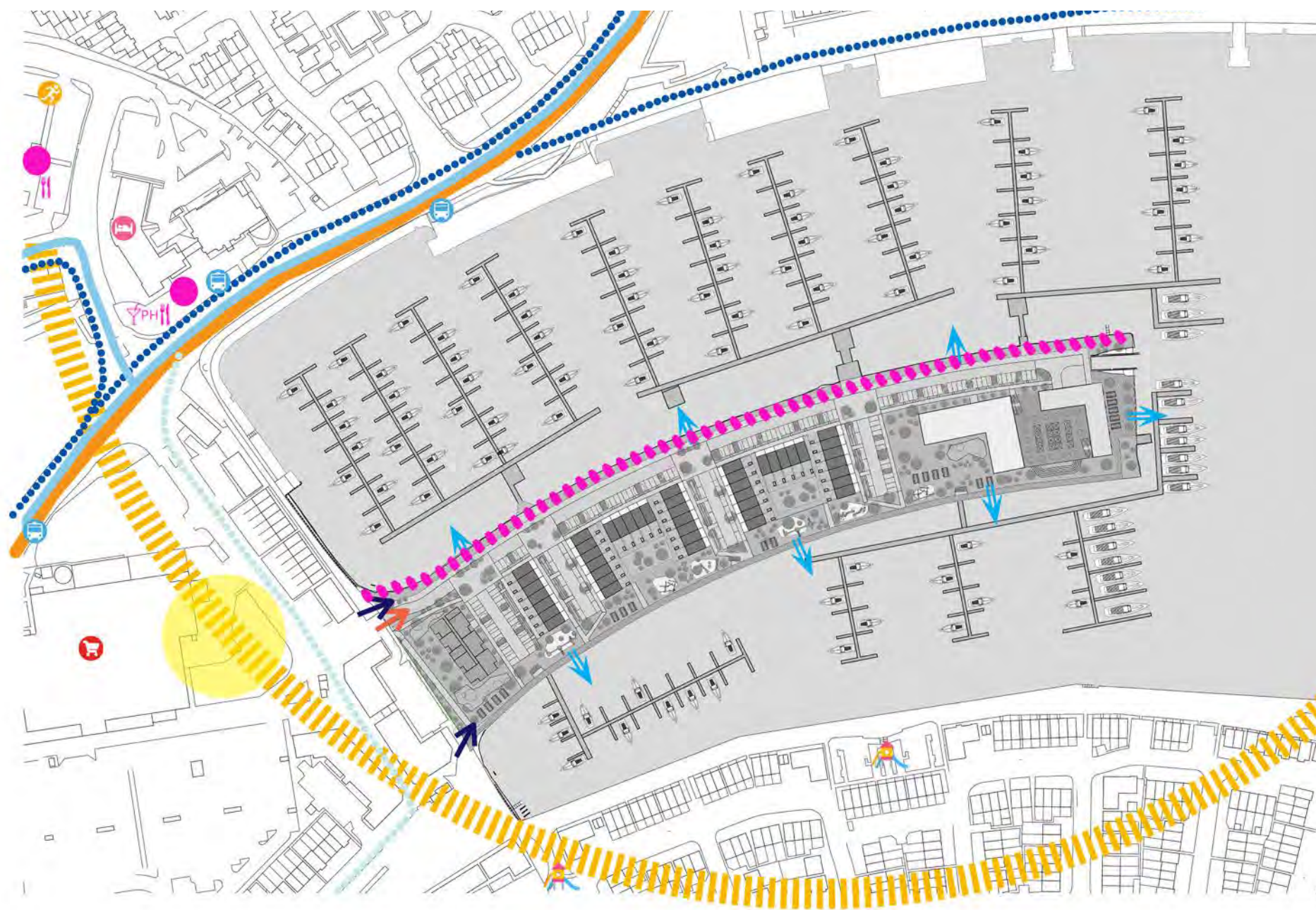
Assessment of Constraints and Opportunities

The various constraints and opportunities listed above have been used as the basis of the design proposals for the subject site:

- Create a sensitive and high-quality development based on the principles developed through consideration of Constraints and Opportunities and the supporting assessments developed through the Levelling-up Fund bid.
- Create a brand-new marina development in the adjacent dock with 400 berths, which will stimulate the local economy and act as a visual amenity for the site.
- Establish a clear spine road to the northern side of 'The Mole', which connects to the existing point of access, and allows the residential, commercial and leisure parcels to have distinct access from the spine. Bring this forward with the level raising as a separate package of enabling works to remediate the site.
- Develop a vibrant mixed-use scheme with a low storey height and several visual links through the development to reduce the visual impact.
- Integrate sustainable drainage infrastructure into the landscape as a feature tying the development together.
- Implement a new linear park to the south to allow the public to explore the site, along with a variety of other public spaces for rest and play.
- Integrate the open spaces between each of the parcels to ensure the various land uses interact and are not 'fenced off' from one another.
- Integrate parking within shared surface mews streets, and utilise podium parking to reduce the visual impact of the required parking numbers for the marina development.

KEY

-  Main Road
-  Integrated Networking Walking
-  Pedestrian Link
-  Existing Sea Wall
-  Main Vehicle Access
-  Pedestrian Access
-  Key Views
-  Public House
-  Leisure
-  Bus Stop
-  Sport Facilities
-  Superstore
-  Play Spaces
-  Hotel



Constraints and Opportunities Plan. Scale 1 : 1500





Masterplan Framework & Vision

4.1 Masterplan Framework

Development Vision

The Vale of Glamorgan Council and ABP came together with a vision to transform the Barry Docks waterfront.

Shaped by the town's maritime and industrial history, the VOGC is bidding for £20m of funding from the UK Government Levelling Up Fund. The bid comprises two key projects one of which is the redevelopment of the Mole, to continue the regeneration of docks area and the surrounding waterfront.

A new marina at the site is the centrepiece of the plans. The marina would attract visitors and tourists to the town and serve as the catalyst for the next stage of the regeneration of the docks.

An innovative business incubator hub would sit alongside the marina. This unit would give small enterprises space to grow and while generating new jobs for Barry. The development would also include units for hospitality businesses. New residential properties would also feature in the rejuvenated docks area as well as landscaped public open space to create a welcoming gateway for residents and visitors.

This vision and subsequent masterplan formed the starting point for the development of this outline Planning Application.



Leveling Up Fund Vision by FCB

The Initial Brief

1. Residential provision - A mix of townhouses and affordable apartments
2. Business Incubation provision - 2,320 Sqm / 25,000 Sqft NIA (2,900 Sqm / 31,250 Sqft GIA*)
3. Marina Facilities Building - 380 Sqm / 4090 Sqft NIA (542 Sqm / 5834 Sqft GIA**)
4. Food and Beverage provision (quantum not specified)

A VIBRANT MIXED USE DEVELOPMENT



Leveling Up Fund Vision by FCB

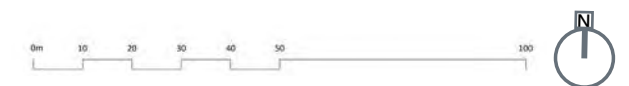
4.2 Design Development

Powell Dobson Architects were first approached by ABP in late 2020 to conduct a series of feasibility studies on 'The Mole', to test the suitability of the site to accommodate residential development, with an integrated marine services building and clubhouse, and associated marina in the docks.

Due to the build-up of the existing site it was determined that any structure in the proposed development could only be a maximum of 4 storeys high. The first proposal (opposite) tested several linear 4 storey apartment blocks, with a mix of tenancy types in order to maximise development on the site. The development capitalised on the potential of the site with dual aspect apartments and several shared courtyard spaces opening towards the south. The development was accessed via a main spine to the north, with smaller perpendicular mews streets at 90 degrees to allow views through the development. This access approach would be retained in all subsequent iterations.

The marina services building was a linked two storey structure at the end of the peninsular, which afforded it the best views out to the South and access to the existing jetty. This location would also be retained throughout design development. The marina building was linked to the westernmost apartment block by a 1st floor podium deck that would act as an events space and outdoor area for the cafe and marina offices. The podium would also enclose the marina parking below, and although this approach was removed in subsequent iterations, it was reinstated by Fielden Clegg Bradley in their Levelling-Up Fund bid masterplan. Ultimately an apartment-led development was considered too dense for the site.

The following proposals looked at integrating more townhouses into the development. Several options were tried with a mix of linear apartments and townhouses. The plan overleaf proposed an option utilising only townhouses, and while this was ultimately superseded by the LUF bid design, it still retained the spine road access, vision corridors through the development, and the linear boardwalk to the south which allowed the marina facilities building to be an amenity for the wider community.



Apartment-based residential development. Scale 1 : 1500

4.2 Design Development

Feilden Clegg Bradley (FCB) were brought on board by the Vale of Glamorgan in order to develop a cohesive masterplan for 'The Mole' which connected with other strategic developments across Barry. After developing the brief for the site further with ABP, they proposed a mixed-use masterplan containing a mixture of affordable apartments, townhouses for private sale, a business incubator building, and a linked marina facilities building (see plan overleaf). The latter two buildings would be connected by a 1st floor podium to screen the parking below and provide an additional outdoor events space. This masterplan adopted several of the strategic approaches of the previous iterations, including arranging the townhouses into south facing courtyards opened to the south, to allow for a shared amenity space between the units. Their masterplan also offered an enhanced linear park as well as a boardwalk to the south, with the intention of integrating the sustainable drainage across the site, and using the park to draw the public towards the commercial elements at the end of the peninsula.

The scheme prepared and detailed within this document (which is being submitted for outline consent) follows the FCB masterplan with a few minor amendments in order to make the scheme deliverable:

- The ground level across the site has had to be raised for flood mitigation reasons, resulting in both the bank to the north, and the linear park to the south, sloping down towards the waters edge.
- As a result compliant pedestrian access routes have had to be added to the linear park, allowing the park to be enjoyed by all.
- The boardwalk depth has also been increased to allow long term maintenance of the sea wall.
- A LEAP has been included near to the western end of the site



Townhouse-based residential development. Scale 1 : 1500





The Proposal

5.1 Proposed Concept Masterplan

KEY

- 1. Gateway apartment building
- 2. Housing square
- 3. Principal street and Marina access
- 4. Shared surface mews
- 5. Incubator building
- 6. Event space podium
- 7. Marina building



Proposed Masterplan Plan. Scale 1 : 1500

5.2 Land Use Parameters

The proposed development comprises:

- Residential use for up to 64 new homes
- A new 'Innovation Hub', Incubator Building (up to 30,000 sq.ft) acting as a focus for the tech and digital sectors across the Vale,
- New marina services building (up to 5,000 sq.ft) including food and beverage offer supporting a new 400 berth marina
- Associated access, parking and landscaping.



Key

- Residential Use Areas
 - Houses
 - Flats
- Incubator Building
- Access and Parking for Marine Services, Incubator Building and Visitors
- Marine Services
- Green Infrastructure

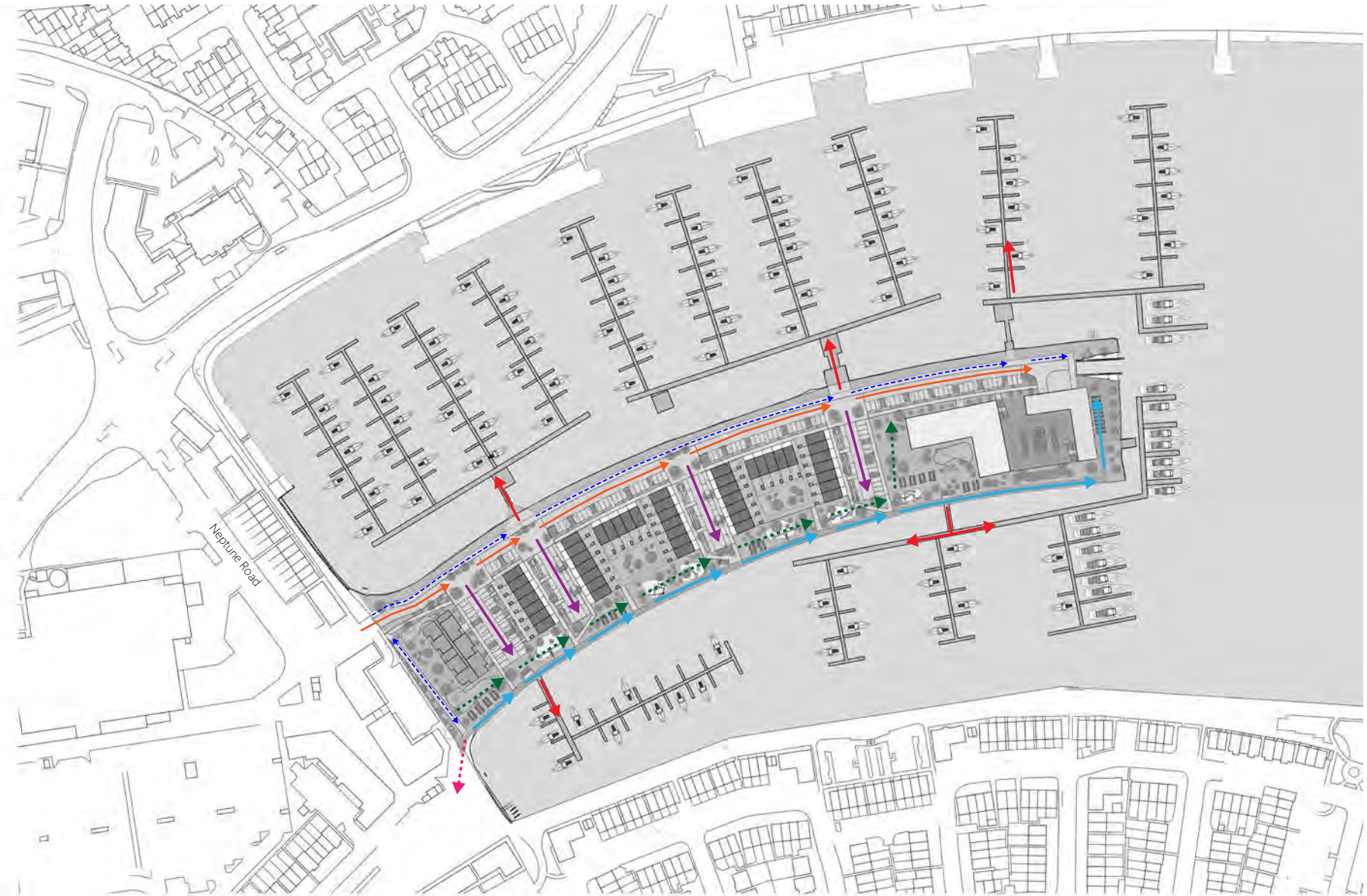


Land Use Parameters

5.3 Access & Movement Parameters

The proposed street hierarchy within the illustrative masterplan is as follows:

- Principle vehicular access from Neptune Road
- Principal street provides site wide access with formal street trees, roadside swales and an off-road combined footway/cycleway running along the north edge of the Mole
- Secondary shared surface Mews streets run north south providing access to each residential parcel. Parking for all the homes is contained within these streets
- 6m boardwalk for pedestrians and cycles along the southern edge of the Mole
- Potential for future footway and cycleway connection into the wider Barry Waterfront Masterplan area at the South Western Corner
- Gated controlled access points into the new marina jettys and pontoons.



Key

- Principle Street
- Shared Surface Street
- Board walk / Promenade
- Marina Access (controlled)
- - - Foot and Cycleway
- - - Potential further active travel connection
- - - Informal pedestrian connection through P.O.S



Access & Movement Parameters

5.4 Scale Parameters

The exact scale of development will be determined as a reserved matters submission, however, the adjacent scale parameter plan identifies the principles of the scale of the dwellings across the different areas of site

The site has an average density of 44 units per hectare across the residential parcel with a scale between 2-3 storeys.

The affordable apartment building acting as a gateway into the site is proposed to be up to 3 storeys in height to relate to the adjacent district centre.

The homes within the rest of the site will be a combination of 2 and 2.5

The incubator building is up to 3 storey but with recognition of a larger potential floor to floor height.

The marina building is up to 2 storey in height wrapping around a single storey podium housing parking below with potential event space above



Key

- 2 & 3 Storey (up to 12m)
- 2 Storey (up to 9m)
- 3 Storey (up to 12m)
- 3 Storey (up to 15m)

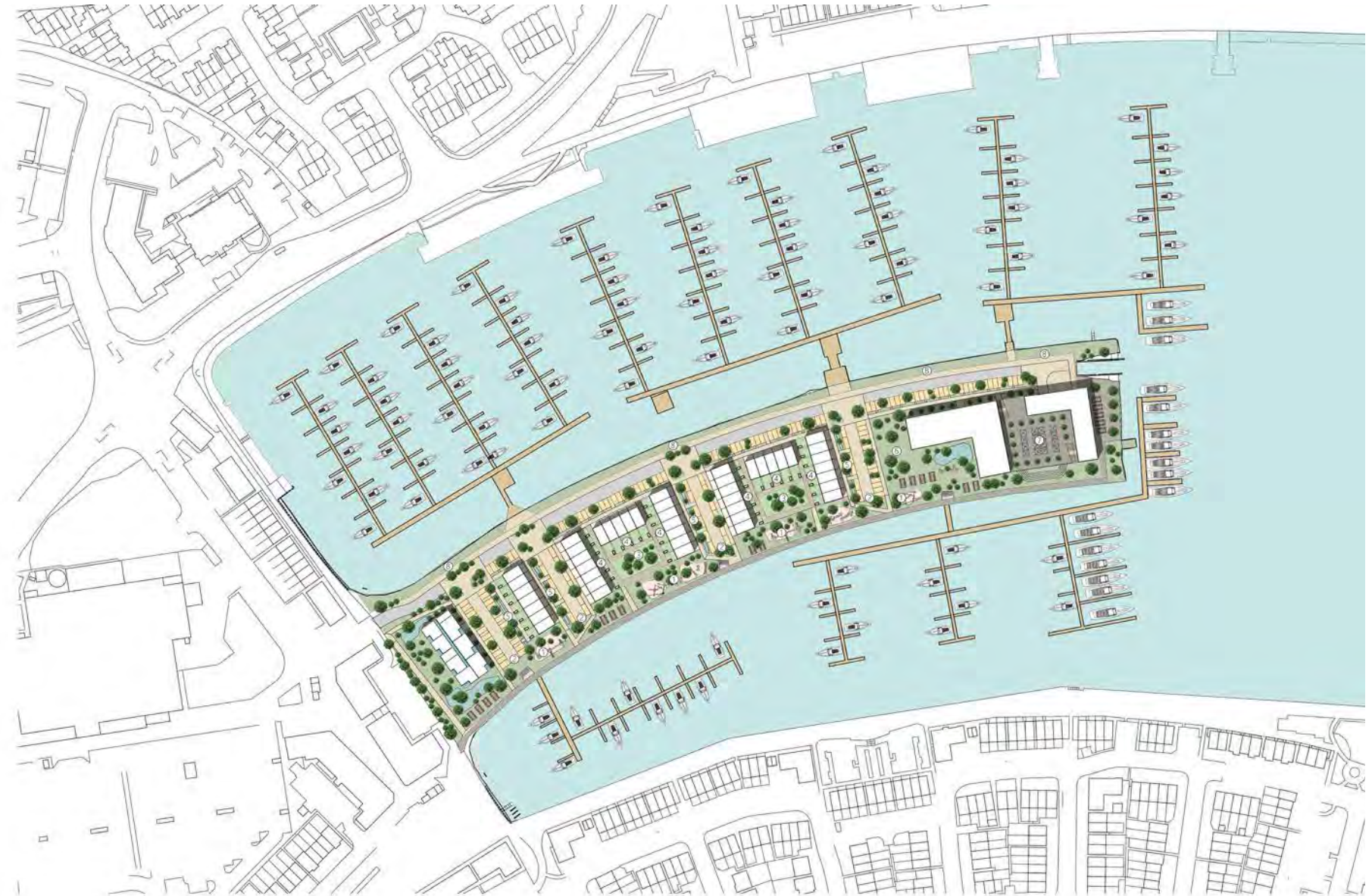


Scale Parameters




5.5 Green Infrastructure Parameters

The scheme provides a number of key elements of Green Infrastructure and high quality public spaces. These include:

- The creation of a new 6m wide boardwalk running the length of the south edge of the mole leading around to a large deck area in front of the marina building also providing informal spill out space for the cafe bar
- The creation of a linear park running adjacent to the new boardwalk containing both soft landscaped areas and hard landscaped shared spaces with opportunities of for informal play and SAB features
- Formal LEAP
- 2 potential event spaces. One at grade next to and aligned to the incubator building and one at podium level wrapped by the marina services building with views across the marina.
- Housing Squares with shared gardens for residents with a community garden feel providing views south over the park and marina
- Swales and rain gardens lining both the principal street and the secondary shared surface streets with regular street trees



Key

-  Proposed Trees
-  Development Areas
-  Green Infrastructure

- 1 Linear park
- 2 Shared surface square
- 3 Housing square park
- 4 Backyards
- 5 Swale SAB feature
- 6 L.E.A.P
- 7 Event Space
- 8 Landscaped embankment



Green Infrastructure Parameters

5.6 Illustrative Concept View



Illustrative Concept View

5.6 SAB Strategy

Sustainable Drainage Systems (SuDS) aim to mimic the natural processes of Greenfield surface water drainage by allowing water to flow along natural flow routes and also aims to reduce the runoff rates and volumes during storm events, whilst providing water treatment benefits. SuDS also have the advantage of providing Blue and Green Infrastructure and ecology and recreational benefits when designed and maintained properly. The following national guidance documents and design standards should be considered when developing the surface water drainage strategy:

- C753 The SuDS Manual (Ciria, 2015)
- Statutory standards for sustainable drainage systems – designing, constructing, operating and maintaining surface water drainage systems (Welsh Government, 2018)
- Planning Policy Wales – Edition 11, February 2021
- The Building Regulations 2010 Part H: Drainage and Waste Disposal
- Sewers for Adoption 7th Edition

Schedule 3 of the Flood and Water Management Act was enacted in Wales in January 2019. Consequently, all new developments in urban or rural settings of more than one dwelling are required to meet the Statutory Standards for SuDS in Wales leading to the requirement for all new developments to incorporate the four pillars of SuDS design. Any new development of more than one dwelling requires approval before construction can commence from the SuDS Approval Body (SAB), a function performed by the Lead Local Flood Authority (LLFA) within the Vale of Glamorgan Council.

The statutory standards are as follows:

- S1 – surface water runoff destination
- S2 – Surface water runoff hydraulic control
- S3 – Water quality
- S4 – Amenity
- S5 – Biodiversity
- S6 – Design of drainage for Construction, Operation, and Maintenance and Structural Integrity

G2.1 of the Statutory Standards for SuDS in Wales states:

“where the surface water body is unaffected by either the discharge rate or volume of runoff (e.g. an estuary, the sea, or a waterbody identified in the Local Flood Risk Management Strategy (LFRMS) as not needing hydraulic control to runoff to it), the hydraulic management control requirements are limited to the drainage service provisions for the site and adjacent areas that could be affected by performance of the system”

The proposed development site is surrounding by Barry Dock, a tidal waterbody. Consequently, in line with G2.1, surface water shall be discharged into the dock at an unattenuated discharge rate. SuDS shall be utilised across the development to treat and convey flow to the dock, providing amenity and biodiversity benefits wherever possible. SuDS features such as rain gardens and swales shall be utilised to keep surface water as close to the surface as possible, receiving flows from the highways, car parking areas and roofs across the site.

The Simple Index Approach shall be utilised to ensure there is no detrimental impact on water quality within the dock as a result of the development. As the drainage system shall serve more than one dwelling, the system shall be adoptable by the SAB.

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Character Areas

6.1 Local Vernacular

The following section gives an overview of the architectural character, fabric, scale and density of Barry

Barry expanded rapidly in the 19th century following the construction of the dock, rows of densely packed terraced houses in local limestone and brick were built to house workers along with the High Street.

As the town expanded a larger range of homes was constructed including larger double fronted homes, with flat façades and mock-Tudor gables, timber-bracketed canopies with slate roofs and ornate ironwork balconies

The more recent developments around the site are contemporary but based on the principles of shared characteristics from the wider local vernacular

Landmark Buildings

The topography of the town means it slopes down to the Waterfront and then rises steeply along the southern boundary with Barry Island. The elevated position of the surrounding areas mean that The Mole is overlooked by the Town and The Island with both areas highly visible from the site itself.

The Dock Office stands out on the skyline of Barry, overlooking the docks. It was built between 1897 and 1900 in the Baroque Revival styles

The now redeveloped Grade II listed Pumphouse was built in the 1880s to provide hydraulic power to the docks. The 42-metre high chimney is highly visible in the town.

Traditional Homes

- Narrow plots on narrow streets
- Feature window & door surrounds
- Materials are predominantly red brick and/or coursed ashlar masonry
- Brick banding - brick is used decoratively
- Simple pitched roofs - gable perpendicular to street
- Dense terraced homes
- Rectangular top-hung casement 'cottage-type' windows of portrait orientation
- 'Pattern-book' style with regular building lines where the topography allows
- Large proportion of slate roofs, some replaced with clay or concrete tiles
- A mix of homes accessed directly off the street while other have small front gardens with low brick/stone walls separating them from the street

Recently Developed Homes

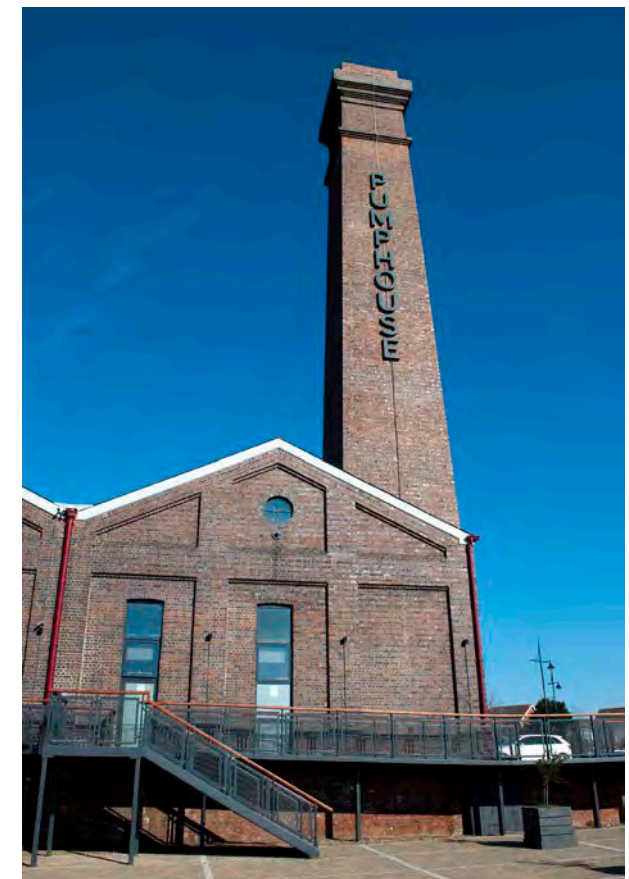
- 2-3 storey
- High quality contemporary design
- Emphasis on layering of details - balconies and bays
- Palette of materials includes render, brick, cladding
- Variety of front garden depths based on location of plot within masterplan

Shared characteristics

- Simple pitched roofs - gable perpendicular to street
- Intermittent use of street facing gables on larger homes and in lower density areas
- Front doors have direct access onto streets in traditional terraces
- The use of varying sized front gardens that create a transition between the street and home in lower density areas
- The use of red brick as the main building material
- Scale between 2 & 3 storeys



The Dock Office



The Pumphouse