

Plymouth Hoe Design Guide

September 2018

HOE
NEIGHBOURHOOD FORUM

AECOM

locality
the power of community

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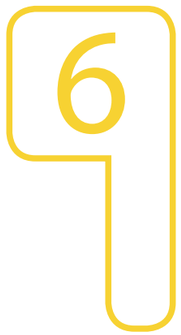

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Introduction

AECOM has been commissioned to provide design support to the Hoe Neighbourhood Forum (HNF) on behalf of Locality. The group has been developing their Neighbourhood Plan, that will define policies, relating to the character and special features of Plymouth Hoe. The group feels there is a need to develop design guidelines that will support the Neighbourhood Plan and help to assess future development proposals.

The Plymouth Hoe has many positive aspects that contribute to its unique character, as a landmark area within Plymouth and the south west region. The forum recognises that the area (see Figure 1) is likely to evolve over time as a result of changes to the climate, alterations to existing buildings, the introduction of new buildings, and careful and positive changes to the streetscape and public realm. However, certain aspects of the area are sensitive and successive individual changes may cumulatively erode its distinctive character.

Each site will have specific strengths, weaknesses, opportunities and challenges that should be understood and addressed through design. The structure of these design guidelines is intended to be flexible, such that other building types and design principles for specific areas or site allocations may be developed in the future. They are intended to guide developers and home owners to help them understand how to apply the policies set out in the Plymouth Hoe Neighbourhood Plan with respect to design, layout, materials and landscape in the preparation of planning applications.





Approach

The following report has been divided into three core sections described below to guide future change in the area.

Townscape character assessment

Townscape character assessment is a process used to describe and articulate what is special and distinctive about a particular place by identifying recognisable patterns of elements or characteristics that make one urban area different from another. Landscape is defined by the European Landscape Convention as "….. an area, as perceived by people, whose character is the result of the action and interaction of natural and / or human factors." This definition is broad and encompasses natural, rural, urban and peri-urban areas.

The information generated through the process of characterisation can be used as evidence to support the planning and design process. This approach is supported by the National Planning Policy Framework (NPPF), which states that neighbourhood plans should develop robust and comprehensive policies based on an understanding and evaluation of its defining characteristics (DCLG, 2012).In doing so, policies can ensure that development responds to local character and history, and reflects the identity of local surroundings and materials, while not preventing or discouraging appropriate innovation.

Owing to when this technical support was approved, this report was prepared in in the context of the 2012 NPPF. The 2012 NPPF has been replaced with a new NPPF, published in July 2018 (hereafter referred to as the 2018 NPPF). Paragraph 214 of the 2018 NPPF states that plans submitted before 24 January 2019 will be examined against the 2012 NPPF. If your plan will be submitted after this date then we recommend that you liaise with your local planning authority to ensure that your neighbourhood plan is in accordance with the 2018 NPPF.

Quality of the built environment plan

The current study is designed to complement the Conservation Area Management Plan (CAMPs) by assessing the quality of the built environment within the neighbourhood area but outside the conservation areas.

Work was undertaken using the guidance in Historic England's Neighbourhood Planning and the Historic Environment (HE2014) and Understanding Place: Historic Area Assessments (HE2017). Reference was made to the Oxford Character Assessment Toolkit when designing the survey together with the data presented in Plymouth City Council's CAMPs for the Hoe and Barbican Conservation Areas.

The Waterfront

Design guidelines

The design guidelines section is divided into two parts. The first is an outline of design guidelines showing the aspirations of the Hoe Neighbourhood Forum (HNF) as well as the built form characteristics observed in Plymouth Hoe.

The design guidelines developed in this document focus on residential and public realm environments. Yet, individual development should not be viewed in isolation. Considerations of design and layout must be informed by the wider context, considering not only the immediate neighbouring buildings but also the townscape and landscape of the wider locality.

The local pattern of streets and spaces, building traditions, materials, landscape and ecology should all help to determine the character and identity of a development, recognising that new building techniques are capable of delivering acceptable built forms and may sometimes be more efficient. It is important with any proposals that full account is taken of the local context and that the new design embodies the "sense of place" and also meets the aspirations of people already living in that area.

The second is a set of key elements to consider when assessing a design proposal. These are presented as general questions; the Hoe Neighbourhood Forum (HNF) should seek clarification and explanation from developers and their design teams.

The aim of this section is to produce design guidelines that help to assess design quality and appropriateness in development proposals.

The Hoe Neighbourhood Forum

The Hoe Neighbourhood area, which was adopted by Plymouth City Council on 10th July 2017, is shown on Figure 1. It lies within the ward of St Peter and the Waterfront. The Hoe Neighbourhood Forum exists to give a voice to the community in the planning process for the area. The forum recognises the unique characteristics of the area are a focal point for social, civil and historical interest within Plymouth as both a residential community and a tourist hotspot. The forum acknowledges the importance of appropriate development and the potential this delivers for:

- Job creation;
- Improved quality of housing;
- Additional housing;
- Improved quality of life;
- Enhanced tourist experience;
- Infrastructure that development brings;
- Maintaining good relations between different communities within the Plymouth Hoe area;
- Improvement of the social, economic and environmental well-being of the Hoe Neighbourhood; and
- Initiating Neighbourhood Development Orders, Neighbourhood Action Plans or Community Right to Build Orders, identifying Assets of Community Value, or carrying out any other permitted actions.

Members of the HNF met with AECOM on 16th November 2017 to discuss their knowledge and experience of the history and character of the area, as well as aspirations for its future. The observations made have been used to inform the study. The group also accompanied AECOM on a site visit in the completion of a Built Heritage Assessment on the 30th and 31st of January 2018.

A number of key considerations emerged from the meetings which have informed the preparation of the study. These are summarised below:

- Attractive, unique place to live, work and visit;
- Strong historical and cultural associations;
- A wide variety of buildings, places and spaces which should be celebrated;
- Vibrant cultural areas contrast with quieter commercial and residential areas;
- Open space is highly valued; and
- Opportunities and threats of continuing change through development.
- A focal point for the city's gatherings, celebrations and commemoration.
- Primary routes are busy and parking is an issue.

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1. Context

Location

Plymouth, known locally as Britain's 'Ocean City', sits within South Devon at the confluence of the rivers Plym and Tamar, where they flow into the English Channel. The maritime location of Plymouth has influenced its history and development as a naval port and key trading city in the south west of England. The coastal location and backdrop of Dartmoor National Park provide a unique setting.

Plymouth Hoe lies on the southern side of the city centre overlooking Plymouth Sound. 'The Hoe'- the name derives from the Anglo-Saxon for 'high place' – is formed by the ridge of hard grey limestone which runs across the southern edge of the city, in places forming a substantial cliff along the waterfront.

The Hoe, is a south-facing public open space and a landmark within the city. The Hoe sits above a stretch of low limestone cliffs that form the seafront and provide elevated views of the Plymouth Sound, Drake's Island and Mount Edgecumbe. The Plymouth Hoe projects like a peninsula surrounded on all sides by Sutton Harbour (east), Plymouth Sound (south) and Millbay Docks (west). The Hoe Park (Registered Park and Garden) is centrally located and represents an extensive area of public realm. It is located at the summit of a long north facing slope, rising from Notte Street on the southern periphery of Armada Way. The approach from the north- the direction in which most visitors approach the Hoe – gives no indication until almost the last moment of the grand vista across Plymouth Sound which the Hoe provides. Located on the eastern end of the Hoe, the Royal Citadel, know locally at 'The Citadel' is still in military use. The Citadel is a military fort built in 1665 to defend the city against attack by the Dutch.



Figure 1: Hoe Neighbourhood

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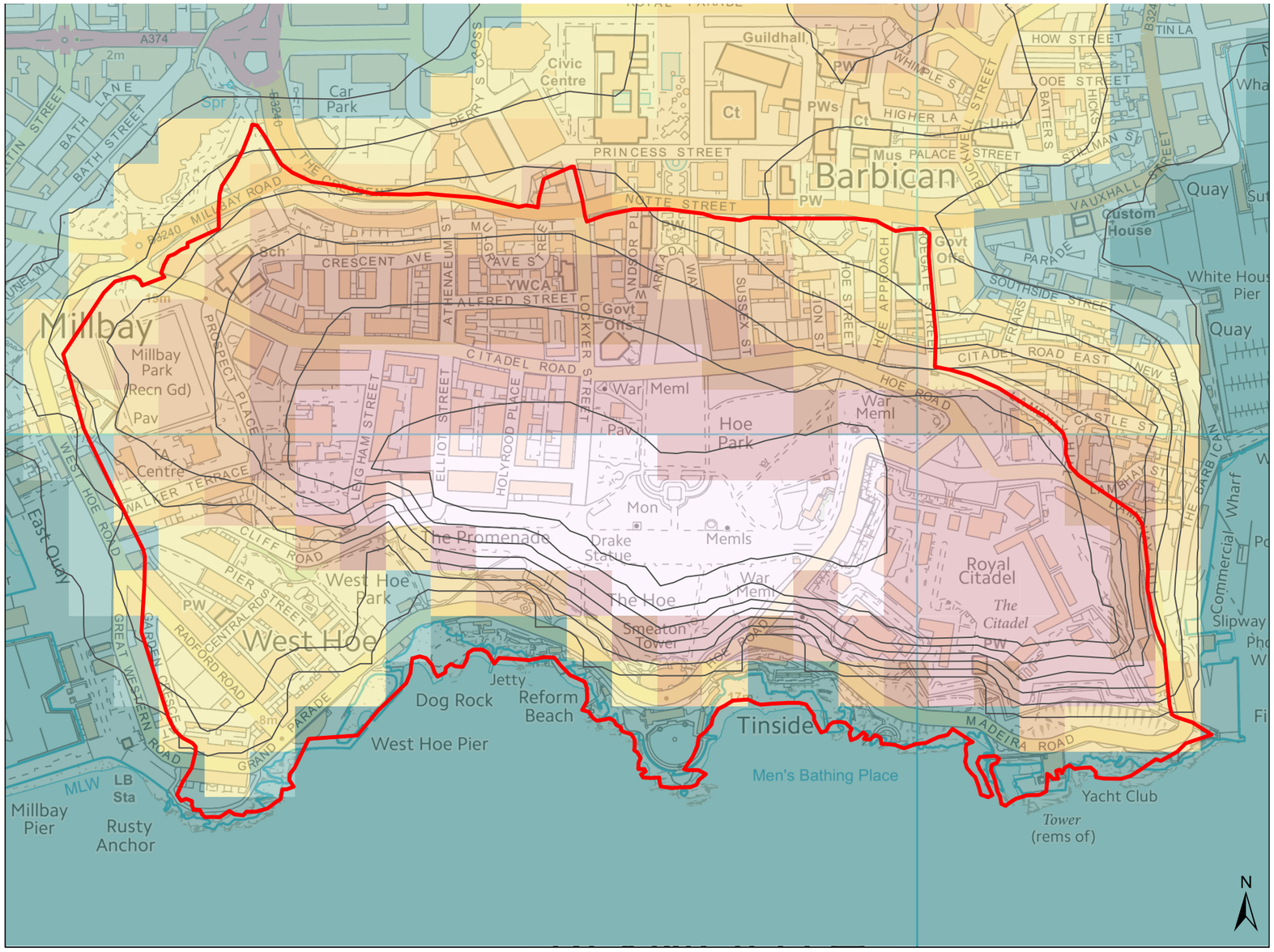

Figure 2: Topography and Hydrology

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Natural Factors

Topography

The topography of the area is strongly influenced by the surrounding waterbodies including Plymouth Sound. Landform rises steeply from low lying areas in West Hoe, at approximately 0-10m Above Ordnance Datum (AOD), towards Hoe Park at approximately 30m AOD. The contours of the lower level follow the edge of a historic quarry, now a reinforced cliff wall containing West Hoe Park.

East of Hoe Park, landform decreases in elevation towards the Citadel and Sutton Harbour and residential areas within the boundary to the north west at approximately 20-25m AOD. The landform continues to fall northward towards Notte Street at approximately 15m AOD. This distinctive variation of topography is evident when approaching the area from the City, with the rising terrain preventing expansive views across Plymouth Sound until reaching the highest point, which is defined by a high quality public viewpoint.

Geology and soils

The underlying geology of an area is often largely hidden from view but has a strong influence on its character, having been shaped by natural processes including erosion and sedimentation over millions of years. These processes help to define the landform, soils, vegetation, drainage and building materials which are common in an area. The Neighbourhood area is predominantly Plymouth Limestone Formation, which comprises irregular masses of fine and course-grained fossils and corals (British Geological Survey, 2018). Soils in the majority of the area are freely draining, slightly acidic but base-rich soils (Soilscapes, 2018).

Plymouth City Centre Masterplanning

Plymouth has benefited from the preparation of three city-wide masterplans since 1943.

Plan for Plymouth City Centre, Abercrombie and Watson's (1943)

The Abercrombie and Watson plan of 1943 and the corresponding report outlined proposals for the rebuilding of Plymouth city centre following the extensive damage sustained during World War II. Part of the re-structuring strategy meant that the majority of the few remaining buildings were also removed to make way for a complete and radical remodelling of the City centre. The proposed scheme aimed to re-order the centre by using the following three principles :

- Reduction of congestion and unhygienic Victorian city conditions;
- An emphasis on political and social re-organisation; and
- City planning and architecture should be manifestations of an egalitarian and democratic society.

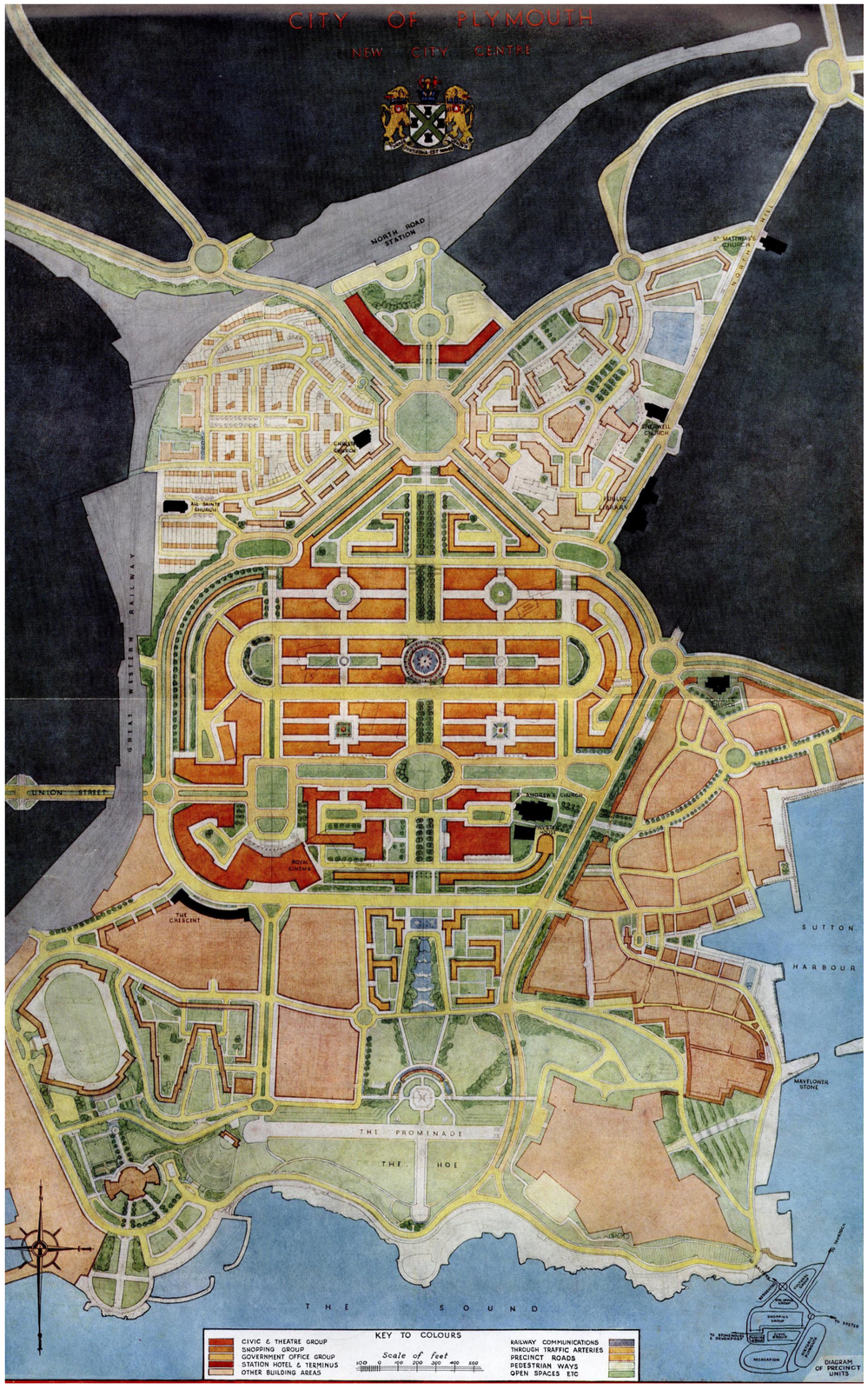
The city plan compartmentalised the centre into precincts separated by function, such as; shopping, civic centre, offices, theatres, recreation and culture. With precincts arranged in a grid set around an architecturally striking north to south axis, which links the railway station to the war memorial on the Hoe. It was conceived in a style of urban planning popular on both sides of the Atlantic known as Beaux-Arts, and for which Plymouth is recognised as a fine British example .

The plan for the rebuilding of the city centre also included pre-planned layouts and forms for buildings. It was intended that these would be developed independently by developers and third party architects, in a measure to ensure a city vernacular emerged which garnered a strong sense of place. A manifestation of the emerging vernacular was the use of local materials, such as Portland stone and Plymouth Limestone.

One area in which the plan for future development struggled, was the scale of the streets, which were planned to be framed by buildings four to six storeys . In reality developers shied away from developing shops over two storeys and permission was refused by the Council at the time, for proposals to use the upper floors. The consequence meant upper floors were often left as stores.

City planning control was relaxed during the mid-1950's and the Reconstruction Committee was dissolved in 1961. This led to some lesser quality architectural interventions which failed to follow the emerging vernacular of the city.

The intention for the Hoe and the waterfront area was for it to be left largely as public open space. It was to be enhanced with proposals for a covered stadium and amusement centre on the site now currently occupied by the Territorial Army Centre at Prospect Place.



Plan for Plymouth City Centre, Abercrombie and Watson's (1943)

David Mackay MBM Architects & AZ Urban Studio 2003

In 2003 a coalition of architects from MBM and AZ Urban Studio, spearheaded by British architect David Mackay, set out proposals for the city to build on the urban framework laid down by Abercrombie and Watson. The proposals often termed as 'Mackay's vision' was eloquently described as "not a fixed blueprint for the exact future of the city but rather a review of strengths and weaknesses, an assessment of direction, a pointer to opportunity and an invitation to aspire" . Indeed, it was envisaged not so much as a physical rebuild, but more a philosophy for continued development to ensure the city's future success. The vision outlines five separate principles to guide development in the city:

- A modern approach to city expansion which looks to increase city densities, improve the quality of public space and enhance user experiences.
- A focus on public realm enrichment aimed at promoting social encounters and creating a strong sense of place.
- An attention to the scale and sense of enclosure with recognition of the contributions both space and place make to a city's urban fabric. The use of architecture and landscape architecture to punctuate, frame or emphasise spaces and create place.
- For the street or public realm to be respected as a place in its own right, a place to gather and share transient experiences. With a focus on accepting the conflict between car and pedestrian use, which when often completely separated create further issues.
- A philosophy which draws on the history of place, of past generations and past uses, to be used as a tool for renewing and building places which continue to create future memories.

The report also highlights specific sites within the city, which have a strategic importance. The Hoe and waterfront, described as the façade of the city, is identified as one such site, functioning as a connecting element as well as a destination. Further proposals to enhance the Hoe and waterfront area include:

- Improvements to access and amendments to parking provision.
- The creation of a "new focus" to establish two new major attractions along the waterfront, with the Dome site identified as an exhibition space and a marine discovery exhibition centre at West Hoe Park.
- To improve the Hoe's appeal during the darker hours with a lighting strategy to reduce the feeling of isolation and promote a sense of security.
- The last proposed intervention is the construction of piers which would house restaurants or cafés hung beneath the access platform. The potential of existing historic structures located along the waterfront are mentioned.



The Mackay's vision'

Plymouth City Centre Strategic Masterplan (2016) LDA Design

The Plymouth City Centre Strategic Masterplan was developed as part of the evidence base to support the Plymouth Plan.

The purpose of a strategic plan and this masterplan is to help direct change and investment in a way that brings the greatest benefit to Plymouth and its citizens, making sure that the city's extraordinary built, natural and historic environment and its neighbourhoods and communities thrive and can be sustained well into the next century in line with the provisions of the NPPF.

Plymouth Waterfront Strategic Masterplan (2017) LDA Design

The Plymouth Waterfront Partnership (PWP) is a not-for-profit organisation working on behalf of over 700 businesses across four square miles of the Plymouth Waterfront Area. The PWP are working alongside the City Council to secure funding and to deliver 42 projects within the BID (Business Improvement District) programme. The Waterfront Masterplan produced on behalf of the PWP is a spatial plan that puts place-making at the heart of decision making. This strategic document sets out a vision for the look and feel of the waterfront. This leads onto the approach to delivering the technical work and design principles that will shape future development.



Plymouth City Centre Strategic Masterplan (2016) LDA Design: https://www.plymouth.gov.uk/sites/default/files/PlymouthWaterfrontStartegicMasterplan.pdf

Policy Review

National Planning Policy

National Planning Policy Framework (NPPF), 2012

The NPPF requires local authorities to set out in their Local Plan a positive vision for the enhancement and enjoyment of heritage assets (DCLG, 2012). Part 12 Conserving and enhancing the historic environment clearly states that local authorities should recognise "the desirability of new development making a positive contribution to local character and distinctiveness" and should seek "opportunities to draw on the contribution made by the historic environment to the character of a place".

The National Planning Policy Framework (NPPF) encourages local authorities to consider using design codes to help deliver high quality outcomes for new development. It is important however, that guidance finds the balance between promoting and reinforcing local distinctiveness and allowing for innovation and originality. The NPPF suggests that guidance should focus on the overall scale, density, massing, height, landscape, layout, materials and access of new development in relation to neighbouring buildings and the local area more generally'(NPPF,2012), rather than imposing particular styles or tastes.

The NPPF also emphasises that although the visual appearance and the architecture of individual buildings are very important factors, 'securing high quality and inclusive design goes beyond aesthetic considerations' (DCLG, 2012). It is therefore important that planning policies and decisions should address the connection between people and place guidance on promoting landscape character (Paragraph: 007Reference ID: 26-007-20140306). It states that "development should seek to promote character in townscape and landscape by responding to and reinforcing locally distinctive patterns of development" and that the "successful integration of new development with their surrounding context is an important design objective".

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Local Planning Policy

Plymouth and South West Devon Joint Local Plan (Submission July 2017)

The Plymouth and South West Devon Joint Local Plan is a joint plan between Plymouth City Council, South Hams District Council and West Devon Borough Council. The plan envisions how the three local authority areas will emerge over the next 20 years and, once adopted, it will replace all existing development plans. Existing policies within the Plymouth Plan will be combined with Plymouth Specific Policies in the Joint Local Plan.

Policies within the Joint Local Plan, which have relevance to the design and development of the Plymouth Hoe Neighbourhood Area are considered below:

Strategic Objective SO3: Delivering growth in Plymouth's City Centre and Waterfront Growth Area

To realise the potential of the Plymouth City Centre and Waterfront Growth Area as a regionally significant growth hub through:

1. Establishing and reinforcing the City Centre's role as a regional centre for shopping, employment, leisure, a university centre, a strategic transport hub and a sustainable community in its own right.

2. Utilising the City Centre and waterfront's economic assets, including its waterfront infrastructure, to drive economic growth in the area.

3. Improving sustainable transport facilities and connections throughout the area, and particularly between the City Centre and the waterfront at Millbay, The Hoe and Sutton Harbour.

4. Protecting and making best use of the unique historic environment and landscape of the City Centre and waterfront, in particular Devonport waterfront, Royal William Yard and Devil's Point, The Hoe and The Barbican.

5. Capitalising on the potential of the City Centre and waterfront to deliver a world class cultural and visitor offer, with well-connected destinations, high quality visitor accommodation, and facilities to deliver major events and improved public realm and waterfront access.

6. Delivering new residential-led mixed-use developments that integrate successfully with existing communities and enhance community cohesion.

7. Improving city gateways, arrival points and key transport routes and delivering high quality architecture and urban design.

8. Delivering improved public access to and along the waterfront as well as enhancements to key public spaces and heritage assets.

Policy PLY6 - Improving Plymouth's city centre

Plymouth City Centre will be renewed and enhanced through a combination of major new developments, proactive management of change and support for community and trader led initiatives. This will deliver a modern, high quality, vibrant, accessible and adaptable centre that reflects its status alongside the waterfront as the showcase of Plymouth.

Policy PLY20: Managing and enhancing Plymouth's waterfront

Plymouth's waterfront will be renewed, enhanced and maintained as Plymouth's showcase and as a unique, sustainable and vibrant asset that drives the city's economic, cultural, social and environmental well-being.

Policy PLY22: Cultural Quarters

Support will be given for cultural development proposals and proposals which protect existing cultural facilities within the city's cultural hubs including Royal Parade, The Hoe and historic waterfront.

Policy PLY27: Register office, Lockyer Street, The Hoe

Land at Lockyer Street, The Hoe, is allocated for mixed use development, including a quality hotel and housing. Provision is made for in the order of 52 homes.

Policy PLY28 Land north of Cliff Road, The Hoe

Land north of Cliff Road, The Hoe, is allocated for hotel led mixed use regeneration, including housing and potentially complementary uses which supports the tourist function of area. Provision is made for in the order of 80 homes.

Policy DEV20 Place shaping and quality of the built environment

Development proposals will be required to meet good standards of design, contributing positively to both townscape and landscape, and protect and improve the quality of the built environment.

Policy DEV21 Conserving the historic environment

Local planning authorities will pursue a proactive and solution-orientated approach for the conservation of the historic environment, ensuring that it is prompted as a key element of local character and distinctiveness, forms a strategic context for regeneration and development, and is conserved as part of the area's cultural offer.

Policy DEV22 Development affecting the historic environment

Development proposals will need to sustain the local character and distinctiveness of the area and conserve or enhance its historic environment, heritage assets and their settings according to their national and local significance.

Policy DEV24 Landscape character

Development will conserve and enhance landscape, townscape and seascape character and scenic and visual quality, avoiding significant and adverse landscape or visual impacts.

Policy DEV29 Green and play spaces (including Strategic Green Spaces, Local Green Spaces and undesignated green spaces).

The Local Planning Authorities will protect and support a diverse and multifunctional network of green space.

Policy DEV30 Trees, woodlands and hedgerows

Development should be designed so as to avoid the loss or deterioration of woodlands, trees or hedgerows.

Plymouth Hoe Conservation Area Appraisal (2009)

Conservation Areas were introduced in 1967. They are 'areas of special architectural or historic interest the character or appearance of which it is desirable to preserve or enhance' (Planning (Listed Buildings and Conservation Areas) Act 1990). This document provides a character appraisal of the Hoe Conservation Area and considers what issues affect the area and how they impact upon its character. Opportunities to manage, improve and enhance the area are discussed.



Plymouth Plan Image: https://www.mutantcreative.com/projects/the-plymouth-plan

Landscape Designations

An area of the foreshore and Hoe (CWS: Hoe and Madeira Road) is designated as a County Wildlife Status. The area which covers approximately 7 hectares of land under the ownership of Plymouth City Council is recognised for the variety of habitats present and the 119 species recorded at the Site.

For management policies see: https://www.plymouth.gov.uk/sites/default/files/hoe_and_madeira_road_management_statement.pdf

Although not within the HNF boundary, the Plymouth Sound and Estuaries Special Area of Conservation (SAC) is directly adjacent to this. Flanking the waterfront/foreshore and providing an increased element of ecological protection to the area. The SAC designation is in recognition of the significance of multiple ecological habitats which exist within the Plymouth Sound and Estuaries which include:

- Sandbanks
- Estuaries
- Large shallow inlets and bays
- Reefs
- Atlantic salt meadow (Glauco-Puccinellietalia maritimae)

Historical Timeline



Ladies on the Hoe

14TH CENTURY

It is likely that the area known as the Hoe was a meeting point for the residents of Plymouth and was already a place of some significance. A medieval chapel is known to have existed on the Hoe during the 14th century and tradition holds that a monument was created of two giants, 'Gog Magog' holding clubs.

1539

Plymouth became an increasingly important port during the 16th century and the Hoe provided a natural vantage point from which to gain early warning of attack. The foreshore was provided with a continuous line of fortifications.

1592

Following the Armarda threat of 1588, the construction of an artillery fort was started at the eastern end of the Hoe in 1592.

1665

Work was started on the Royal Citadel including a large parade ground across the top of the Hoe. Parts of the 16th century artillery fort were incorporated in the scheme.

1667

Work was stated on the Church of St Catherine (Grade II, NHLE 1067141) within the Royal Citadel on the site of the medieval chapel and completed in 1688.

EARLY 19TH CENTURY

A large area at the western end of the Hoe was quarried for limestone creating a steep cliff and reinforcing the dramatic scenery in the area.

1817

The Hoe was used as a municipal park from 1817.

1830'S

The area to the north-west of the park began to be developed with terraces in Athenaeum Street, Lockyer Street, Alfred Street and the Esplanade to the designs of Plymouth's foremost architect John Foulston and his pupil George Wightwick.

1870

The Grand Hotel (Grade II, NHLE 1386469) was constructed. The Grand was one of a number of hotels built at the time highlighting the popularity of Plymouth, and especially the Hoe, as a tourist destination.

1882

The foreshore was purchased from the Duchy of Cornwall in 1882 in order to prevent the redevelopment of the area including quarrying and stone-gathering.

1887

The Hoe was formally laid out as a park following the release of earthworks surrounding the Citadel by the military. The period saw the erection of a number of buildings and monuments in the park including the Smeaton Tower (Grade I, NHLE 1386470); the Armada Memorial (Grade II*, NHLE 1386461); the Drake Statue (Grade II* NHLE 1386462); the Observation Tower (Grade II, NHLE 1386446; a commemorative drinking fountain (Grade II, NHLE 1096045); and shelters.

1891 Plymouth's pier was rebuilt with a 2,000 seater theatre, the Pavilion, at the pier heads and the Belvedere (Grade II, NHLE 11133300) opposite the entrance, subsequently passing through a number of hands.

1919-1938 Construction and improvement of bathing facilities along the Hoe foreshore. Borough Engineers J. Wibberley and J Paton Watson redeveloped the Hoe foreshore focusing on the Tinside Lido of 1935 (Grade II, NHLE 1271847) and its associated Colonnade, promenade and sun terrace (Grade II, NHLE 1380066).

1924 The Naval War Memorial in the centre of the Hoe (Grade I, NHLE 1386464) designed by Sir Robert Lorimer with sculpture by Henry Poole was unveiled.

1939-45 In common with the whole of Plymouth the Hoe suffered badly from enemy bombing, the Marine Biological Association was severely damaged. In September 1941 the City Council approved the preparation of a redevelopment plan for the city. Sir Patrick Abercrombie's 'A Plan for Plymouth' was ready in 1943 and approved in 1944.

1946 The Hoe featured in Jill Craigie's film The Way We Live as the venue for a public dance.

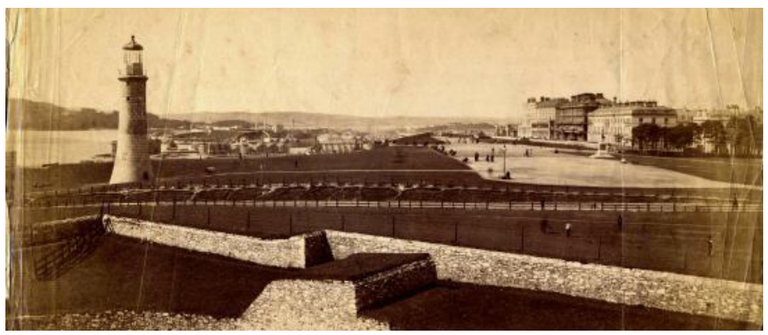
1947 Construction of Abercrombie's plan started, with the aim of reconnecting the Hoe to the city centre via Armada Way, a grand avenue running north to the railway station. The Naval Memorial on the Hoe was chosen as the terminal feature at the southern end of the route.

1954 A Second World War extension was added to the 1924 Naval War Memorial.

1988 Plymouth celebrated the 400th anniversary of the Armada. The Plymouth Dome was opened by HM The Queen.

2003 Tinside Lido is restored, meeting with overwhelming public support.

2018 The Hoe, as park, meeting place, ceremonial and commemorative space and visitor attraction, remains central to Plymouth's character.



Looking west towards Millbay

Cultural associations

Eddystone Reef

The Eddystone Reef is a dangerous group of rocks that lie some 14 miles south west of Plymouth. First lit in 1759 Smeaton's Tower (or Smeaton's Light) was the third of four famous lighthouses built to mark the reef that is submerged and only visible at low tide and therefore dangerous for ships sailing though these waters. In the mid nineteenth century the upper part of the lighthouse was taken down due to failing foundations. The lighthouse was rebuilt and relocated on the Plymouth Hoe on a new granite base. Opened on Plymouth Hoe in September 1884, it remains one of the city's most famous landmarks to this day. https://plymhearts.org/smeatons-tower/about/



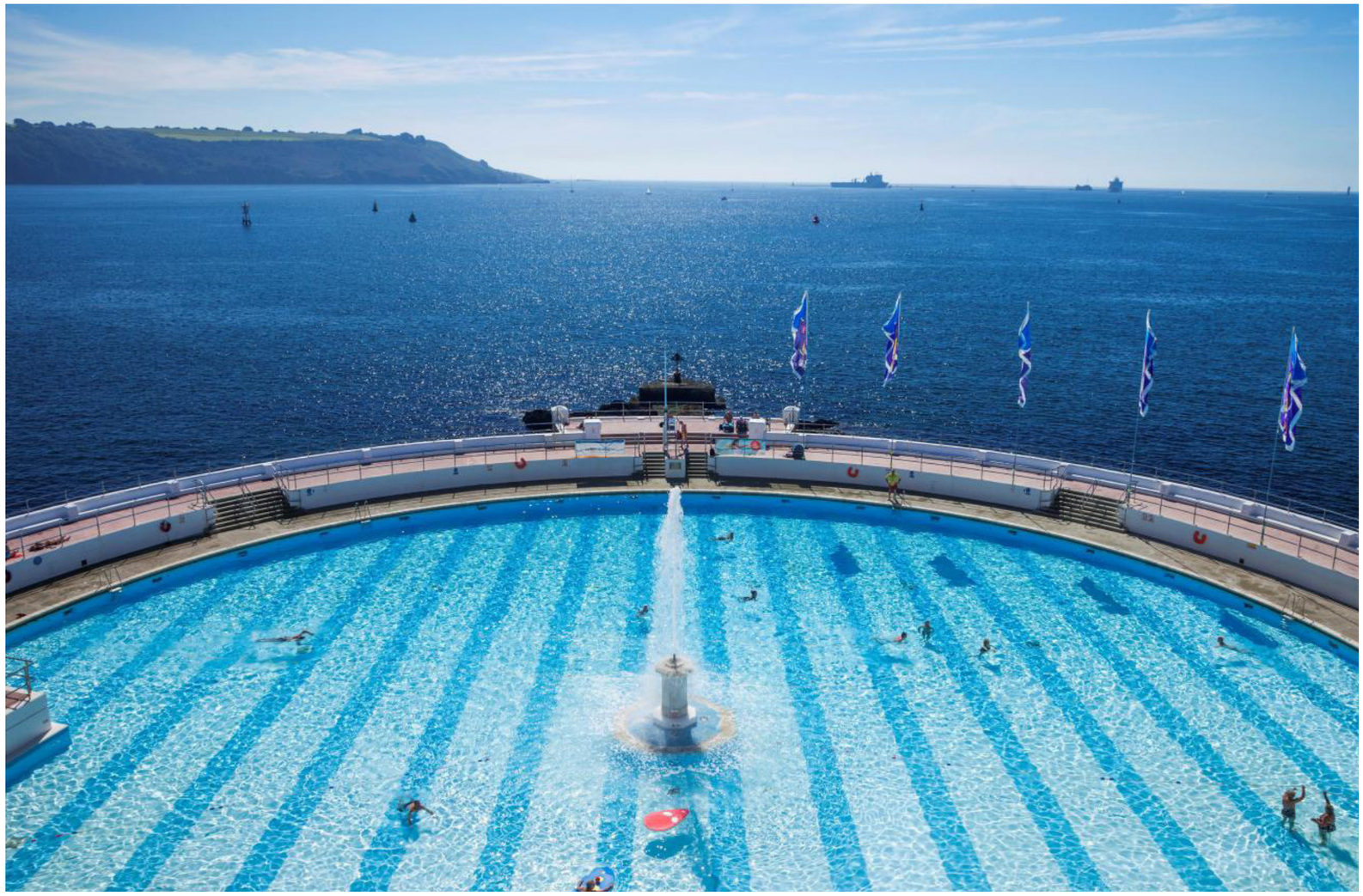
Smeatons's Tower

The Tinside Lido

The Tinside Lido is a rare example of art-deco style, built in 1935 and sets the scene of a quintessential British seaside of the inter-war period. The Grade II listed outdoor salt water swimming pool is open during the summer, offering both locals and visitors to Plymouth a unique surrounding in which to swim and sunbathe.https://www.visitplymouth.co.uk/things-to-do/tinside-lido-p1096383

The British Firework Championships

The British Firework Championships is an annual event held on the Plymouth Hoe. Thousands of people fill the Hoe seafront to view the spectacular sights as the top professional firework companies compete to be crowned the British Firework Champions.



Tinside Lido: https: https://www.standard.co.uk/lifestyle/travel/12-of-the-best-lidos-in-the-uk-to-make-a-splash-in-this-summer-a3257786.html

MTV Crashes Plymouth

MTV Crashes Plymouth is a live event on Plymouth Hoe spread over two nights that see thousands of people join together to enjoy live pop music. The 2017 event was the fourth event on the Hoe and is organised in partnership with MTV and Plymouth City Council. Other events on the Hoe include:

- Ocean City Half Marathon
- Plymouth History Festival
- Plymouth Race for Life
- Armed Forces Day
- Pride in Plymouth



MTV Crashes: http://www.mtv.co.uk/

Sir Francis Drake

Sir Francis Drake was born in Tavistock, Devon in around 1540 and went to sea at an early age. Drake was the first Englishman to circumnavigate the globe and was knighted by Queen Elizabeth I after returning from this epic voyage with a rich cargo of spices and treasure. There is a popular legend that on Plymouth Hoe, on 20th July 1588, Sir Francis Drake was playing bowls when first news of sightings of the invading “Spanish Armada” was brought to him. Drake signified his wish merely to continue his game of bowls undisturbed, a cool reaction fabled as an act of English heroism (rather than an intricate knowledge of the wind and tide conditions). When he eventually went out to sea, he defeated the Spanish Armada, for which he is most famed. https://www.visitplymouth.co.uk/explore/sir-francis-drake



Sir Francis Drake Memorial, Plymouth Hoe





2. Townscape Character Assessment

Existing Character Assessment

The approach of this study follows well-established character assessment techniques. The detailed desk study and fieldwork carried out to inform this assessment underpins the classification and description of character areas and broadly follows the process set out in the "Approach to Landscape Character Assessment" (Natural England, 2014). This approach has been tailored to meet the specific needs of the neighbourhood planning process and draws on further best practice guidance including:

- Townscape Character Assessment, TIN 05/17 (Landscape Institute, 2017);
- Historic Environment: Good Practice in Planning Note 3 (Historic England, 2017);
- Shaping Neighbourhoods: Character and Context (Great London Assembly 2014);
- Character and identity Townscape and heritage appraisals in housing market renewal areas (Historic England and CABE 2008); and Understanding Place Historic Area Assessments: Principles and Practice (Historic England 2010);
- Using Historic Landscape Characterisation (Historic England 2004).

Historic England, previously English Heritage has issued a number of guidance and best practice notes covering a range of issues in relation to the conservation and management of historic places and heritage assets all of which are available on the Historic England website (https://historicengland.org.uk/advice/planning/).

This section outlines the broad physical and experiential characteristics of Plymouth Hoe. The analysis considers: pattern and layout of buildings, building heights and roofline, access and open spaces. Photographs and maps have been used to support the text. The information outlined in this section has informed the design guidelines.

Existing Character Assessments

Existing character assessments have been reviewed to provide some context to this assessment. The study area falls within National Character Area (NCA) 151. South Devon, as defined by Natural England (Natural England, 2014). This NCA is broad but provides a framework to the character of the study area. It mentions how Plymouth developed from the medieval period into the region's major port and remains an important naval base.

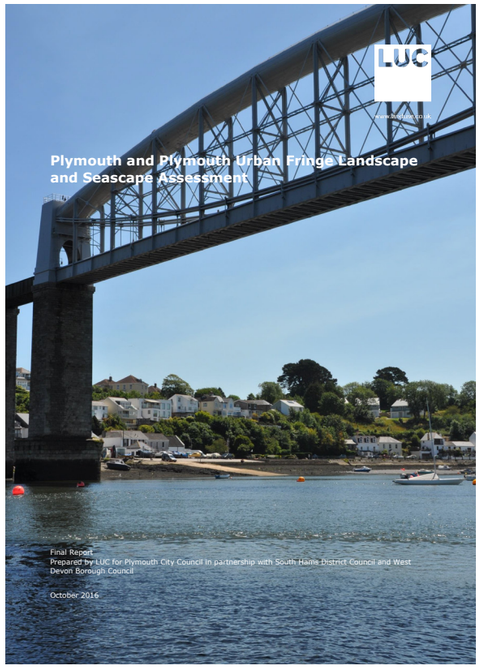
At a local level, the study area falls outside the Plymouth and Plymouth Urban Fringe Landscape and Seascape Assessment. However, the Plymouth Sound, which sits adjacent to the waterfront, is mentioned as having the following characteristics that relate to the study area:

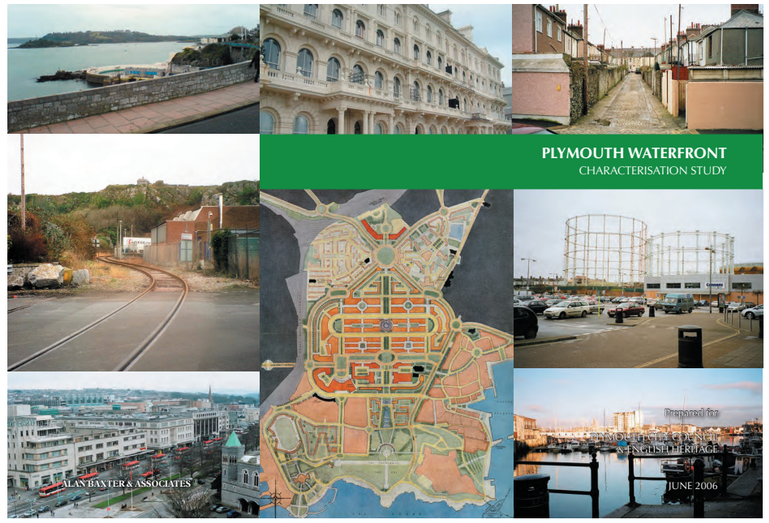
- Intrinsic part of Plymouth's setting as Britain's 'Ocean City', people arriving by sea travel through the Sound, greeted by the historic, elevated waterfront of The Hoe.
- Shelter provided by the surrounding landform (as well as the Breakwater). Southerly and south, south easterly storm surges can pass through the easterly entrance of the Breakwater, as witnessed by the damage affecting West Hoe in early 2014.
- The sheltered waters are popular for a range of recreational activities including sailing, kayaking, diving and bathing. Speed is limited to 10 knots to account for the range of activities taking place.

Plymouth Waterfront Characterisation Study

In June 2006 Alan Baxter Associates was commissioned by Plymouth City Council and English Heritage to produce a Waterfront Characterisation Study. The study identifies specific priorities for Area Action Plan policies in each identified character area. Overall, this study summarised that there has been has been a general lack of appreciation of the importance of the city's heritage, particularly that relation to Abercrombie's post war reconstruction . The character areas identified in the Waterfront Characterisation Study have been used to inform the character areas defined this report. The issues and opportunities have also be reviewed and utilised where they are still relevant.







Character Area Profiles

The results of the desk study and fieldwork have been analysed and two distinct character areas have been identified, as shown in Figure 3. These have been informed by the following:

- Historical development - including street pattern, land use, conservation areas and heritage assets;
- Movement - including physical boundaries such as railway lines, roads, rivers and gateways, nodes and linkages;
- Urban structure and built development - including density and building height, enclosure, architectural style and detailing;
- Land use and levels of activity;
- Green space and public realm - including those with planning policy and statutory protection, and how this relates to buildings and spaces; and
- Views and their contribution to an understanding of character, including the identification of landmarks.

Natural England defines key characteristics as “those combinations of elements which help to give an area its distinctive sense of place” that would result in significant consequences for the current character if they were changed or lost. As a result, they form important evidence to support the development of planning and management policies and a reference point against which to monitor change. Key characteristics have been defined for each character area identified.

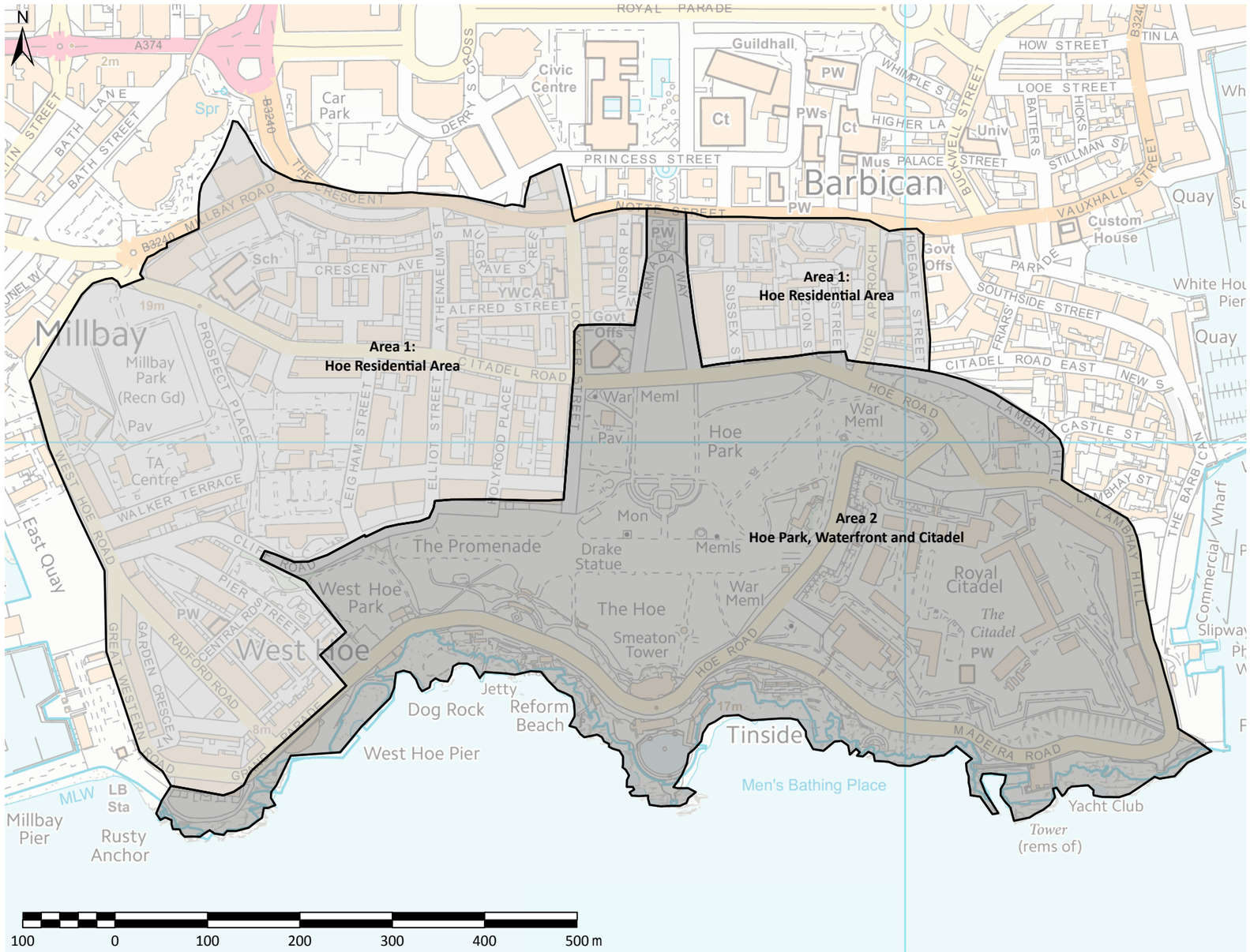


Figure 3: Charatcer Areas

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Area 1: Hoe Residential Area

Key Characteristics

The key characteristics of Area 1 are as follows:

- Unique residential area set between a coastal landscape and busy urban centre;
- Some of the only surviving Georgian planned townscape in Plymouth;
- Due to the varied topography there are two distinguishable parts to this area; Citadel Road (approximately 25m AOD) and West Hoe (approximately 10m AOD);
- Blocks of development on wide streets within a grid pattern;
- Examples of early 19th century terraces, rendered façades distinguish most buildings and are often painted white;
- Predominantly residential development interspersed with other complimentary land use; including numerous large hotels and guesthouses;
- The area is bounded by open water at West Hoe and Grande Parade where residential properties set on the waterfront are designed to maximize sea views;
- Pockets of infill development built to replace original buildings destroyed as a result of bombing in WW2;
- Many larger properties have been converted into guesthouses;
- Views towards the Waterfront, Plymouth Hoe and Plymouth Sound; and
- Green space is limited to small private gardens and internal courtyards.



Citadel Road East

Figure 4: Character Area 1



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Movement and connectivity

Notte Street is an important arterial route forming part of Plymouth city centre's ring road and is the primary route into the Neighbourhood area. It is referred to by a number of names but is known as Notte Street and The Crescent within the Neighbourhood area. The area is structured on a grid road network; streets are generally straight and vary in width. Citadel Road is the widest residential road in the area and crosses from east to west; it runs parallel to the Waterfront and connects to the eastern section of Hoe Park and Millbay in the west and Lambhay Hill in the East. Athenaeum Street, Elliot Street and Lockyer Street run perpendicular from Notte Street (north to south) and parallel from each other. Hoe Approach, a residential street in the east of the area, is a through route which provides access to the Plymouth Hoe. The waterfront is serviced by Madeira Road (one-way) which becomes Hoe Road (one-way) and later Grand Parade in the west. Vehicle congestion and high levels of on street parking are common across the area.

In general the area lacks a sense of arrival at key gateways. West Hoe Road (also Great Western Road and Grand Parade) is the primary gateway in the west of the area. This road forms part of a continuous one-way ring road that flanks the southern and western boundary of the area, adjacent to the waterfront. Streets including Radford Road serve the predominantly residential area of West Hoe.

The southern section of Armada Way is the main pedestrian route into the Neighbourhood area; there are numerous footpaths and passageways that lead from residential areas onto Armada Way. Pavements and passageways through residential areas create high levels of permeability for pedestrians. However, in the north east of the area, large walls and buildings block access from east to west; between Sussex Place and Zion Street for example.

The South West Coast Path (SWCP) National Trail and National Cycle Route 27 from Ilfracombe in North Devon to Plymouth fringe the western and southern boundary in West Hoe



Holyrood Place



Lockyer Street



Passageway connecting Hoe Approach to Hoe Street



Notte Street

Land use

Land use is mostly residential development, interspersed with a mixture of other community and leisure uses including; numerous large hotels and guesthouses such as the Crown Plaza hotel, which fronts onto Armada Way; various small supermarkets and retail outlets; a number of public houses and a primary school.

Land uses within the Plymouth Hoe Conservation Area are principally residential; however, the area also contains several landmark buildings including The Duke of Cornwall Hotel, New Continental Hotel and The Roman Catholic Church of Christ the King. Properties on the Crescent in the west of the area contain offices and small businesses. Numerous residential properties have been converted into guesthouses. Regeneration is beginning to transform residential developments at Leigham Street and Notte Street. The St Andrew's Church of England Primary School is located on the western boundary and is the only school within the Neighbourhood area.

Outside of the conservation status there are a variety of land uses including residential, commercial and an Army Reserve training facility. The residential area of West Hoe including Radford Road and Garden Crescent, is medium density, predominantly 2 and 3 storey terraces; several of the larger properties have been converted into guest houses due to their location close to the Waterfront. Chichester House is a block of high rise apartments at Citadel Road. At the convergence of Leigham Street and Cliff Road is a site allocated in the Plymouth and South West Devon Joint Local Plan, allocated for a hotel led mixed use regeneration, including housing and complementary uses to support the tourist function of area.

The close proximity to Plymouth City Centre and the Barbican mean that there is no distinct commercial centre to the area; however, there are clusters of shops and other businesses, along Hoegate Street and West Hoe close to the doctors surgery. These shops tend to be located within residential-scale buildings with flats above. Other land uses in the area include a miniature golf course and the Plymouth Marine Laboratory. There is a multi-level car park behind properties on Pier Street and Radford Road.

There are limited trees within the streetscape and vegetation is limited to areas of open space and small back gardens.



Holyrood Place



Hoegate Street



West Hoe Road



Saint Demetrios & Saint Nikitas Greek Orthodox Church

Urban Structure and Built Form

The unique residential area set between a coastal landscape and a busy urban centre, forms the majority of the residential development in the Neighbourhood area. As a result of the varied topography and steep inclines, the area is separated into two distinct parts; areas of higher ground at Citadel Road (approximately 25m AOD) and areas closer to sea level at West Hoe (approximately 10m AOD). In places, particularly in the west, steep gradients are noticeable along the streets such as Cliff Road and Walker Terrace which lead away from the waterfront where buildings step up the hillside.

The grid street pattern results in high density development in blocks that provide a sense of enclosure, particularly where properties face internally such as Radford Road. Within the Plymouth Hoe Conservation area there are examples of early 19th century terraces with varying levels of architectural detail. There is a general consistency in scale, density, building line and style of development; rendered façades distinguish most buildings and are often painted white. Slate roofs, timber sash windows and iron railings are also common. This building style is predominant, which creates rhythm and repetition in the streetscape. The majority of buildings are terraced and positioned directly to the rear of the pavement or set back slightly to accommodate access to basements. Occasional detached properties and larger houses are generally set back behind gardens or driveways. The historic arrangement of narrow, long plots, which extend back to streets, such as Mulgrave Street, has remained largely intact.

The Citadel Road area is of special historic value as it contains some of the only surviving Georgian planned townscape in Plymouth. The properties on this street are generally larger than surrounding areas with terraced properties of 4-5 stories. This mainly residential component within the context of the Hoe Conservation Area includes works of prominent architects; John Foulston and George Wightwick, with examples of early 19th century terraces on Athenaeum Street, Osbourne Place, Lockyer Street, Alfred Street and The Esplanade; several of the larger properties have been converted into guest houses due to their location close to Hoe Park and coastal views from some properties. Bad examples of properties such as 1 Leigham Street can be found throughout the area, that have been poorly maintained, restored with a lack of attention to detailing or show little consideration for their setting; these properties reduce the quality of the area.

There are occasional modern buildings and infill development, particularly post-war examples where historic buildings were destroyed during the Second World War. An example is 83 Citadel Road, which reflects the style and scale of other buildings on the street but lacks quality and attention to detailing. Hoe Court at the corner of Lockyer Street and Citadel Road and 6-14 Alfred Street are examples of post-war infill development that do not reflect the style of existing properties; brick façades and UPVC windows contrast with the surrounding period properties. There are numerous examples of modern buildings which contribute positively to the townscape. Numbers 5-9 Athenaeum Street,



Lockyer Street



Well presented 'front' to the street



Athenaeum Street

for example, are modern infill properties which reinforce the building line and rhythm of other properties within the streetscape. Notte Street on the northern edge of the character area lacks unity where there are disparate modern developments.

Properties on Elliot Terrace and The Esplanade are predominantly 4-5 stories and face the Waterfront with views across the Hoe and Plymouth Sound. These buildings have grandeur and provide a backdrop to the public realm on Hoe Promenade, defining the roofline on the Waterfront. The Grand Hotel has been restored and converted into luxury apartments. However, from the façade the appearance and signage of its former use as a hotel remains intact. Modern apartments on Cliff Road and Leigham Street are examples of large-scale developments of modern architecture that have respected the size and scale of the adjacent properties without enforcing pastiche. As a result, they make a positive contribution to character of the area.

The majority of terraced properties present a clearly defined and well presented 'front' to the street or public open space. The backs of properties tend to include large areas of underutilised space that is less well maintained. There is evidence of attempts to improve the function and appearance of these rear façades including extensions, rear entrances and garages which contribute to the character of the narrow back streets.

Outside of the conservation area the architectural style and building quality is varied. There are rows of these 19th century terraced properties in other areas including Citadel Road. Properties on Radford Road, Garden Crescent and Eddystone Terrace are high quality examples, two and three storey terraces arranged in a triangle facing inwards across a public urban park which is dominated by large areas of asphalt tennis courts; the street layout provides a strong sense of enclosure. The Territorial Army Reserve complex is a gated facility located at the convergence of Walker Terrace and Prospect Place and is a physical barrier between the Hoe and the regenerated area of Millbay to the west.

The West Hoe area is defined by the varied topography and steep cliffs at West Hoe Park, as a result properties in this area are overlooked from the Hoe Promenade and properties on Elliott Street and Cliff Road. Properties on Grand Parade are predominantly three storeys in height and face the Waterfront with views across the Plymouth Sound. These buildings vary in quality and architectural detail; the higher quality properties include ornamental detailing, such as decorative iron work on balconies, mouldings on building façades and sash windows. The Rivage is a 21st century development of apartments on Grand Parade which uses contemporary materials to contrast with the white render of traditional properties, the scale and building line has been respected and the new development complements the existing architecture.

The quality of post-war redevelopment, for example where an original building was destroyed during the Second World War, is varied. The single storey West Hoe Surgery on Cliff Road is an infill property that contrasts with the style and scale of other buildings on the street. The Plymouth Marine Laboratory is a post war brutalist building, which is currently undergoing renovation. This style of architecture is seen widely across Plymouth and provides a historical context and diversity to the streetscape.

There are also several high density infill developments and high rise buildings that do not reflect the style or scale of older properties. Examples include a large 1960's, eleven storey development on Notte Street (Opal Villas). Similarly, Chichester House on Citadel Road is a high-rise (approximately) 19 storey apartment block, and the Crowne Plaza on Armada Way is (approximately) 11 stories, both are post war development that sit incongruous to the surrounding low rise buildings. There are devlopments under construction with scaffolding visible.

In areas where there is active frontage such as West Hoe Road, the majority of shops are independent which contributes to the unique character of the area. The maritime and coastal character of the area is noticeable in features within the public realm; however, garish, poor quality signage, advertisements and shop fronts are common.



Garden Crescent (Radford Road)



West Hoe



Elliot Street



Radford Road



Lockyer Street



Osbourne Place



Duke of Cornwall Hotel



Crescent Avenue



Cobbled surface



Osbourne Place



Sussex Street



Chichester House



Hoegate Street



Hoe Approach

Heritage

The area to the west of the Royal Citadel and east of Millbay remained largely undeveloped until the 19th century. In the 1830s streets to the north-east of Hoe Park were developed with terraces to the designs of John Foulston, Plymouth's lead architect and town planner of the time, and his pupil George Wightwick.

By the 1860s the majority of the area north of Citadel Road from Millbay in the west to Hoe Approach in the east had been developed with terraces and larger buildings including the South Devon and East Cornwall Hospital (Wightwick, 1835) and the Notte Street Brewery, both facing Notte Street on its south side. Land to the south of Citadel Road in West Hoe was less densely developed apart from terraces on the west side of Lockyer Street (now Osbourne Place), the south side of Citadel Road and the Esplanade. Prospect Row stood to the east of Prospect Place and the long terrace of West Hoe Cottages stood to the north of the present Cliff Road. Further west were the Prospect Row Barracks on the site of the present Territorial Army Centre and Millbay Barracks at the north-eastern corner of the present Millbay Park. Further south, most of the ground was covered by the West Hoe Quarry and its associated lime kilns.

By the 1890s the area to the south of Citadel Road not previously developed had been provided with streets (Leigham Street, Elliot Street and Holyrood) and developed with terraces. West Hoe Quarry had closed and the streets seen today had been built with terraces on Great Western Road, Garden Crescent, Eddystone Crescent and Radford Road. Central Road and Pier Street had been built but development on them was only piecemeal by 1893. The barracks and drill ground at Millbay Park were surrounded by houses on Prospect Place, Walker Terrace and West Hoe Road. The hospital moved in 1884 and the property was sold and in the 1880s the brewery was demolished and Artisan's Dwellings built on the site.

After the First World War the street pattern was much as it is today. Millbay Barracks had been removed and the drill ground turned into a recreation ground. There was little development in the area between the wars.

Enemy bombing during the Second World War and subsequent clearances for Sir Patrick Abercrombie's Plan for Plymouth effectively removed the entire residential area between Windsor Place in the west and Hoe Approach in the east with only Sussex Place, the terrace on Citadel Road between Sussex Street and Zion Street, and 18, 18a and 18b Hoe Street remaining from the 19th century plan.

Bomb sites and gaps were filled across the area with differing degrees of success. Two of the larger plots were developed with local authority housing with similar four storey blocks built at 31-101 West Hoe Road and 65-159 Notte Street. The most prominent post war buildings were the 19 storey Chichester House to the east of Millbay Park which opened in 1968, the 10 storey Mayflower Hotel on Cliff Road which opened in 1970 (now demolished and to be replaced by the 1620 development of an hotel and apartment block); and the 12 storey Crowne Plaza (formerly Holiday Inn) on Armada Way which opened in 1972. The recent Azure and Azure West developments on Cliff Road and Leigham Street are less tall and respond to their surroundings differently, the former respecting the roof line of the grade II listed Grand Hotel next door and the latter responding to the height, rhythm and verticality of the more modest terraces in the streets surrounding it. The latest additions to the area are the twin buildings of Astor House, student accommodation blocks on Notte Street opened in 2013.



Athenaeum Street



Elliot Street

Figure 5: Historic Environment Area



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Green space and public realm

The public realm within residential areas is generally limited to the pavements lining the streets, which are mostly kerbed in granite and surfaced in concrete paving slabs. Some have been lost to 20th century maintenance which has replaced paving with asphalt, to the detriment of the area.

Green infrastructure is limited to mature trees and vegetation in small residential gardens and pockets of vegetation surrounding buildings, such as the gardens surrounding St Andrew's Church of England Primary School.

Millbay Park recreation ground is a large open green space in the west of the area. It includes sports pitches, grassland and mature trees. However, the central recreational area is currently fenced and public access to this site and the original entrance has been blocked.

There is an area of public green space including mature trees, tennis courts and seating at Radford Road, the dominance of asphalt surfacing for the tennis courts reduces the quality of this area. Additionally, there are various locations with significant green space and mature trees including the Territoral Army Reserve centre, Plymouth Marine Laboratory and the miniature golf course off Pier Street that soften the appearance of the residential streets.



Citadel Road East



Millbay Park



Hoegate Street



Hoegate Street

Views

Views in this area are channelled along straight residential streets by the tall continuous lines of buildings either side. Along the southern boundary there are views from residential properties along Cliff Road and Elliot Terrace towards the Waterfront and across the Plymouth Sound. Additionally, there are open, panoramic views across Plymouth Sound from properties on Grand Parade and to the west at Walker Terrace there are views of Millbay Docks. From higher ground to the north views are channelled through streets towards Plymouth city centre.



Views from Grand Parade

Channelled views along streets













Managing change

The character of the Hoe Residential Area described above is the result of a range of interactions between natural and human processes. This evolution is supported by the section on historical development, which describes how the structure and character of the area have changed over time. Together this provides a baseline against which change can be monitored and managed.

The evolution of the landscape will continue and therefore the management of change is essential to ensure that sustainable social, environmental and economic outcomes are achieved. This section therefore considers various factors which may influence change and inform the policies set out in the Hoe Neighbourhood Plan.

Positive aspects

There are a number of positive aspects of character which should be sustained, reinforced or enhanced. These relate to high quality architecture, street layout and coastal views:

- General consistency in scale, density, building line and style of development, particularly in the conservation area;
- Survival of many historic houses particularly in the conservation area, which create a strong sense of local identity and unity;
- Properties on Elliot Terrace and The Esplanade have grandeur and provide a backdrop to the public realm from Hoe Promenade;
- Defined blocks provide a sense of enclosure and structure;
- General rhythm and repetition of architectural form with a modest palette of materials and attention to detailing in places, particularly in render, eaves, windows and doors;
- Coastal views towards the Waterfront and Plymouth Sound provide a sense of tranquillity;
- Modern influences and high quality infill development complement the local vernacular;
- Plymouth Marine Laboratory is a good example of post war Brutalist architecture; and
- Small parades of local shops bring diversity to the area and contribute to a sense of community.

Issues to be addressed

The following issues have been identified, which could be addressed through new development or active management. These are principally related to loss of historic street materials, the rear of buildings not addressing the street and low quality maintenance of properties:

- Due to the density of buildings, there is limited green infrastructure within the residential areas;
- High levels of on street parking is common;
- Examples of low quality additions or improvements to properties particularly within the conservation area, such as UPVC windows and front doors and lack of detailing on exterior façades;
- Properties that are poorly maintained, restored with a lack of attention to detailing or show little consideration for their setting;
- Asphalt and concrete are dominant paving materials;
- The busy Notte Street severs the area from the city centre to the north;
- Pedestrian connections across the area are restricted in places by large retaining walls;
- High levels of congestion on access roads such as Hoe Approach as a result of through traffic to and from the city to the Hoe;
- Varying maintenance of properties;
- Large areas of underutilised space that is less well maintained at the rear of terrace blocks;
- Garish, poor quality signage, advertisements and shop fronts, particularly around areas of active frontage such as West Hoe Road;



St James Place West

- Infill development and urban expansion has begun to weaken the grandeur of the historical character of the area;
- National styles and lack of attention to architectural detail and common design in some modern housing developments;
- High rise blocks out of scale with the area;
- The scale of infill development is larger in places than existing buildings and infrastructure;
- Lack of entrance or sense of arrival;
- Access to the sports pitches at Millbay Park is restricted; and
- The Crowne Plaza Hotel and Chichester House and opal Villas are landmark towers, but are out of scale with the character of the conservation area.

Sensitivity to change

There are also some elements which are particularly sensitive to change. These relate to historic buildings and the limited areas of green space and recreation space:

- Municipal buildings, such as St Andrew's Church of England Primary School are sensitive to increased pressure for commercial development within the area;
- Areas of green space, including Millbay Park;
- Buildings and other features of historical or townscape interest which are not listed or are outside of the conservation area are particularly sensitive to change; and
- The limited shops within the area are independent local business which increases the variety and local distinctiveness.



Millbay Park

Character management principles

In order to address the issues highlighted, principles for managing change in this area should focus on sustaining, reinforcing or enhancing those aspects which retain the grandeur and unique location of the setting. The following principles should be considered when defining policies with respect to heritage and character:

- Proposals to alter existing buildings should demonstrate a detailed understanding of the history and design qualities and provide a clear rationale for how this is taken account of in design proposals:
- New development should be responsive to the townscape characteristics and maritime character of the Plymouth Hoe. In particular; street pattern, plot widths and proportions, building lines and positions within plots, roof lines, height, scale, massing, boundary treatments, attention to detailing and architectural individuality;
- The materials proposed for any new buildings and building alterations should be of a high quality, respond to the character of the buildings in the area, and have strong attention to architectural detailing;
- The materials proposed for any new road surface treatments should be of high quality and respond to the character of the area;
- New development on Notte Street should use design to unify this area with the city centre;
- Buildings and other features of historic or townscape interest identified in this assessment within and outside of the Conservation Area, including their setting, should be protected;
- New development should maintain and enhance access to the Waterfront and should retain open views from key vantage points;
- New development should incorporate trees within gardens.
- Areas of green space should be designed and managed to provide attractive and functional areas for residents and visitors. This may include play equipment, seating, lighting and sculptures. The landscape should be designed to complement the existing materials and include areas of attractive planting with species selected which are characteristic of the coastal location.
- Any new development should include off-street parking provision;
- Development within the area should, wherever possible, provide a mix of uses including community and retail in order to retain the sense of community;
- Retail and commercial unit sizes in future development should be restricted so that stores lend themselves to more local businesses;
- Future development should retain and enhance original shop fronts. Designs should demonstrate an understanding of the history and complement the existing materials, architectural detailing and roof lines; and
- Future development should incorporate facilities for wheelie bins off the street such as screened bin stores.

In addition to policy protection, this assessment has identified projects or initiatives which could be financed through the Community Infrastructure Levy (CIL) and Section 106 (S106) contributions, or if the project is not eligible for these mechanisms, through other means of funding or delivery. CIL is a tool for local authorities to levy contributions from developers to help deliver infrastructure projects which benefit the local community – for more information, see http://planningguidance.communities.gov.uk/blog/guidance/ community-infrastructure-levy/.

Section 106 agreements are site-specific and put in place to make it possible to approve a planning application that might not otherwise be acceptable in planning terms – for example, the provision of new green space. It is recommended to seek advice from the Local Planning Authority on what types of project can be funded through CIL and S106.

Projects and initiatives identified as having the potential to be brought forward by CIL, S106 or other means include:

- Traffic calming measures and public realm improvements along the West Hoe Road, Notte Street, Hoe Approach and Citadel Road to reduce the speed of vehicles and improve the quality and permeability of the environment;
- Public realm and way finding improvements at key gateways and nodal points into the Neighbourhood area to create a sense of arrival and grandeur;
- Work with the local authority to review the public access opportunities for local residents at Mill Bay Park. Options for landscape and public realm improvements within the park should be explored; and
- Upgrade the tennis courts and public open space at Radford road to improve the quality of this area.



Leigham Street



West Hoe Road



Sussex Street

Area 2: Hoe Park, Waterfront and Citadel

Key Characteristics

The key characteristics of the area as follows:

- Hoe Park public green space, which lies at the centre of the area, is open and exposed to the sea;
- Rich with green infrastructure, historic associations, structures and monuments;
- Waterfront provides a physical link between the coast and built up areas of the city centre;
- Citadel fortification and military compound dominates the eastern part of the area and is prominent in views across the harbour;
- Promenade, including Tinside Lido, beach huts, and seating areas which survive largely intact and provide a unique leisure and recreational character;
- Landmark features and monuments including Smeaton's Tower and the Plymouth Naval Memorial;
- The cliff face includes various structures integrated into the rock, such as terraces extending down to the sea;
- Panoramic, scenic views across the Plymouth Sound to Drakes Island, Mount Batten beyond;and
- Recreational activity including fishing, water sports, swimming pool, cycling and walking.



Waterfront

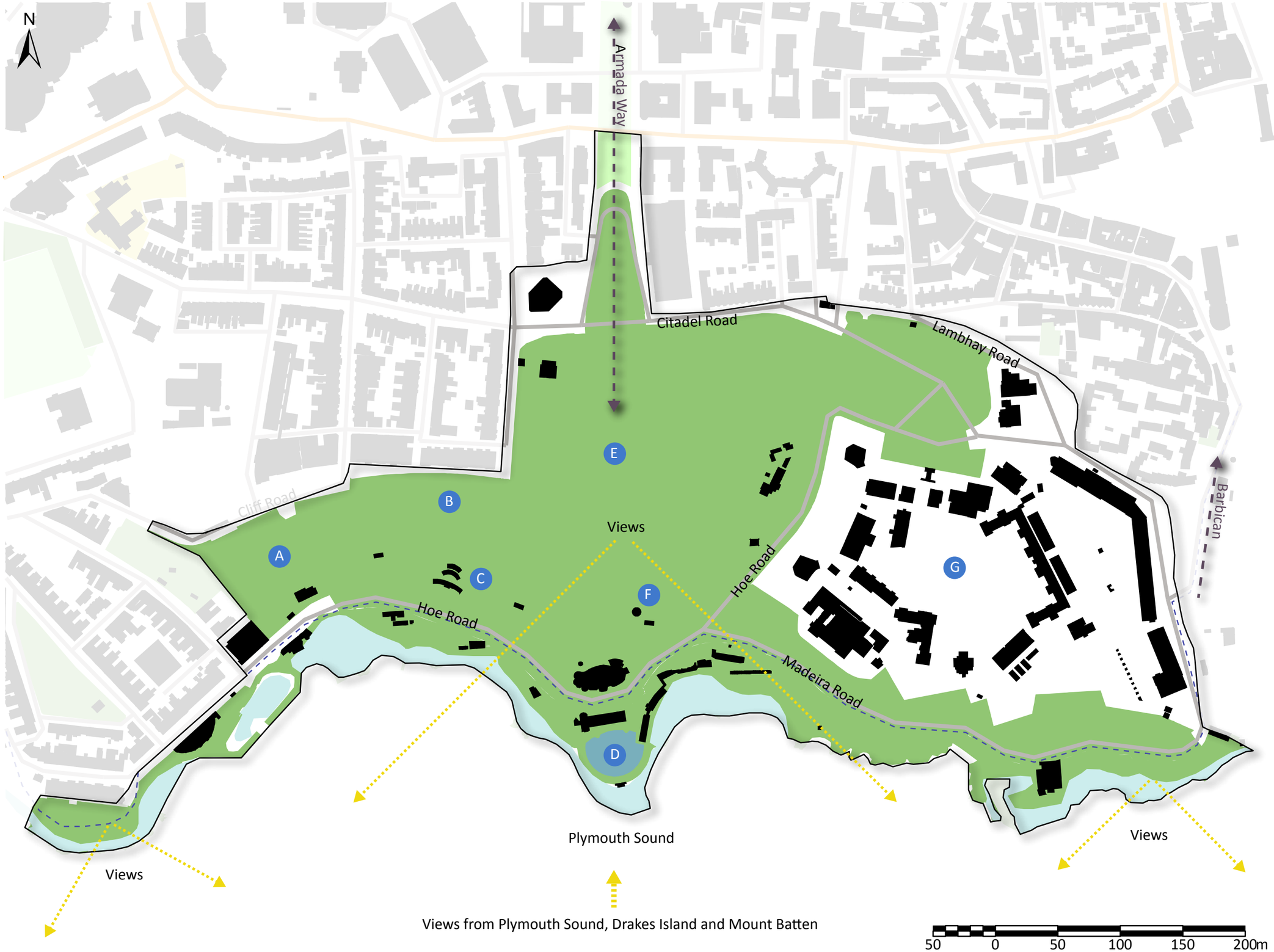

Figure 6: Character Area 2

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Movement and connectivity

Plymouth Hoe is centrally located on the Plymouth waterfront and adjoins the city centre, which lies to the north. There is a clear connection between the city centre and Plymouth Park via Armada Way; a north-south axis from the train station to the Hoe which is predominantly pedestrianised. Due to its central location traffic levels and congestion with the Neighbourhood area are often high. Primary road access to the Hoe is via Madeira Road, Hoe Road and Lambhay Hill, which form part of a continuous ring road around the study area. Hoe Road and Madeira flank the southern boundary adjacent to the waterfront; a wide promenade for pedestrians and cyclists sits in-between this road and the coastal cliff face. The area is a destination for tourists and citizens of Plymouth and at peak times this results in high levels of traffic congestion that detracts from the quality of the street scene. The main pedestrian activity is north to south along Armada Way and east to west along Madeira Road and Hoe Road. There are no public car parks within the HNF boundary; however, the area of hardstanding on Hoe Promenade is often used for disabled parking and on-street parking is common.

There are many opportunities for pedestrians and cyclists to travel through the area. The South West Coast Path (SWCP) National Trail fringes the southern boundary along the waterfront from east to west. However, steep level changes restrict ease of movement across the park, especially for people with limited mobility, pushchairs, prams etc. There are also various footpaths located along the foreshore. Plymouth Hoe has a limited bus service, the number 25 bus which connects the area to Royal Parade in the city centre. Pedestrian and vehicular routes to and from the Hoe are constrained, and not all routes are intuitive or legible due to the topography.



Land use

The area is a unique combination of public parks, landmarks, public open space and tourism and leisure facilities. Land use is diverse, comprised of many elements set around the central core of Hoe Park, which is an extensive public green space in an exposed, coastal setting. The park includes iconic landmarks such as the Plymouth Naval Memorial and Smeaton's Tower which is also a museum. The park includes various seating areas, ornamental flower beds, independent cafes and a bowling green. There is a large area of hardstanding at the summit of the park known as Hoe Promenade which extends from east to west and is used as a multi-functional event space. The Plymouth Register Office is located off Lockyer Street, this site is included in the Plymouth and South West Devon Joint Local Plan and is allocated for mixed use development.

The Waterfront area contains a range of land uses including; promenade, tourist attractions, food and drink outlets, community facilities and the Tinside Lido open air swimming pool.

The Citadel is a substantial active and secure military compound which occupies an area of approximately 6 hectares with restricted access.

West Hoe Park in the west of the area is an additional area of open green space and includes a small childrens play park and fairground, the park is surrounded by a steep cliff face; the result of a previous quarry.

View of Hoe Park from Smeaton's Tower



Urban Structure and Built Form

This area is characterised by numerous distinctive features including; the relationship between the openness of the Park and the coast to the sea; the interface along the cliff face which includes Tinside Lido and various structures integrated into the rock, such as terraces extending down to the sea; and various landmark features which are unique to the area including Smeaton's Tower and The Plymouth Naval Memorial.

Hoe Park is an open expanse of green space that is predominant in the centre of the area. The park includes large areas of lawn, pockets of ornamental planting and matures trees. There are distinctive landmark buildings and features distributed throughout the park and along the waterfront; Smeaton's Tower is a former lighthouse that was rebuilt on Plymouth Hoe, characterising the maritime landscape with its red and white painted stripes. Visitors may access the lighthouse from the base and climb to the top to maximise the 360 degree views. Hoe Promenade is a large area of hard-paved recreation space that serves multiple uses inlcuding public congregation, events and informal leisure. Hoe Promenade includes street furniture, lighting and various monuments. Armada Way is a central axis through the city centre to Hoe Park, however, the pedestrian gateway lacks a sense of arrival and grandeur.

There are various independent cafes that bring variety to the park and provide users with active frontage and social spaces. However, garish, poor quality signage, advertisements and furniture are common. The Plymouth Hoe Bowls Club is a post war building which lacks quality and attention to detailing and serves as an important community asset.

Steep level changes separate various sections of the area, resulting in a lack of unity. The Belvedere is located in a prominent location on the cliff face and maximises views across the Waterfront and Plymouth Sound (terraced building in a classical style is stepped into the steep cliff face on three levels). Sheltered areas within the Belvedere that provide a sense of enclosure accommodate anti-social behaviour.

Along the Waterfront there is a juxtaposition of man-made and natural forms along the foreshore. The Tinside Lido is an iconic Art Deco open air saltwater swimming pool which is built into a rocky promontory on the waterfront, which extends out into the Plymouth Sound and is therefore open and exposed to the sea. There are various bathing and recreational facilities built along the foreshore that provide access to the water, additionally, cafés, beach huts and terraces of varying architectural style and quality are built into to rock face along the waterfront; some buildings are unused, in a poor state of repair or undergoing restoration. Numerous retail and food outlets are distributed throughout the area that lack quality and attention to detail. Additionally these facilities include low quality signage and outdoor furniture that does not represent the grandeur or maritime characteristics of the area. However there are examples of modern additions and new development which use high quality materials that respect the grandeur of this coastal setting and have a positive effect on the character of the waterfront.

The Citadel is a landmark feature due to its imposing, high, ancient stone walls which sits above the Waterfront and forms a physical barrier between the Hoe and Sutton Harbour.



The Belvedere



The Citadel



Plymouth Naval Memorial



Plymouth Naval Memorial



Waterfront

Green space and public realm

Hoe Park is central to the Neighbourhood area and is a Grade II Registered Park and Garden. The area extends from Armada Way to the Plymouth Naval Memorial and includes a large area of public realm extending to the waterfront. Large areas of hardstanding on Hoe Promenade dominate high ground across the park from east to west. Green infrastructure elements include lawns containing well-established trees, ornamental (albeit municipal) planting and hedging. There are various elements to the park including; the Bowling Lawn and Sensory Garden which are screened from the residential properties at Osbourne Place by mature trees and vegetation. Wide pathways provide a variety of pedestrian routes through the Park; formal gardens with planted flower beds are located adjacent to Hoe Café and the Belvedere.

The foreshore is a more natural environment in comparison to the manicured landscapes within Hoe Park. The area is characterised by rocky limestone cliffs which comprise numerous inlets and tidal beaches resulting in a unique, protected coastal environment.

West Hoe Park is situated at the base of a reinforced cliff wall, which defines the edge of a historic quarry and now contains, tree planting, a children's playground and toilet facilities.

Both Hoe Park and West Hoe Park are Green Flag Parks.

Views

There are extensive panoramic views from high ground on the Plymouth Hoe of the natural harbour of Plymouth Sound, the River Tamar and Mount Edgecumbe and other landmarks including Drake's Island and Mount Batten. There are numerous opportunities to take in coastal views from vantage points along the waterfront and from high ground at Hoe Park. Boats, including ships and sailing vessels that cross the Sound create movement within the view. Views north towards the city centre and Armada Way extend to the North Cross roundabout in the distance in the winter. 360 degree views are afforded from the summit of Smeaton's Tower across the city to Dartmoor National Park to the north. Additional views of Dartmoor are afforded in the north of the area such as Hoe Road.



Smeaton's Tower



Hoe Park



Hoe Park



Plymouth Hoe Bowling Club



Hoe Road

Heritage

The name Hoe is Anglo-Saxon in origin and means ‘high place or high ridge’ reflecting the strategic position of the area on the southern edge of the city at the ridge of a cliff overlooking Plymouth Sound. Although the Hoe had been used as a place of recreation since medieval times it was not laid out as a municipal park until the early 19th century. Its strategic importance was realised as early as 1539 when it was used as a lookout point and provided with fortifications. After the Spanish Armada of 1588 a fort was built on the eastern side of the Hoe incorporating earlier defences. The Royal Citadel was started in 1665 to defend the city against attack by the Dutch and arguably to control the town, which had been fiercely Parliamentarian during the Civil War. Buildings on the site dating to the first phase of development include the Governor’s House, the Church of St Catherine, and the Great Store. Phases of rebuilding and new building continued throughout the 18th and 19th centuries and the site is still used by the military today, currently by the 29 Commando Regiment Royal Artillery.

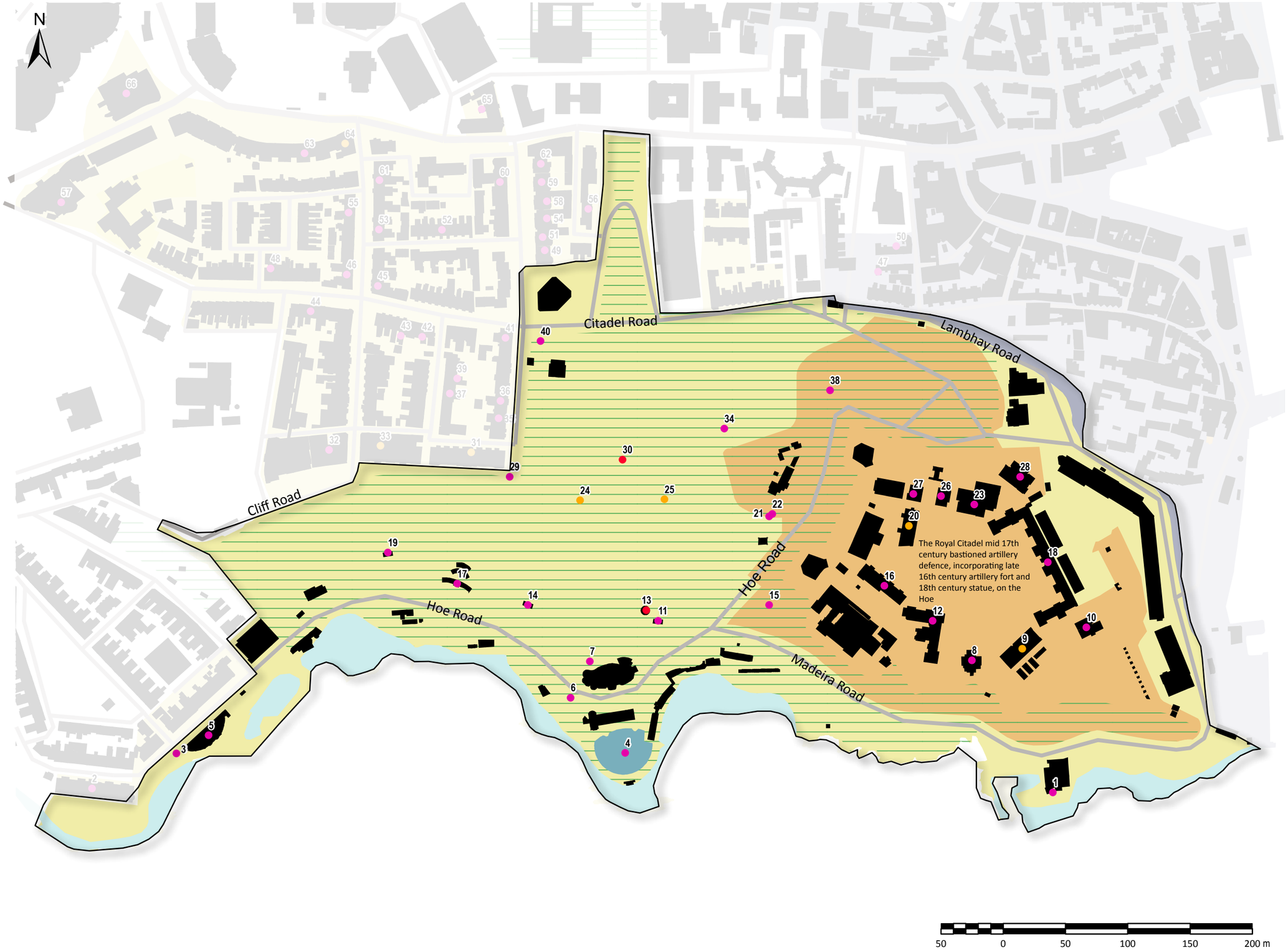
Hoe Park was established in the early 19th century responding to the rising fashion of public parks in the country. The waterfront was further transformed with natural and man-made pools catering to the fashion for outdoor bathing. The upper part of the Eddystone Lighthouse was resited within the park in 1882 and five years later the park was formally laid out after the military gave up the earthworks surrounding the Citadel. The park quickly acquired a number of leisure buildings including a pier with its 2,000 seat Pavilion Theatre. Increasing numbers of tourists between the wars were catered for by new hotels, many of them on the Hoe. Further leisure facilities were also provided including the Tinside Lido (1935). Although the Hoe had acquired a number of memorials before the First World War including the Drake Statue, the Armada Memorial and a memorial to Prince Christian Victor of Schleswig-Holstein it was to acquire more after the war including the Plymouth Naval War Memorial (1924, extended 1954). Abercrombie’s Plan for Plymouth had the intention of re-connecting the Hoe with the city centre. This was achieved by extending the new Armada Way up onto the Hoe either side of a new green space but the new ring road and large scale development either side of the space has meant that the scheme has not been as successful as intended.

The 2016 document A Better Defence Estate (Ministry of Defence) indicated that the Royal Citadel would be disposed of by 2024.



The Waterfront

Figure 7: Historic Environment Area 2



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Managing change

The character of Hoe Park, The Waterfront and The Citadel described above is the result of a range of interactions between natural and human processes. This evolution is supported by the section on historical development, which describes how the structure and character of the area have changed over time. Together this provides a baseline against which change can be monitored and managed.

The evolution of the landscape will continue and therefore the management of change is essential to ensure that sustainable social, environmental and economic outcomes are achieved. This section therefore considers various factors which may influence change and inform the policies set out in the Hoe Neighbourhood Plan.

Positive aspects

There are a number of positive aspects of character which should be sustained, reinforced or enhanced. These relate to the high quality of the public realm, landmarks and visual connections to the Waterfront and Plymouth Sound:

- Unique location within Plymouth and the South West region;
- Large, open park in an exposed coastal setting;
- Hoe Park is a high quality public green space that is used for local events;
- There is a clear physical connection between the city centre and Hoe Park via Armada Way;
- The Park provides a setting for key historic landmarks including Smeaton's Tower, the Citadel and the Plymouth Naval Memorial;
- Extensive areas of public realm in a unique waterfront location;
- Various structures integrated into the rock along the waterfront, such as terraces extending down to the sea;
- Cafés and viewing platforms which provide opportunities with scenic views across Plymouth Sound;
- Tinside Lido, open air swimming pool is a unique, Art Deco landmark; and
- The natural setting of the limestone cliffs, and the unique plant communities of these areas should be sustained, reinforced and enhanced. These are currently being invaded by non native species and future management should include for the removal of non native species and the reintroduction of the native plant assemblages. See https://www.plymouth.gov.uk/sites/default/files/hoe_and_ madeira_road_management_statement.pdf

Issues to be addressed

The following issues have been identified which could be addressed through new development or active management. These are principally related to a lack of maintenance of landmark features; litter resulting from anti-social behaviour and traffic congestion:

- Traffic and congestion on the periphery of the park including Hoe Approach and West Hoe Road particularly at peak times for tourists;
- Large areas of hardstanding on the Plymouth Hoe sit incongruous to the surrounding lawns and soft landscaping, reducing the overall quality of the park;
- Poor quality signage and appearance of retail and food outlets are distributed throughout the area;
- Litter resulting from anti-social behaviour, particularly on the foreshore;
- Poor design, surveillance and lighting of public spaces that accommodate anti-social behaviour including enclosed areas within the Belvedere;
- Steep level changes restrict ease of movement and access across the park;
- Municipal buildings, such as the Plymouth Registry Office are sensitive to increased pressure for commercial development within the area; and
- Planting is municipal and does not reflect the coastal setting.



Hoe Promenade

Sensitivity to change

There are also some elements which are particularly sensitive to change. These relate to municipal buildings and public open space:

- The frontage along Armada Way is sensitive to high rise development that does not compliment or sit in context with its surroundings;
- Public open space is sensitive to loss of openness and views, particularly of Plymouth Sound, as a result of development;
- Mature trees are sensitive to removal from development particularly on Armada Way;
- The setting of landmark structures such as the Tinside Lido and Smeaton's Tower; and important vistas are threatened by imposing high rise development.
- The southern edge of Hoe Park is visually exposed where the topography is elevated and there is a lack of vegetation.



Plymouth Register Office

Character management principles

In order to address the issues highlighted above, principles for managing change in this area should focus on sustaining, reinforcing or enhancing those aspects which retain the grandeur and unique location of the setting. The following principles should be considered when defining policies with respect to heritage and character:

- Proposals to alter existing buildings should demonstrate a detailed understanding of the history and design qualities and provide a clear rationale for how this is taken account of in the design of the alterations proposed;
- New development should be responsive to the landscape and townscape characteristics of Plymouth Hoe. In particular plot widths and proportions, building lines and positions within plots, roof lines, height, scale, massing, boundary treatments, views, ecology, attention to detailing and architectural individuality;
- The materials proposed for any new buildings and building alterations should be of a high quality, respond to the character of the buildings in the area, and have strong attention to architectural detailing;
- Lighting and design solutios should be explored to discourage anti-social behaviour.
- The materials proposed for any new public realm should be of a high quality, respond to the character of the setting the area, and have strong attention to architectural detailing;
- Buildings and other features of historic or townscape interest identified in this assessment within and outside of the Conservation Area, including their setting, should be protected;
- A strategy for tree management and replanting should be developed to increase the age structure of tree stock and range of species to ensure continuous contribution of tree cover to streets, increased diversity and resilience to environmental change, in line with city targets and aspirations;
- Trees or groups of trees that contribute to the character of the area should be protected and incorporated into new development. Where new development is proposed on or close to the edge of the Park boundary, planting should be incorporated and buildings set back from the edge to maintain distinction with the public landscape;
- Any new development should include off-street parking provision;
- A common palette of materials, street furniture and signage should be further developed to enhance the quality and legibility of the public realm.
- Opportunties to improve access and connectivity should be explored.
- Important vistas should be retained and enhanced.
- Plymouth Hoe Bowls Club has potential for enhancement.

In addition to policy protection, this assessment has identified projects or initiatives which could be financed through the Community Infrastructure Levy (CIL) and Section 106 (S106) contributions, or if the project is not eligible for these mechanisms, through other means of funding or delivery. CIL is a tool for local authorities to levy contributions from developers to help deliver infrastructure projects which benefit the local community – for more information, see http://planningguidance.communities.gov.uk/blog/guidance/ community-infrastructure-levy/.

Section 106 agreements are site-specific and put in place to make it possible to approve a planning application that might not otherwise be acceptable in planning terms – for example, the provision of new green space. It is recommended to seek advice from the Local Planning Authority on what types of project can be funded through CIL and S106.

Projects and initiatives identified as having the potential to be brought forward by CIL, S106 or other means include:

- Traffic calming measures and public realm improvements along the West Hoe Road, Notte Street, Hoe Approach and Citadel Road to reduce the speed of vehicles and improve the quality and permeability of the environment for pedestrians and cyclists in particular; and
- A common palette of materials, street furniture and signage should be further developed to enhance the quality and legibility of the public realm.



Waterfront cafe


SUSSEX PLACE



3. Quality of the Built Environment

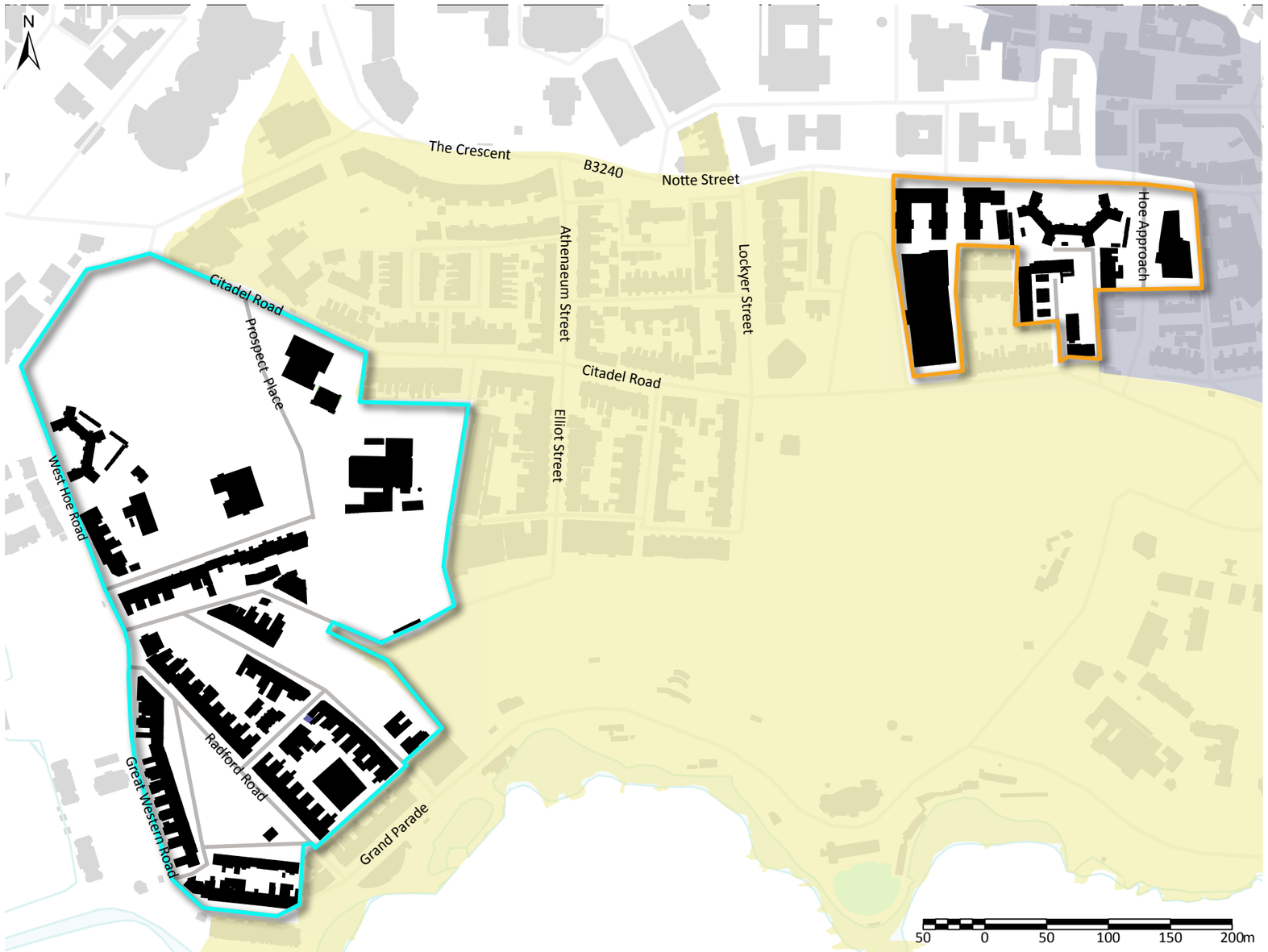
Quality of the Built Environment

The majority of the Hoe neighbourhood area falls within the Hoe Conservation Area as adopted by Plymouth City Council with a very small area falling within the Barbican Conservation Area as adopted by Plymouth City Council. Two areas fall outside the conservation areas, an area of West Hoe to the west, north-west and north of West Hoe Park and an area to the north of Hoe Park. For the purposes of this study the two areas are referred to as West Hoe and North of Hoe Park respectively. North of Hoe Park is bounded by Notte Street to the north, Hoegate Street to the east, and Armada Way to the west with an irregular border to the south comprising two stretches of Citadel Road and three roads cutting through the centre of the block to the north and covers an area of approx. 2.4ha. West Hoe is bounded by Citadel Road to the north, Leigham Street to the east, Grand Parade to the south and Great Western Road and West Hoe Road to the west and covers an area of approx. 11.6ha.

Plymouth City Council adopted Conservation Area Appraisals and Management Plans (CAMPs) for the Barbican and Hoe conservation areas in 2007 and 2009 respectively. The CAMPs were the result of extensive survey and characterisation and both presented sections on the quality of the built environment. These sections enumerated the scheduled and listed buildings within the conservation areas, assessed the quality of buildings including prevalent and traditional building materials, survival of original features, and illustrated this assessment with figures showing land use, building age, building height, and building designation and contribution.

The quality of the built environment within the conservation areas is covered in the CAMPs in some detail and précised here. There is a marked difference in the quality of the built environment in those areas of the Neighbourhood Plan covered by conservation areas and those outside the conservation areas. That part of the Barbican Conservation Area located within the Neighbourhood Plan area has two groups of listed buildings and three assessed to 'make a positive contribution to the conservation area' within the CAMP. The Hoe Conservation Area is located entirely within the Neighbourhood Plan area and contains the Royal Citadel, a scheduled monument, the Hoe, a grade II registered park and garden and several listed buildings covering land uses including religious, civic, community, residential, catering, hotel and office. By contrast there are no listed or locally listed buildings within the two areas of the Neighbourhood Plan outside the Conservation Areas.

Listed buildings within the Hoe Conservation Area can be broadly divided into four groups. The Citadel scheduled monument contains fifteen listed buildings, eleven of them within the walls of the bastion including the grade II* late 17th century Governor's House and Great Store. The foreshore area includes a number of listed buildings, some relating to defence but others such as the Tinside Lido with its associated changing rooms, colonnade, promenade and sun terrace (1935), and the Waterfront pub (a late 19th century harbour side pavilion).



The registered park and garden includes a number of listed buildings, some associated with leisure such as the Belvedere, an open terrace with sea views built in 1891, a late 19th century observation tower, shelters, a drinking fountain and a park keeper's lodge. There are also a number of memorials including the grade I listed Plymouth Naval War Memorial unveiled in 1924 and extended in 1954 and the grade II* listed Plymouth Armada Memorial erected in 1888 to mark the 300th anniversary of the Spanish Armada. The park also contains the grade I listed Smeaton Tower, the upper part of the former Eddystone Lighthouse of 1759 resited in 1882. The residential areas to the north-west and south-west of the park both contain listed buildings. To the south-west this is confined to numbers 23 to 39 Grand Parade, a terrace of 1860s houses.

In the north-west the streets were planned in the 1820s and 1830s by

Figure 8: Quality of the Built Environment Areas

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John Foulston, Plymouth's first town architect, and his partner and later successor George Wightwick and many of the houses are listed. The building form is mainly terraces but with a row of six villas in Lockyer Street. There are a number of listed houses of the period including the grade II* 1 The Crescent, grade II* listed 1 – 8 The Esplanade, Windsor Villas in Lockyer Street, 1 to 15 Alfred Street, and five groups of houses in Athenaeum Street. Development to the south of Citadel Road was mostly later with listed examples of houses on Citadel Road, Hollywood Place and overlooking the Hoe at 1 to 8 Elliot Terrace (grade II*) and the Grand Hotel. The terraces are of two or three stories plus attic and stuccoed. Detailing is generally quite plain but the Windsor Villas have balustrade parapets and console brackets supporting moulded hoods above the front doors and the windows in the central bays. The examples in Athenaeum Street have enclosed timber porches. The most ornate houses are 1 to 8 The Esplanade and 1 The Crescent, which have stucco detailing.

All four areas have buildings that make a positive contribution to the conservation area as shown in the CAMP. These include the Citadel Hill Laboratory of the Marine Biological Association, several elements of the foreshore to the east of Tinside Lido, the electricity substation in Hoe Park and several terraces in the residential areas. Modern, post war buildings are judged within the CAMP to be either neutral or negative, with the rear wing of the Marine Biological Association building; The Dome; Plymouth Register Office and the Plymouth Hoe Bowling Club pavilion in Hoe Park all rated as neutral and all modern residential properties rated as either neutral or negative.

Changes to the quality of the built environment of the Hoe Conservation Area since 2008.

No new listed buildings have been added to the area since 2008.

The Studio 5-11 slab block on Millbay Road was re-clad and given an active frontage after the CAMP was published and could now be considered a neutral rather than a negative building. The Hoe Court flats on Lockyer Street are not in keeping with the rest of the area, the use of brick in an area almost completely dominated by stucco is jarring. However, their staggered depth, strong rhythm and attractive front gardens suggest they should be assessed as neutral rather than negative influences. The terrace at 6-14 Alfred Street is let down by replacement doors and windows. However, their small scale, continuous porch roof, attractive front gardens with dwarf walls and their good state of repair make them a neutral rather than a negative influence on the streetscape. St Andrew's Church of England School on Citadel Road has little architectural merit but its low profile means it does not make a bold statement within the streetscape. The classroom accommodation to the rear is not unattractive. In common with many buildings of its age and type St Andrew's has acquired accretions which detract from its aesthetic. The blank wall of the building that obscures the front of the hall is part of this problem and a little planting in this area would do much to relieve the monotony.

Scope and Methodology

The current study is designed to complement the CAMPs by assessing the quality of the built environment in the two areas within the Neighbourhood area but outside the conservation areas. An initial meeting with the Neighbourhood Forum was used to gain information about positive and negative influences in the built environment of the areas and what elements of those areas could be improved upon. At this stage the Forum's willingness to take part in the data gathering process was confirmed. Subsequent work was undertaken using the guidance in Historic England's Neighbourhood Planning and the Historic Environment (HE2014) and Understanding Place: Historic Area Assessments (HE2017). Reference was made to the Oxford Character Assessment Toolkit when designing the survey together with the data presented in Plymouth City Council's CAMPs for the Hoe and Barbican Conservation Areas. Pro formas were designed using tick boxes (with room for extra comments) to facilitate the gathering of the maximum amount of data in the minimum time. In order to complement the quality of the built environment sections of the CAMPs, information was gathered for the following attributes of buildings within the two areas of study:

- Height;
- Use;
- Age;
- Features;
- Materials;
- Condition; and
- Overall effect on street.

In addition to tick boxes under each heading the pro formas included fields for 'Opportunities for Improvement' and 'General Comments.'

Volunteers from the Neighbourhood Forum familiarised themselves with the pro formas before undertaking the survey in the company of representatives of AECOM's landscape and heritage teams. Data from the completed pro formas was entered into spreadsheets and the following figures created in GIS; Land use (Figure 9); Building ages (Figure 10);Building heights (Figure 11); and Building quality (Figure 12).

Land Use (Figure 9)

Land use in both areas is predominantly residential, 80% in West Hoe and 45% in North of Hoe Park with some office use in West Hoe including the large Plymouth Marine Laboratory on Prospect Place, and some commercial use in North of Hoe Park. There are hotels and guest houses in both areas, primarily the Crowne Plaza and four guesthouses in North of Hoe Park and guesthouses in the streets at the southern extent of West Hoe. Each of the areas has an educational establishment, a nursery school in North of Hoe Park and Mayflower College, a school of English in West Hoe. There is one place of worship, the Saint Demetrios & Saint Nikitas Greek Orthodox Church in West Hoe, a public house, The West Hoe in West Hoe and a Territorial Army Centre with three buildings also in West Hoe. The only civic building in either area is an electricity sub-station in West Hoe.

Building Ages (Figure 10)

Buildings in the West Hoe area date mostly from the late 19th century at 73% of the total with no buildings predating 1850. 22% of the buildings date to the period 1950 to 2000 with some post 1945 infill. Buildings in the northern part of West Hoe, with the exception of houses at the west end of Walker Terrace and on Bishop's Terrace, West Hoe Road, date to the second half of the 20th century. In the North of Hoe Park area all the buildings, with the exception of Nos. 18, 18a and 18b Hoe Street which are remnants of the late 19th century street, date to the late 20th and early 21st centuries.

Building Height (Figure 11)

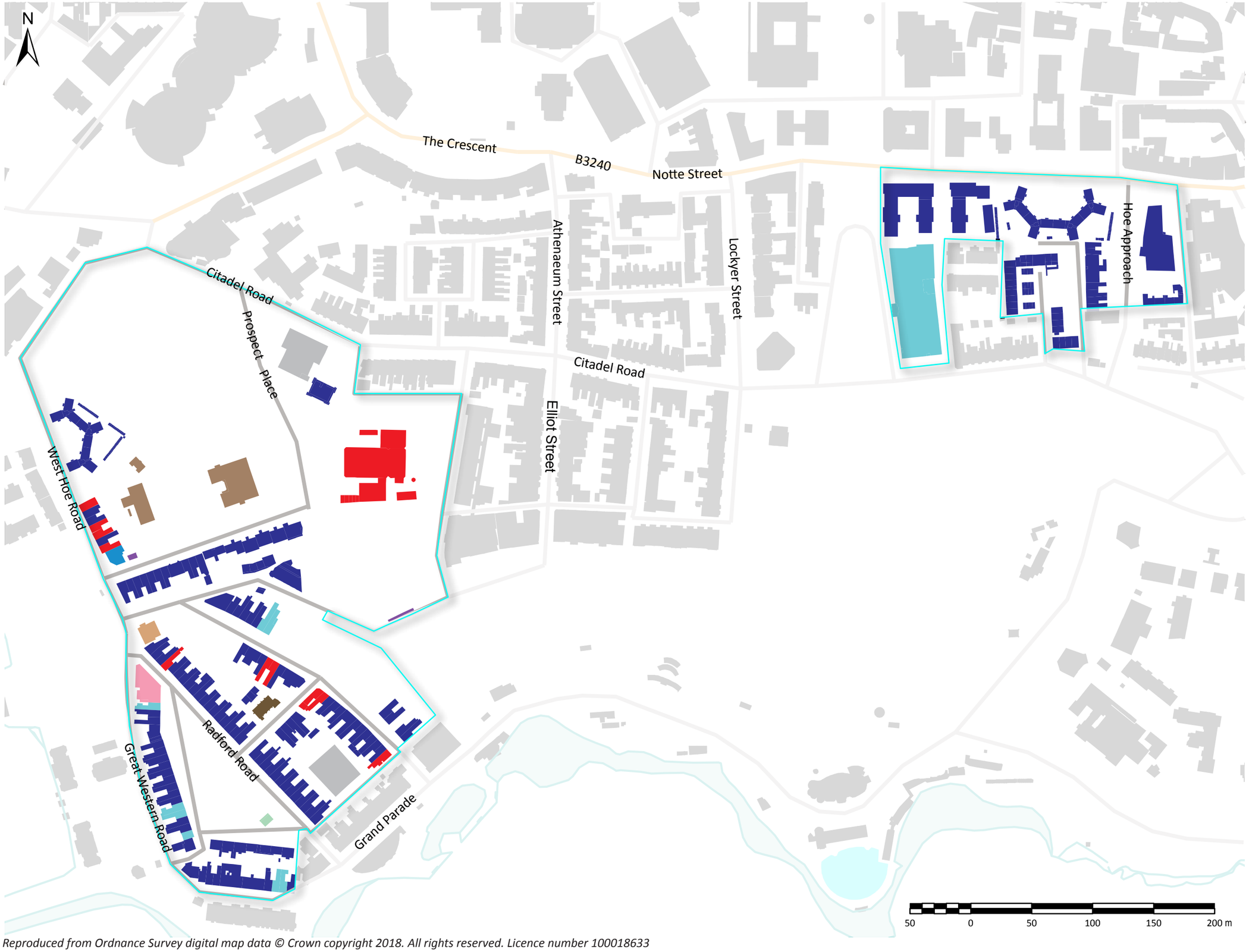
In West Hoe buildings are predominantly two storeys (20%) or three storeys (62%) high with 8% at four storeys and only Chichester House rising above six storeys. 12% of the building stock incorporates an attic. In North of Hoe Park building heights are more mixed, with 1-17 Hoegate Court, 65-159 Notte Street and the flats on Zion Street all at four storeys high and the towers of Astor House and the Crowne Plaza all above six storeys.

Building Quality (Figure 12)

In West Hoe just five buildings were judged to be of negative quality, these included Chichester House and its adjacent car park, two terraced houses on Pier Street that have been stone clad and clash with the stucco of their neighbours, and a car park in the gap behind the houses on Radford Road and Pier Street. 58% of the buildings in the area have a positive effect on the street while 42% are neutral. Positive buildings include the Plymouth Marine Laboratory on Prospect Place; the entirety of Bishop's Place apart from the West Hoe Public House; and other late 19th century terraces on Northumberland Terrace, Eddystone Terrace, Radford Road, Garden Crescent, and Pier Street. Of the relatively few modern buildings in the area the houses at Harmony Court on Cliff Road and flats at One Walker Terrace were judged to be of neutral quality while the flats at Trinity Place Cliff Road were positive. The former West Hoe Surgery at 2 Cliff Road has a neutral effect on the street. The local authority flats at 31-101 West Hoe Road were judged to be neutral as were the three buildings that comprise the Territorial Army Centre on Prospect Place. Most post war buildings built as infill in bomb gaps in the style of their neighbours were judged to have a neutral effect on the street due to the lack of quality and detailing when compared with their neighbours.

In North of Hoe Park 45% of the buildings have a positive effect on the street, 10% have a negative effect and 35% neutral. The Crowne Plaza and the flats on Zion Street being of negative quality, the two blocks of Astor House on Notte Street and Nos. 18, 18a and 18b on Hoe Street positive and 1-17 Hoegate Court, Hoe Street; ASA House on Hoegate Street; and the façade of the Zion Street flats facing Citadel Road neutral.

Land Use (Figure 9)



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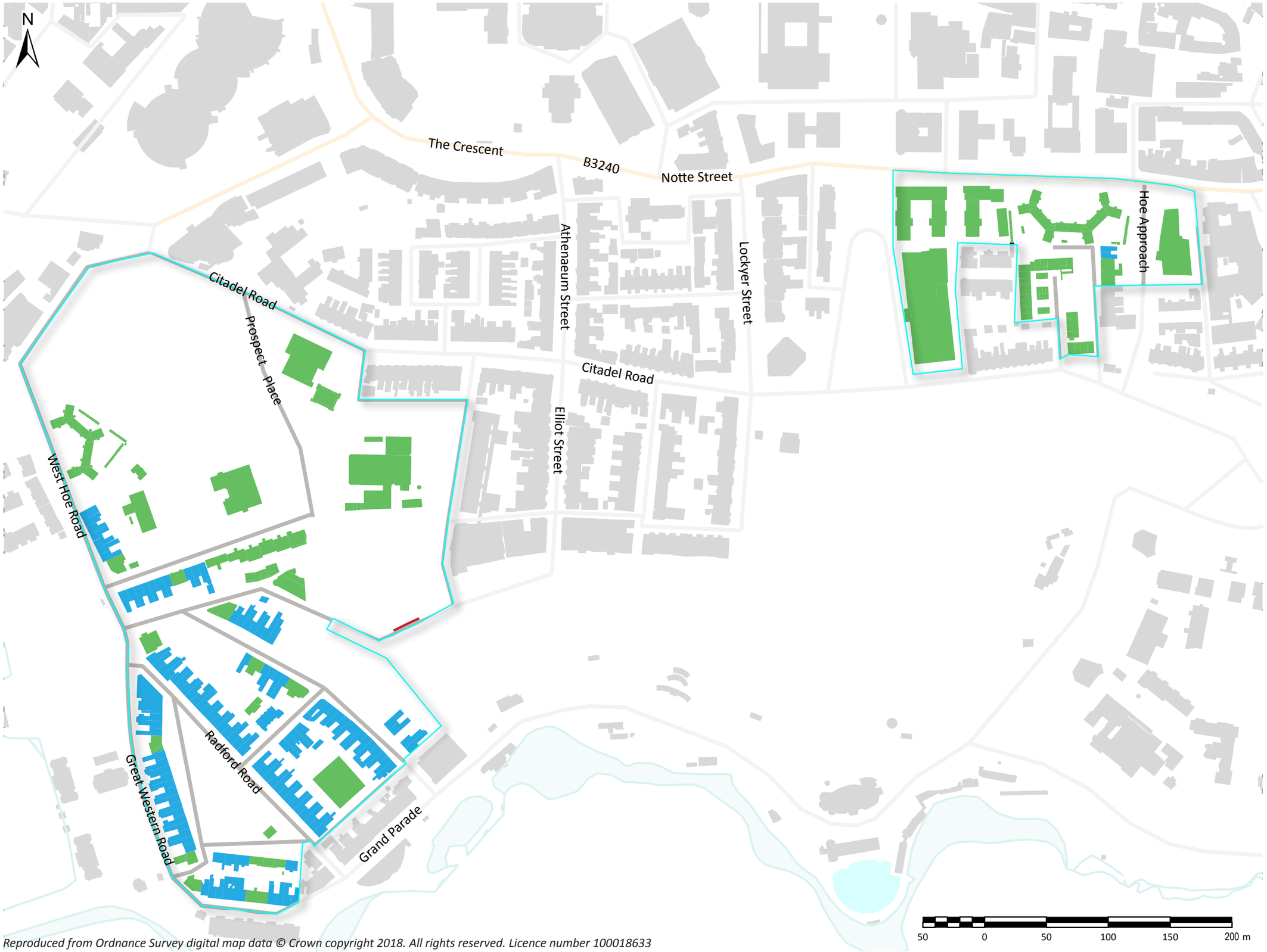
Building Ages (Figure 10)



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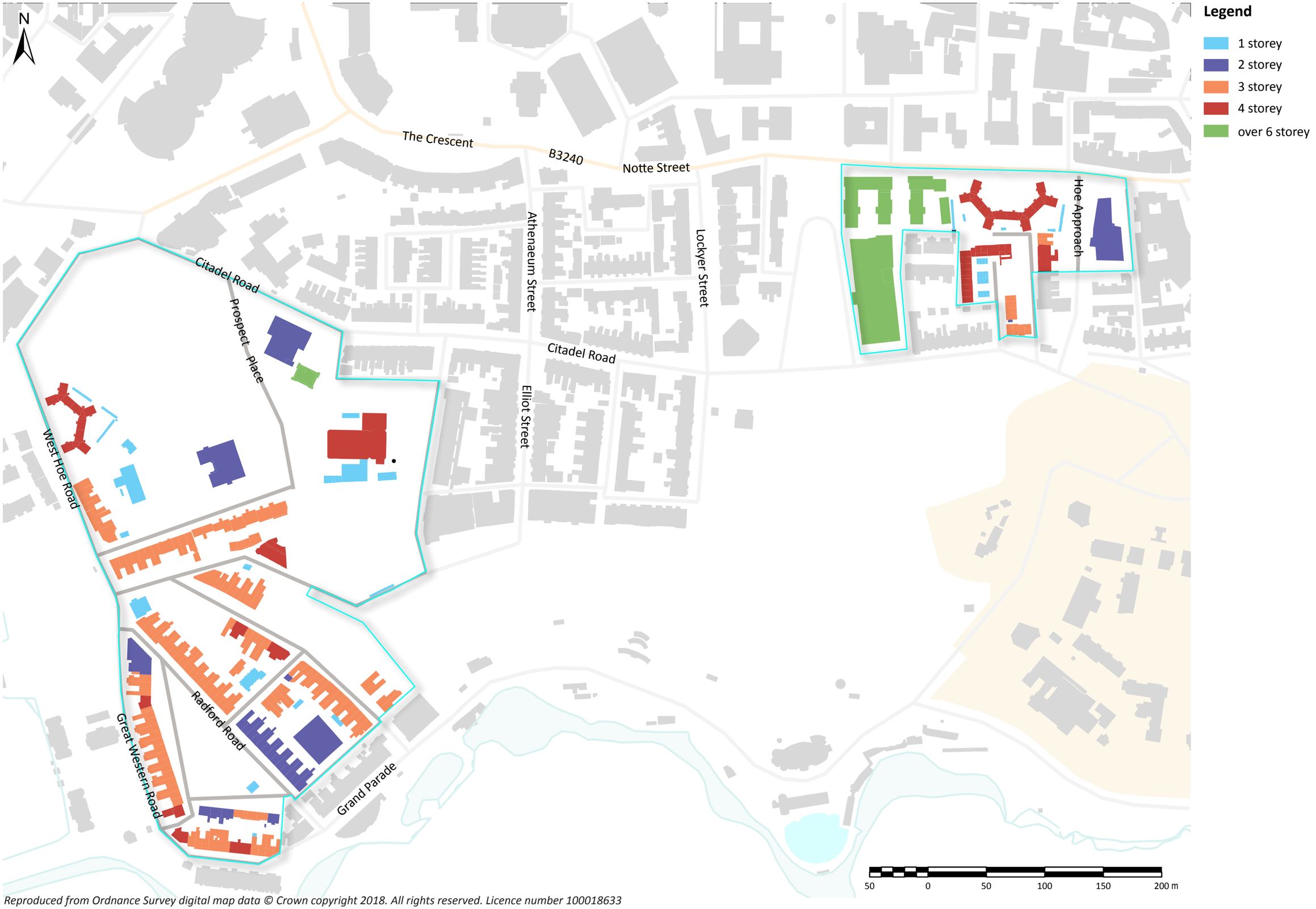
Building Heights (Figure 11)



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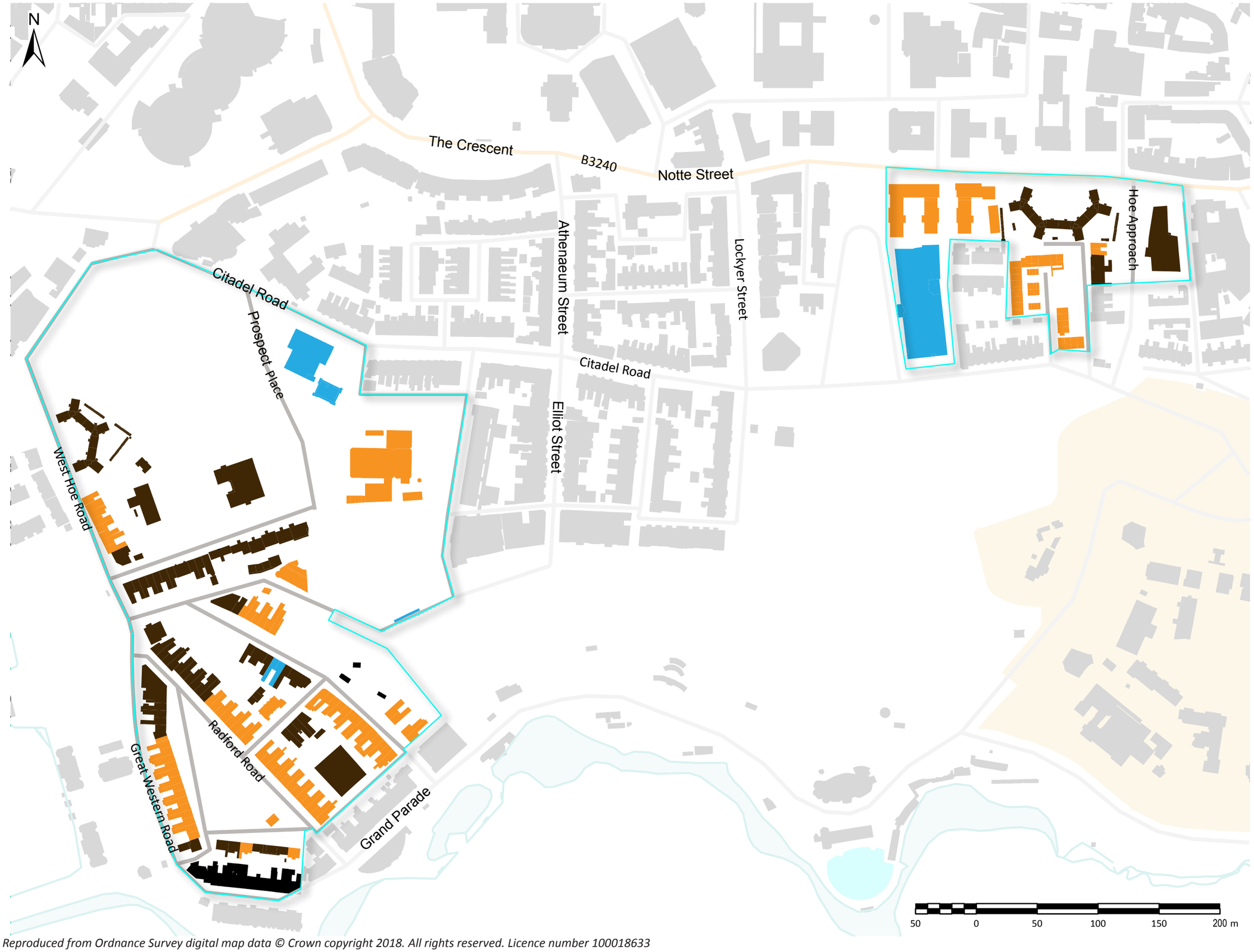
Building Quality (Figure 12)



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Other attributes of the built environment

North of Hoe Park

The greater variety and low number of building types in the area north of West Hoe Park makes it difficult to generalise about the attributes of its buildings. Buildings are of good or fair condition with no buildings in poor or very bad condition.

West Hoe

In general the condition of buildings in the area is good (44%) or fair (53%) with only 3% in poor condition. The majority of buildings (74%) are rendered with only 12% in unrendered brick and with only the walls of the two parks and the electricity substation on Walker Terrace built in stone. Roofs are mostly of slate at 90% of the total. Some metal rainwater goods remain but are outnumbered almost two to one by plastic replacements. Plastic windows are common at 76% of the total with only 6% of buildings retaining original timber frames. Doors have also been replaced with plastic and metal versions but timber doors remain in almost a third of properties. Original mouldings remain on many of the late 19th century terraced houses but are absent from the post war replica replacements. Where front gardens are present 60% of properties retain original dwarf walls and 60% of these retain railings or ironwork. By contrast only a quarter of these gardens are planted, the rest being paved or otherwise covered.

Summary

The overall condition of buildings in the two areas is fair to good, with the majority of buildings having an overall positive effect on the street scene. West Hoe especially has some good quality late 19th century terraces. The majority of the houses on Pier Street are in good or fair condition and have a positive effect on the street. The triangle formed by Radford Road/Northumberland Terrace, Garden Crescent and Eddystone Terrace is especially attractive with most houses retaining attractive plaster detailing to the front elevations and the whole of Northumberland Terrace retaining dwarf walls and ornate cast iron railings. Both Chichester House in West Hoe and the Crowne Plaza North of Hoe Park have negative effects and are too tall for their surroundings. Although modern buildings in both areas tend to have a neutral or even negative effect on the street scene there are exceptions. Both the Plymouth Marine Laboratory building on Prospect Place in West Hoe and the flats on Zion Street in North of Hoe Park are of interesting design and have a positive effect.



West Hoe Road



Radford Road



Central Road



Hoe Street

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Joint selling agents:
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4. Design Guidelines

Introduction

The guidelines developed in this document focus primarily on residential areas **(Area 1)** and general principles applied to the public realm **(Areas 1 and 2)**. Considerations of design and layout should be informed not only by the immediate neighbouring buildings, but also the character and context of the wider area as described in the above Character Assessment. Making positive, successful places is a result of a combination of factors including layout of streets, landscape, land uses and built form. New buildings should interact with the street and complement the existing character and heritage of the townscape. However, this should not preclude modern styles of architecture and building technologies, where they contribute positively and enhance the character.

Green and blue infrastructure provides a link between the natural and man-made features. It is the combination of these elements that provides a sense of place. Successful development will balance these needs and reinforce the distinctive “sense of place” of Plymouth Hoe, which is valued by the people that live, work and visit the area.

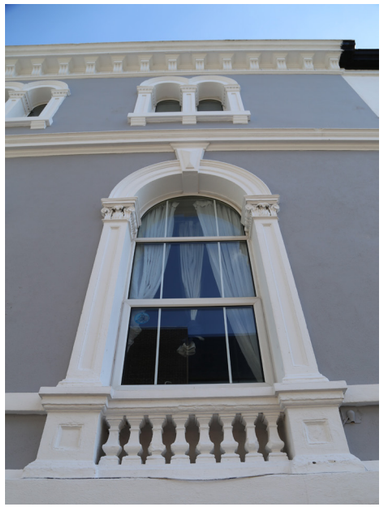
The following design guide consists of principles that development should adhere to, descriptions of how this can be achieved and provides a framework for place making. The principles can be applied to developments from simple renovations to new housing schemes. The design guide is sub-divided relevant to the Character Areas defined in the Character Assessment above. Additionally, a number of opportunity areas have been identified across the HNF where future development and management could have a positive impact on the character and setting of the area. Design principles have been provided specifically for each opportunity area.

Policies have been extracted from the Plymouth and South West Devon Joint Local Plan to highlight where the following design principles are aligned.









Area 1: Residential

As described in the Character Assessment this is a unique residential area set between a coastal landscape of Plymouth Sound and the city centre of Plymouth. This setting, combined with some of the only surviving Georgian townscape in the city results in a strong sense of place. Future development will be required to retain and enhance the distinct qualities of the area using the following principles as a guide.









Area 2: Hoe Park, Waterfront and Citadel

As described in the Character Assessment this area is rich with green infrastructure, historic associations, structures and monuments, within an exposed coastal setting. Features such as Hoe Park, The Citadel and monuments including Smeaton’s Tower and the Plymouth Naval Memorial all contribute to this unique location within the centre of Plymouth. The area provides a physical link between the coast and built up areas of the city centre and future development will be required to retain and enhance the unique qualities of the area using the following principles as a guide.

Street Scene and Public Realm

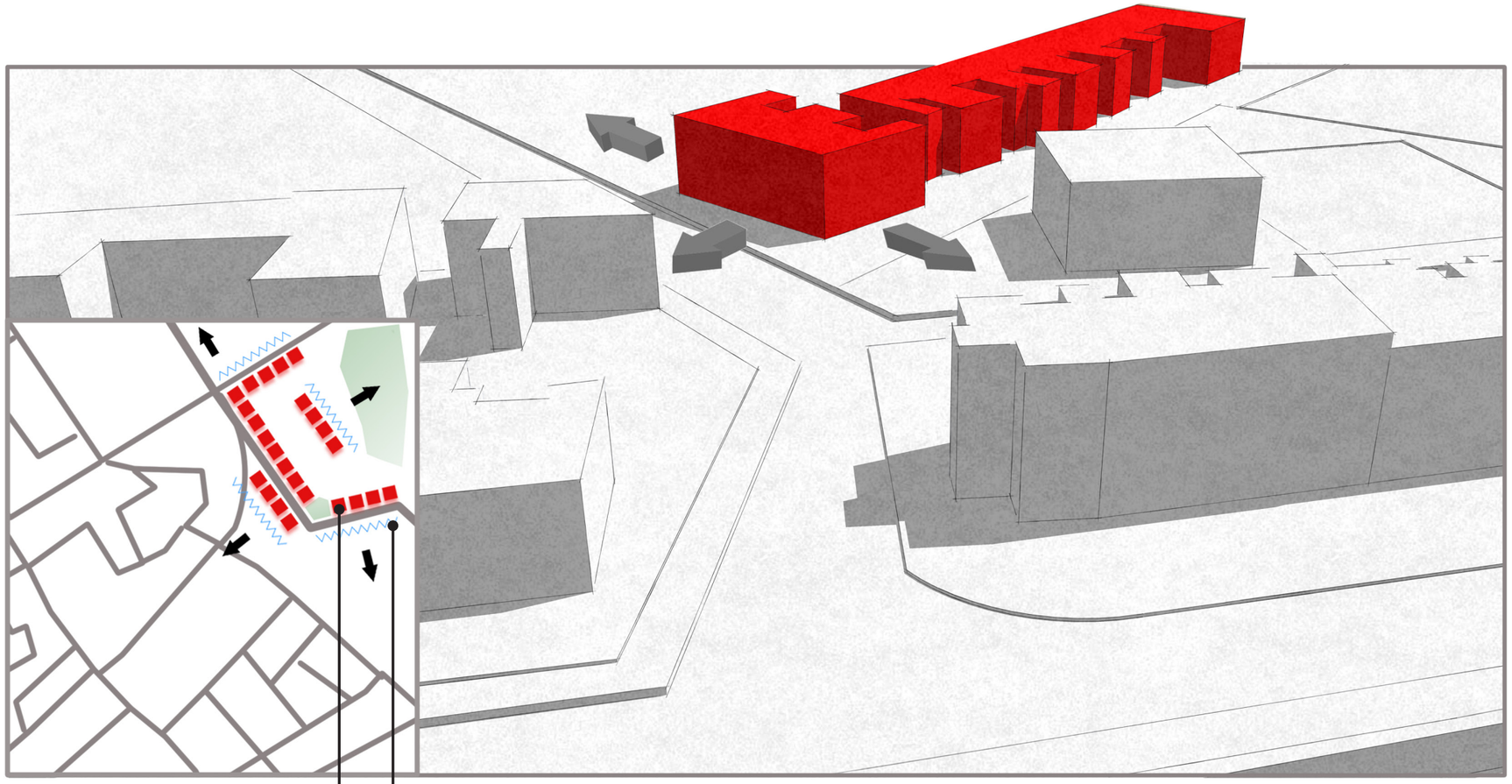
Area's 1 Residential and
Area 2 Hoe Park Waterfront and Citadel

The effective design of streets and public spaces provides the foundation for a successful townscape. Streets are the backbone of the community and if designed well can encourage social interaction and physical activity; provide meeting points for communities; add value to surrounding properties; and enhance the overall character of the area. The following principles are provided to guide the design of streets and the public realm within both **Areas 1 and 2.**



Design Element	Policy	Design principles	How to achieve this
Urban Structure	**Policy DEV20** **Having proper regard to the pattern of local development.**	Development should respond to the immediate context of the built environment with regard to building lines, frontages and distance from the road.	Careful masterplanning should pay attention to the back as well as the front of development to ensure it merges with existing built form. The incorporation of varied building typologies can enhance the character of development and reinforce the sense of place. Regular breaks in built form provide permeability and connections to public rights of way.
Enclosure	**Policy DEV20** **Having proper regard to the pattern of local development.**	The degree of openness or enclosure of development contributes to the sense of place.	Building density, height, boundary design and road width create street scene ratios which should be designed to a human scale. A combination of open areas and more enclosed spaces can add richness to development. Development proposals should include a range of spaces such as: squares, courtyards, avenues and streets.
Masterplanning	**Policy DEV10** **Delivering high quality housing. Housing development should be of a high quality in terms of its design and resilience, and provide adequate space to achieve good living standards.** **Policy DEV20** **Having proper regard to the pattern of local development.**	Masterplans should aim to integrate the movement framework corridors and provide networks that are self-policing and permeable.	Characteristics of clear, legible movement networks: Safe Attractive Legible connections to surrounding areas Way finding Connect to public transport Variety of routes Allow for various modes of transport including cycling, walking, bus etc.

Design Element	Policy	Design principles	How to achieve this
Development Edge	**Policy DEV20** **Having proper regard to the pattern of local development.**	Edges of urban development should be highly considered and designed to connect to surrounding development.	New development should engage with existing edges of development. Building elevations and orientation should project an attractive and positive frontage which relates to the surrounding context. Boundary design should promote new development integration and facilitate passive surveillance of surrounding streets to increase safety and security.



Development Edge

New development should engage with existing edges of development.

Building elevations and orientation should project an attractive and positive frontage which relates to the surrounding context.

Boundary design should promote new development integration and facilitate passive surveillance of surrounding streets to increase safety and security.

Design Element	Policy	Design principles	How to achieve this
Mixed use	**Policy SPT2: Have the appropriate level of facilities to meet the identified needs of the local community including...sport and recreation.**	Mixed use developments which increase the vibrancy of the area and create successful communities should be encouraged.	Support thriving economies by providing facilities such as local shops, cafes and doctors surgeries etc. and opportunities for employment. Facilities should be clustered and located at local nodes for ease of access. Different operating hours increase natural surveillance and sense of security.
Heritage	**Policy DEV20: Achieving a good sense of place and character through good utilisation of existing assets such as quality buildings, heritage assets, trees and landscape features and attention to the design details of the scheme.** **Policy DEV21: Conserving the historic environment: Protecting and enhancing the character and special interest of heritage assets and their setting.**	Development in sensitive areas, such as the Hoe Conservation Area, should use a similar design language realised with high quality materials to integrate with the surrounding townscape.	Potential elements for inclusion: • Masterplans should integrate heritage assets into the townscape, to reinforce a strong sense of place. • Redevelopment of historic buildings should be completed to a high standard, to preserve and enhance heritage assets.
Layout	**Policy DEV20** **Having proper regard to the pattern of local development.**	New development should respect and respond to the existing pattern of the built environment.	New street layouts within the Hoe conservation area should reflect the linear grid pattern of the existing planned townscape. Outside the Hoe conservation area new streets should be linear and utilize coastal views.
Density	**Policy SPT3: Provision for new homes.**	The density of new development should be appropriate to the site and the surrounding area.	Urban development found in this area can support higher densities and successful residential schemes should provide a good mix of dwelling types to support balanced and diverse communities. Tall and high density typologies are often better suited to busier areas, or end plots which frame and enclose development. High density buildings should also be located at important nodal points, support mixed use and thriving communities.
Design	**Policy DEV10** **Delivering high quality housing** **Housing development should be of a high quality in terms of its design and resilience, and provide adequate space to achieve good living standards.**	Streets should be designed to encourage active lifestyles.	The design of streets should provide many functions including a place to walk, cycle, play and spaces for social interaction. Street clutter, such as unnecessary road markings, signage or street furniture, should be minimised. Provide the minimum space for the carriageway to provide additional space for hard or soft landscaping.

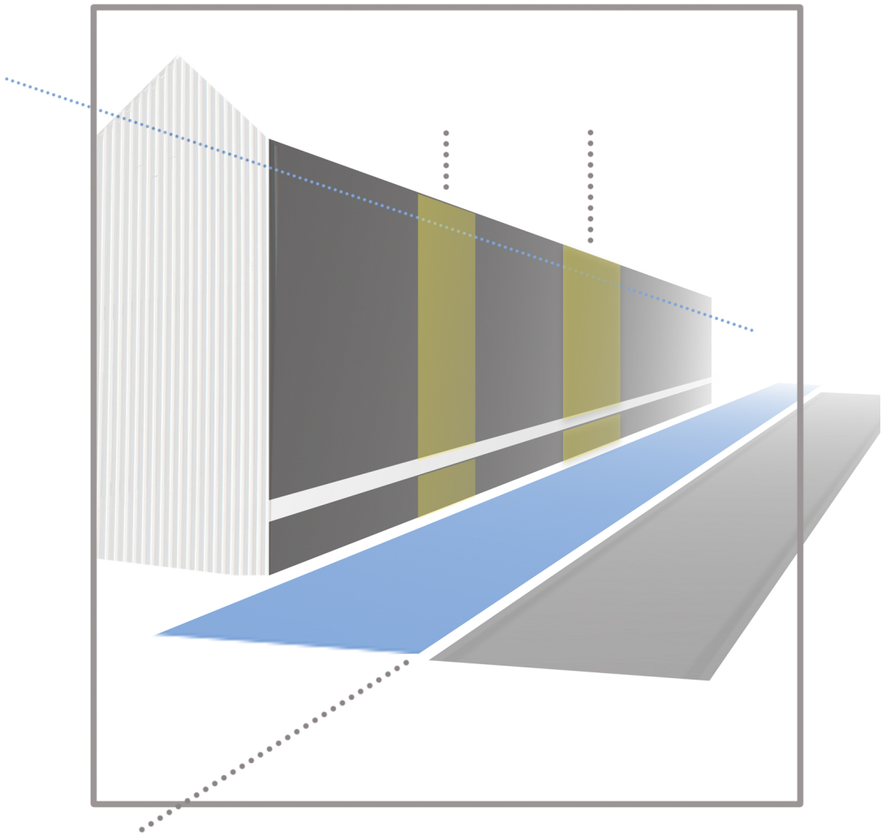
Building Line



Consistent building line along the street

Building Line

Architectural elements; depressions and protrusions break up the massing on long, straight streets



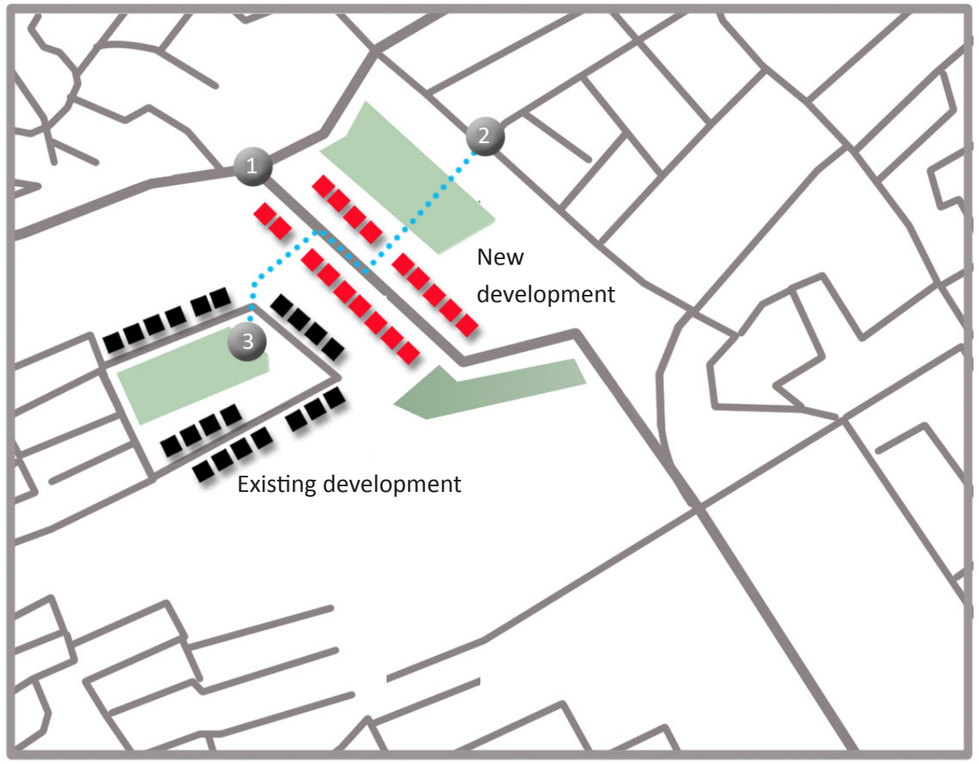
Streets should have provision for walking, cycling, play space and opportunities for social interaction

Design Element	Policy	Design principles	How to achieve this
Building Line	**Policy DEV20 Having proper regard to the pattern of local development.**	The set back of new buildings should respect the existing building line along the street.	Measured from the back of the pavement to the front elevation.
Architectural quality	**Policy DEV20: Achieving a good sense of place and character through good utilisation of existing assets such as quality buildings, heritage assets, trees and landscape features and attention to the design details of the scheme.**	Proposals should provide evidence of how new development has respected the local context and how it will reinforce and enhance the local identity.	Evidence will include whether the design and materials used, the amount and type of decoration and functional elements such as the position and type of doors and windows, flues, chimneys, gutters and flashings has been considered to reinforce or complement local character.

Design Element	Policy	Design principles	How to achieve this
Permeability	**Policy SPT1: A society where sustainable and health promoting transport options are available; Policy SPT10: Balanced transport for growth and healthy and sustainable communities.**	Primary streets should be legible, allowing for multiple connections and a choice of routes. New development needs to integrate in a way that connects to the existing network, respects the historic, ecological and culturally important landscape and provides sufficient space for people and wildlife.	Developments should be encouraged to enhance permeability through the area, incorporate high quality public realm and provide opportunities for green infrastructure. Pedestrian and cycle friendly environments to reduce the need to travel by car should be encouraged.
Boundary treatment	**Policy DEV20: Achieving a good sense of place and character through good utilisation of existing assets such as quality buildings, heritage assets, trees and landscape features and attention to the design details of the scheme.**	New development should use boundary treatments which are common or complimentary to the street. Boundary treatments define public and private space and contribute to the character of the public realm. Uncoordinated boundary treatments that are out of character with the wider area can fragment the unity of the public realm. Boundary treatments reinforce the continuity of the building line.	Boundary treatments will vary but these should be of high quality materials. Boundary treatments facing the street and public areas should reflect the best examples in Plymouth; for example, dwarf walls made of Plymouth limestone or granite, ironmongery, well maintained hedgerows or a combination of these. Modern materials that complement the street scene may be appropriate where they enhance the local character. The use of low quality materials in these publicly visible boundaries should be avoided. Boundary treatments provide enclosure to the street and give a degree of structure. In the Neighbourhood area this is important both at the front and rear façades.

Permeability

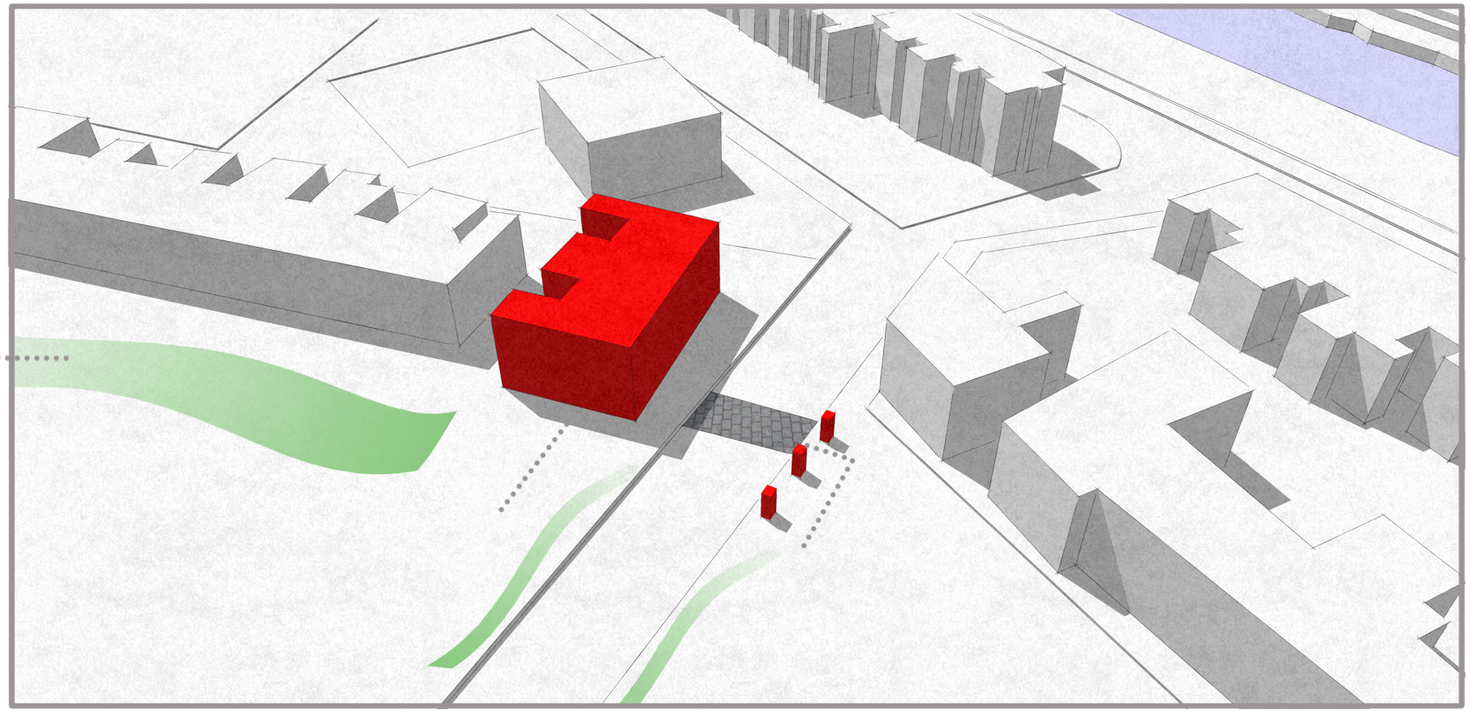
1. Connections to transport network
2. Existing footpath
3. Pedestrian links connecting new and existing development



New development should increase the permeability within the area. Links to existing footpaths and cycle routes will integrate new development into the surrounding built form.

Gateways/Arrival points

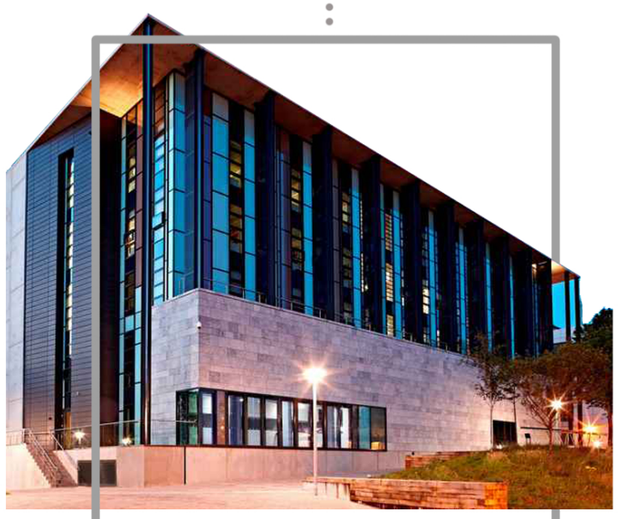
Incorporate areas of green infrastructure .....



Areas which warrant an emphasised 'arrival point' such as conservation areas, should include elements which improve the visual legibility of the 'arrival'. Landmark buildings, subtle changes in paving or road detail and signage, can all help to improve legibility.

Design Element	Policy	Design principles	How to achieve this
Gateways/Arrival points	**Policy DEV20: Enhancing the appearance of key gateway locations and routes into Plymouth and the main towns.**	New development should include elements which provide a sense of arrival and identity.	Design proposals should consider placing gateways, built elements and landscape features to highlight the access or arrival points of a new development. Gateway buildings should reinforce local character.
Road Surface	**Policy DEV20: Achieving a good sense of place and character through good utilisation of existing assets such as quality buildings, heritage assets, trees and landscape features and attention to the design details of the scheme.**	Materials used in road surfacing should complement the built form and local vernacular.	Historic cobblestone is widespread in the area. In high traffic areas these have been covered with asphalt. New development should specify high quality surface materials with particular attention given to gateways and nodal points.
Materials	**Policy DEV20: Achieving a good sense of place and character through good utilisation of existing assets such as quality buildings, heritage assets, trees and landscape features and attention to the design details of the scheme.**	Materials used in new development should complement the materials typical of the existing buildings in the street, the streetscape or the existing building in the case of extensions.	Materials such as Plymouth limestone, granite and render that are widespread in the area should be used in new development. Materials that are durable, high quality and easy to maintain are preferable. Modern materials that complement the street scene or traditional materials in a contemporary manner, may be appropriate where they enhance the local character.

Contemporary use of Plymouth Limestone

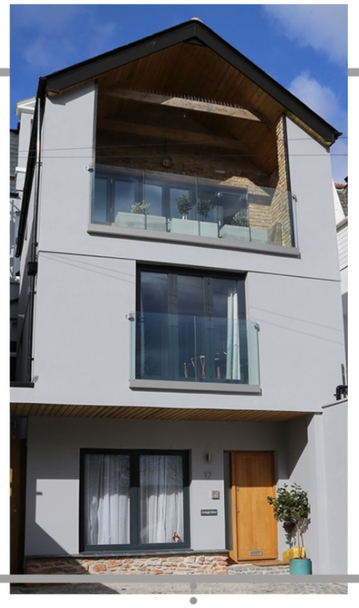


Metal facade



Stone rubble wall





Contemporary detailing



High quality detailing



Cobbles/granite kerbs

Design Element	Policy	Design principles	How to achieve this
Landscape Structure	**Policy SPT1 3: A sustainable environment;** **Policy SPT12 5: Strategic green infrastructure sites and a functional network of greenspaces which meet the needs of local communities and help to manage recreational impacts on European Sites and enhance the natural environment.**	A landscape-led approach to masterplanning will integrate new development into the townscape.	Potential elements for inclusion: • Integrated Sustainable Urban Drainage Systems (SUDS); • Well-designed public realm and open space elements to encourage resident interaction and provide a destination for visitors; • Green infrastructure networks which connect to existing ecological corridors and provide good pedestrian and cycling links; • Retention of key views; • Contemporary amenity planting including species selections appropriate for the coastal location.
Green infrastructure	**Policy SPT1 3: A sustainable environment;** **Policy SPT12 5: Strategic green infrastructure sites and a functional network of greenspaces which meet the needs of local communities and help to manage recreational impacts on European Sites and enhance the natural environment.**	Developers should work closely with the local authority early in the design process to identify green infrastructure needs, design and long term management.	Green infrastructure proposals should be: • Effective and robust, underpinned by a network of well-maintained, connected and biodiverse spaces. Strategically designed into new development these spaces will require continued investment and management to ensure that benefits are maximised. • Biodiverse, green infrastructure in urban areas, for example reed beds and green/ brown roofs, can improve water quality by reducing diffuse pollution through enhanced sediment retention.
Open space standards	**Policy DEV29** **Green and play spaces.**	New development should design public realm to meet the necessary standards to allow adoption by the HNF.	Open spaces should be located in accessible places. Where possible and practical they should be surrounded by properties facing onto them to improve natural surveillance. Open spaces should offer a variety of uses related to surrounding activities and buildings
Open space standards	**Policy DEV20** **Green and play spaces.**	New development should provide sufficient open space for the incoming population.	All new development of 11 homes or more will be required to provide open space in line with the Fields in Trust population benchmarks. Where development cannot provide open space provision on site, an equivalent contribution will be required to help create, enhance and manage other spaces to demonstrate that the additional pressure on open space from the growth can be sustained.
Health	**Policy DEV1** **Protecting Health and amenity.**	Providing a healthy environment and wildlife rich green spaces for local residents will result in individual and community health benefits.	Potential benefits include: Healthier air from tree planting; and Reduction in noise pollution through the buffering of sound with vegetation.

SuDS in the Public Realm

One of the biggest drivers for increasing green infrastructure in the public realm is to support the sustainable management of surface water, by slowing the flow of water to the sewer network and cleaning the surface water before discharging into the natural environment through SuDS. There are a wide variety of different types of SuDS including those that promote infiltration into groundwater, attenuation to slow the flow of movement and conveyance in order to move water around. SuDS can also be delivered on almost all sites through careful design, including steep or shallow gradient sites and even contaminated sites. Ideally SuDS should be used in conjunction with each other. This is known as the 'SuDS train' and improves the performance of the overall network.

The illustration to the right from CIRIA's 'Planning for SuDS' highlights how SuDS can be integrated into the urban environment.

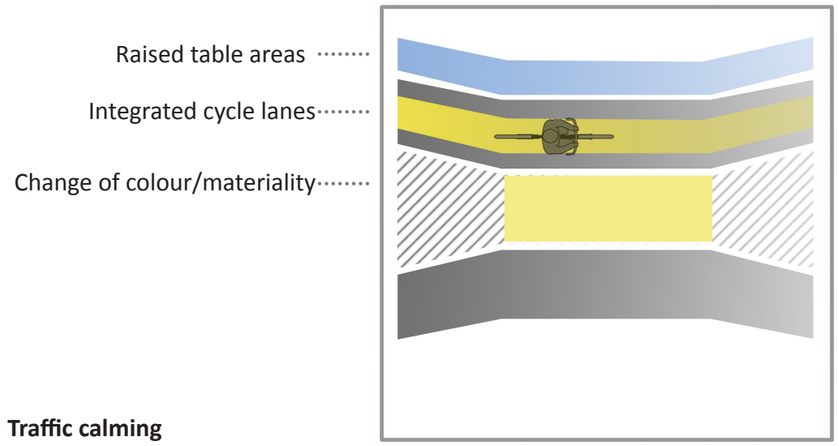


1. Urban square with permeable paving
2. Retention pond with integrated seating
3. Rill within pedestrianised street
4. Brown roof
5. Planted road-side bioretention strips
6. Retention basin / infiltration trench
7. Green roof
8. Micro-wetland
9. Filter strip and retention
10. Permeable paving in residential street
11. Roadside bioretention tree pits
12. Large naturalised swale
13. Wetland
14. Natural waterway
15. Water butt

Design Element	Policy	Design principles	How to achieve this
SuDs	**Policy SPT1 3: A sustainable environment; Policy SPT12 5: Strategic green infrastructure sites and a functional network of greenspaces which meet the needs of local communities and help to manage recreational impacts on European Sites and enhance the natural environment.**	SuDs sustainable urban drainage should: • Improve water quality by reducing diffuse pollution through enhanced sediment retention. • Be integrated into the scheme early in the design stages. • Create multifunctional benefits for residents and ecology.	Development should take a strategic, integrated approach to managing water that makes best use of green infrastructure led SuDS and identified opportunities for water reuse. Developments should be encouraged to propose biodiverse SuDs, including reedbeds and green/brown roofs to improve water quality and reduce pollution. Measures to manage water should be designed to maximise biodiversity benefits. Incorporate appropriately sized SUDs features such as: • Attenuation ponds • Swales • Rain gardens
Trees	**Policy SPT1 3: Adverse environmental impacts of development are minimised and effectively mitigated where unavoidable; Policy PLY28 8: Tree planting on the sites street frontages and open spaces; Policy DEV30: Trees, Woodlands and hedgerows.**	Where new development is proposed, there should be no net loss of moderate and high qulaity trees and at least two trees shall be planted for each tree lost. Where this is not appropriate plant in nearby open space.	• Trees and shrubs should be planted where locally appropriate to draw new development into the existing townscape setting. • Where trees cannot be planted in the footway make use of nearby open space • New trees should be planted with a diverse palette to provide resilience and mitigate future biosecurity impacts. • Where space allows, large growing species should be used to provide benefits from the largest canopy cover.

Design Element	Design principles	Design principles	How to achieve this
Traffic Calming	**Policy PLY27 5: Innovative car parking solutions to reduce the visual impact of vehicles on the public realm.** **Policy SPT9: Strategic principles for transport planning and strategy.**	Traffic calming measures should be incorporated into new development proposals.	Traffic calming measures should be integrated within the design of the streets rather than a later addition. Design solutions should include: • Shared surfaces; • Variety in the alignment of the street; • Use of tight corners at junctions; • Narrow carriageways; • Raised table areas at junctions and nodal points; and • Changing colour/materials.
Parking	**Policy PLY27 5: Innovative car parking solutions to reduce the visual impact of vehicles on the public realm.**	The design of parking areas should be appropriate to the scale and location of the residential development.	Permeable material solutions should be used to surface parking areas to allow natural drainage.
Off-street parking	**Policy PLY27 5: Innovative car parking solutions to reduce the visual impact of vehicles on the public realm.** **Policy SPT9: Strategic principles for transport planning and strategy.**	The inclusion of off-road parking concepts which minimise street level clutter and enhance pedestrian safety. Off street car parking should be well designed and appropriate for the space.	Off street parking should: • Provide good inter-visibility to promote security. • Ensure footways are clear at all times. • Break parking into blocks to promote opportunities for pedestrian movement. • Where on-street parking is a necessity, ensure regular breaks to facilitate safe crossing points with good visibility.
Car Parking	**Policy PLY27 5: Innovative car parking solutions to reduce the visual impact of vehicles on the public realm.** **Policy SPT9: Strategic principles for transport planning and strategy.**	Car parking and service areas should be considered in context to ensure the most successful outcome can be delivered in each case. In terms of parking, there are many different approaches that can support successful outcomes, such as on-street parking, in-curtilage parking and basement parking.	Car parking solutions should be a mix of on plot, on street (where permissible) and parking courts. Car parking design should be combined with landscaping to minimize the presence of vehicles. Front of property car parking should be kept to a minimum. When placing parking at the front, the area should be designed to minimise visual impact and to blend with the existing streetscape and materials. The aim is to keep a sense of enclosure and to break the potential of a continuous area of car parking in front of the dwellings by means of walls, hedging, planting and use of paving materials. Natural surveillance of parked cars is an important consideration.

Car parking solutions should be a mix of on plot, on street (where permissible) and parking courts. Car parking design should be combined with landscaping to minimize the presence of vehicles.



Traffic calming

Design Element	Policy	Design principles	How to achieve this
Shared Surfaces	**Policy SPT9: Strategic principles for transport planning and strategy.**	Shared surfaces should be used for lower order streets to reduce the speed of traffic.	Design solutions include: • Combining footway and carriageway on the same level or in the same material. • Use tactile material, street furniture, trees and lighting instead of road markings.
Local open spaces	**Policy SPT1 2: A sustainable society;** **Policy DEV29: Green and play spaces.**	Pockets of green space should have a specific role or function to avoid wasted and unused land.	Local open space should make a positive contribution towards the townscape through: • Landscape design, including materials, trees, vegetation and street furniture. • Link spaces to provide stepping stones for wildlife. • Variations in scale and enclosure of the open space contribute to character.
Inclusive design	**Policy SPT1 2: Equality of opportunities, freedom from discrimination and fair access to facilities and services are provided for all;** **Policy SPT2 8: Have services and facilities that promote equality and inclusion and that provide for all sectors of the local population:** **Policy TTV30: Empowering local residents to create strong and sustainable communities.**	The built environment should be designed to be accessible and inclusive to all users. Development should support a variety of users with streets and public spaces designed to encourage social interaction.	Inclusive design principles include: • Consideration to the diversity of people using a space. • Safety and convenience. • Inclusive design should be set out in the Design and Access Statement. • Design should be in accordance with British Standard BS 8300-2:2018: Design of an accessible and inclusive built environment. Buildings. Code of practice. • A high level of accessibility for all development is a core principle for inclusive design. Ensure paving and surface materials are appropriate and safe for a variety of users. • Visual and non- visual prompts such as textured warning on pavements at crossings should be carefully designed into development to aid orientation for all abilities. • Tree pits in the public realm should sit flush to the surface to avoid trip hazards. • Public spaces should be designed to stimulate all the senses including the use of texture, smell and colour.
Playspace	**Policy DEV29: Green and play spaces;** **Policy DEV 3: Sport and Recreation.**	Space for play should be incorporated at appropriate locations within the streetscape to encourage play and social interaction.	The location of play spaces should be determined by: • Needs based assessment • Age of children and size of facility • Proximity to existing residential development Design of play spaces should consider: • Accessibility • Inclusivity • Learning and development
Views	**Policy PLY21: Supporting the visitor economy.**	Development should make the most of existing landmarks and views.	• Retain the keys views of the coast and local landmarks along existing streets. • Provide views in new development to secure through views towards the waterfront and landmark buildings.

Public benches



High quality bollards



Integrated bin stores





Balustrade



Signage/wayfinding



Contemporary features in the public realm





Sculpture





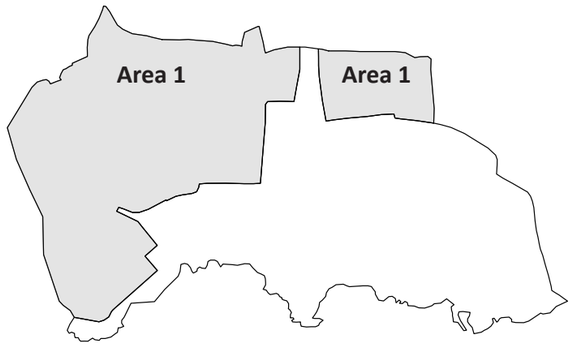
Public art

Design Element	Policy	Design principles	How to achieve this
Street furniture	**Policy SPT12: Strategic infrastructure measures to deliver the spatial strategy.**	Street furniture, such as benches and litter bins in the public realm should complement the local vernacular.	Design and location of street furniture should: • Complement the historic setting of the Hoe; • Be considered in the early stages of masterplanning design; • Contribute to the safety and security of the area; • Be consistent throughout the area; • Seating should be provided in locations where people are encouraged to gather; • Seating should be provided at regular intervals along streets to provide assistance for people who have limited mobility to access community and retail services; and • Be well designed, respect the local vernacular and be robust.
Lighting	**Policy DEV20: Place shaping and the quality of the built environment.**	Lighting design should complement the Historic setting of the Neighbourhood area.	Lighting schemes should: • Complement the historic setting of the Hoe; • Be considered in the early stages of masterplanning design; • Contribute to the safety and security of the area; • Be consistent throughout the area; • Be well designed, respect the local vernacular and be robust; and • Be energy efficinet, respect wildlife and consider light pollution.
Public art	**Policy DEV20: Place shaping and the quality of the built environment;** **Policy PLY20 3i: Delivering high quality and integrated public realm improvements, including public art, as well as making good use of waterfront public spaces, cultural events and festivals.**	Public art that responds to the context of its location should be encouraged to enhance the sense of place.	Public art should be: • Positioned at gateways and nodes to provide a sense of place and arrival; • Reflective of the history, culture and community within the Neighbourhood area; • Well designed, respect the local vernacular and be robust; and • Consider initiatives such as a citywide art trail.

Buildings

Area 1 Residential

The form, proportions and scale of buildings strongly influence the character of an area. New building designs should respond to their context and contribute positively to the sense of place. However, it is also important that by responding to the existing character this does not result in pastiche design and low quality replicas. Contemporary design solutions should be encouraged that have a thorough architectural quality that both responds to and enhances the local vernacular. The following design principles offer guidance for the design of new buildings, renovations and extensions to existing properties in **Area 1.**



Area covered in this section.









The design principles in this section relate to Policy DEV20 of the Plymouth South West Devon Joint Local Plan (Submission)

Policy DEV20

Place shaping and the quality of the built environment

Development proposals will be required to meet good standards of design, contributing positively to both townscape and landscape, and protect and improve the quality of the built environment through:

1. Creating a positive legacy of decisions by ensuring that the lifetime of buildings, the quality of design, the resilience of the materials and opportunities to achieve a sustainable resource efficient design have been considered. Larger scale development should seek to address Building for Life criteria or a similar design framework.

2. Having proper regard to the pattern of local development and the wider development context and surroundings in terms of style, local distinctiveness, siting, layout, orientation, visual impact, views, scale, massing, height, density, materials, detailing, historic value and character, and the demands for movement to and from nearby locations.

3. Achieving a good quality sense of place and character through good utilisation of existing assets such as quality buildings, heritage assets, trees and landscape features and attention to the design details of the scheme. Masterplanning approaches will be strongly encouraged for major schemes.

4. Delivering building design that is distinctive to the place where it is located.

5. Delivering landscape design that is appropriate to the location of the development, with full consideration given to its future management and maintenance and the need for landscape measures that are resilient.

6. Ensuring that the layout and details of new development adequately contribute towards high standards of community safety and reduce opportunities for crime and fear of crime.

7. Rectifying and repairing damaged environments and townscapes.

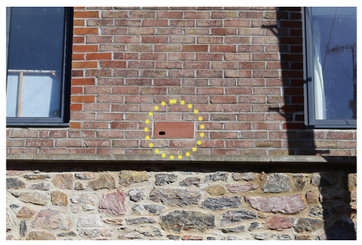
8. Enhancing the appearance of key gateway locations and routes into Plymouth and the main towns.

9. Integrating public art into proposals for major developments in Plymouth. Artists should be engaged in the process at an early stage, when the design brief is being scoped. The use of public art will be particularly promoted in strategically important gateway locations for Plymouth and in the city's core tourism area, including the City Centre.

Layout and Grouping

Design Element	Design principles	How to achieve this
Groups	New development should be designed in small groups.	The groupings should be predominantly terraced properties with limited groups of detached properties. The use of a repeating type of dwelling along the entirety of the street should be avoided. It is suggested, however that small clusters of terraces could be used in groups.
Terraced properties	Terraced properties strongly contribute to the character of the Neighbourhood area. Terraces are devoid of any unnecessary decoration and laid out with a particular emphasis on repetition and uniformity. Replacement dwellings, alterations to existing properties and new developments should be carefully designed to retain the continuity and repetition present in the streetscape.	The proportions of proposed terraced houses should relate to adjacent houses of the same building type. Proposals for extensions or alterations to existing terraced houses must demonstrate a respect for the existing level of detailing displayed in the original buildings in the area.
Boundaries	Boundaries of properties should enhance the character of the street scene and provide a physical connection between the property and the street.	Boundaries such as stone walls, rendered walls and iron railings are common in the neighborhood area and should be chosen for new development based on whichever is appropriate to the street. Boundary treatments should enclose and define each street along the back edge of the pavement, adhering to a consistent building line for each development group. Boundaries on the backs of properties should also be designed to provide structure and enclosure to the small, narrow streets and provide screening for bin storage and areas of driveway for parking.
Apartments	Apartment buildings should respond to the context of their setting and provide adequate legibility.	Apartment designs should consider the scale and context of surrounding buildings to draw inspiration. The height of apartment buildings will vary in the context of the HNF but should be appropriate to their surroundings. Designs should avoid being bulky and provide natural light and ventilation.
Private gardens	Where appropriate small private gardens should enhance the character of the street scene and provide a physical buffer between the property and the street.	On streets where existing gardens are present, properties should provide the appropriate rear and front gardens. Existing gardens and the mature vegetation within them should be retained to ensure that buildings where appropriate have an attractive, verdant setting. Where the provision of a front garden is not possible, a small vegetated border or patio should be encouraged to soften the hard materials within the streetscape. Planting palettes in private front gardens should be designed to complement the coastal context of the area (See planting palette). Vegetation and trees should be retained where possible Proposals for new development which affect the front of properties should be accompanied by detailed plans which show a commitment to providing attractive, well-vegetated gardens. However, in locations where front gardens are not present and properties front the street this should be reflected in new development. Opportunities should then be explored to design gardens internally to blocks.





Example here shows a discrete detail which incorporates ecology boxes into the building's facade

Existing gardens and the mature vegetation within them should be retained to ensure that buildings where appropriate have an attractive, verdant setting.

Planting palette

A palette has been provided to guide planting for small residential gardens located in coastal areas. The palette is appropriate for both residential gardens and small gardens throughout the Hoe Neighbourhood Area. For trees in open space see Tree Value and Ecosystem Services Assessment (Appendix B).

Trees in high exposure



Latin Name	Common Name
Cratagus monogyna	Hawthorn
Acer pseudoplatanus	Sycamore
Cupressus macrocarpa	Monterey Cypress
Hippophae rhamnoides	Sea Buckthorn
Prunus spinosa	Blackthorn
Tamarix tetandra	Tamarix

Trees slightly back from coast



Latin Name	Common Name
Acer platanoides	Norway Maple
Arbutus unedo	Strawberry Tree
Betula pendula	Birch
Betula Utilis	Himalayan Birch
Ilex aquifolium	Holly
Sorbus aria	Whitebeam
Sorbus aucuparia	Rowan

Shrubs exposed



Latin Name	Common Name
Berberis sp	Barberry
Elaeagnus × ebbingei	Ebbinge's silverberry
Euonymus japonicus	Spindle tree
Lonicera nitida	Wilson's honeysuckle
Lonicera pileata	Honeysuckle
Olearia macrodonta	New Zealand Holly
Olearea phlogopappa 'Comber's Blue'	Dusty Daisy Bush
Pyracantha Orange Glow	Firehorn
Rhamnus alaternus 'Argenteovariegata'	Italian Buckthorn
Rosa rugosa	Japanese Rose
Rosa spinosissima	Scotch Rose
Sambucus nigra	Elderberry
Sambucus racemosa	European Red Elder
Ceanothus Blue Sapphire	Californian Lilac

Shrubs slightly back from coast



Latin Name	Common Name
Choisya ternata	Mexican Orange Blossom
Cistus × cyprius	Common Gum Cistus
Escallonia 'Apple Blossom'	Apple Blossom
Genista lydia	Lydian Broom
Griselinia littoralis	Broadleaf
Hibiscus syriacus	Hibiscus
Hebe salicifolia	Koromiko
Lavandula Stoechas	French Lavender
Phlomis fruticosa	Jerusalem Sage
Perovskia atriplicifolia	Russian Sage
Phormium tenax	New Zealand Flax
Pittosporum tenuifolium	Black Matipo
Rosmarinus officinalis	Rosemary
Viburnum davidii	David Viburnum

Perennials and grasses slightly back from coast



Latin Name	Common Name
Achillea sp	Yarrow
Agapanthus sp	African Lily
Echinops bannaticus	Globe Thistle
Geranium sanguineum	Bloody Cranesbill
Kniphofia sp	Red Hot Poker
Rudbeckia sp	Black Eyed Susan
Sedum telephium	Orpine Purple Emperor
Verbena bonariensis	Argentinian Vervain

Climbers slightly back from coast



Latin Name	Common Name
Hydrangea petiolaris	Climbing hydrangea
Jasminum beesianum	Crocus
Jasminum officinale 'Argenteovariegatum'	Jasmine Argenteovariegatum
Parthenocissus quinquefolia	Virginia Creeper
Passiflora caerulea	Blue Passion Flower
Hedera helix	Common Ivy
Trachelospermum jasminoides	Confederate Jasmine

Grasses



Latin Name	Common Name
Cortaderia selloana	Pampas Grass
Elymus hispidus	Magellan Rye Grass
Festuca amethystina	Tufted Fescue
Helictotrichon sempervirens	Blue Oat Grass
Miscanthus sinensis	Chinese Silver Grass
Pennisetum alopecuroides	Chinese Fountain Grass

Building Line and Boundary Treatment

Design Element	Design principles	How to achieve this
Scale, height, massing	New development will be more likely to integrate successfully with the settlement if the scale, height and massing of new buildings demonstrate consideration for the context of the original buildings within the area.	Buildings should not be designed in isolation. Whether they are of traditional or contemporary design, buildings should be part of a design concept for the whole site and the wider area. This will need to be explained in a Design and Access Statement accompanying the planning application.
Roofline	New houses that respect the existing height and follow the roofline of adjacent houses should be encouraged. Similarly proposed extensions are more likely to be successful if they do not exceed the height or footprint of the original building.	Roofs should be designed to reflect the style of the proposed development and its context. Careful attention should be paid to roofing materials, pitch, eaves and verge details and the inclusion of chimney stacks or other features that project above the ridge line. In general, a simple roof form is preferred. In the HNF residential area common features include: • Slate roofs • Shallow pitched roofs set back from the building frontage • Chimneys • Parapets particularly on properties facing the waterfront • Flat roofs on larger apartment blocks Houses very seldom have steeply pitched roofs, to avoid detracting from the main façade. The existing roofline should be respected to create a consistent roofline along the street and in more general terms, to fully fit within the roofline of the area. Any development between existing developments should create a roofline to integrate the new development and create rhythm along the street. Contemporary roof profiles may be considered but should be strongly justified Over complicated roof profiles should be avoided. The roof, in conjunction with the position of the building should allow for glimpses of the waterfront, surrounding landmarks and long distance views where appropriate.
Position	New development and alterations to existing buildings, shall respect the position of existing buildings relative to the street and within the plot.	The proportions of proposed houses should match adjacent houses of the same building type.
Building lines	Gaps in the building line should reduce street enclosure and expose the sides and backs of buildings that were often not intended, or designed, to be seen from the street. Such gaps generally detract from the character of the area.	New development should respect the continuous street frontages of the conservation area, built to consistent building lines. New development or building extensions shall respect the existing building lines. Existing front gardens should be retained to ensure a green setting to the building and the public realm.



Contemporary buildings continue existing roofline

Window projections adopted and applied through new design

Lateral mouldings provide interest to facade



Design Element	Design principles	How to achieve this
Location on street	Buildings should be aligned along the street, with their main façade and entrance facing it.	Buildings proposals with the rear to the street should show consideration has been taken to provide a relationship between the property and the street. This may include features such as: • Garage or out building fronting the street • Boundary treatments
Building height	Although the typical size of a house is not fixed, most houses within the area are two to five storeys with an additional basement.	New development will be more likely to integrate successfully with the settlement if the height of new buildings demonstrates consideration for the context of the original buildings within the area.
Replacement dwellings	In urban locations, replacement dwellings can alter the character of a street if not carefully designed.	Care should be taken to ensure: • The scale of development is in keeping with the street and appropriate to the size of the plot; • There is a positive relationship between the building and the street; and • Reference should be taken from the local vernacular to determine the most appropriate proportions for the replacement dwelling.
Infill	In urban locations, infill plots can alter the character of a street if not carefully designed.	Infill development can be integrated provided the design and layout of the new buildings respect the traditional street scene and character of the area. Care should be taken to ensure: • The scale of development is in keeping with the street and appropriate to the size of the plot; and • There is a positive relationship between the building and the street. Reference should be taken from the local vernacular to determine the most appropriate proportions for dwellings.



The examples here show consideration has been taken to provide a relationship between the rear of the property and the street. Similar features could include:

Garage or out building fronting the street

Boundary treatments



Design Element	Design principles	How to achieve this
Extensions	In urban locations, extensions to existing dwellings can alter the character of a street if not carefully designed.	Reference should be taken from the local vernacular to determine the most appropriate proportions for the extension. Care should be taken to ensure: • The scale of development is in keeping with the existing property and appropriate to the size of the plot; • There is a positive relationship between the building and the existing property; and • Proposed extensions should not exceed the height or footprint of the original building.
Basements	Proposals to create or extend basements of existing houses may be considered acceptable if they are located within the footprint of the original dwelling.	Where new basements are proposed, the appearance of the front façade should be maintained in views from the street. Vegetation and trees should be retained in proposals for basement creation or extensions.
Corner buildings	Corner buildings prominent in the streetscape should be designed specifically to have a relationship with both streets.	Corner buildings should be designed to turn the corner of the street. Continuity of the building frontage should be maintained by incorporating corner windows and entrances. Heights should reflect the scale of adjacent buildings.
Corner buildings	Corner buildings provide an opportunity for non-residential uses and should contribute to the character of the streetscape.	Corner buildings should place windows and/or entrances facing the street and/or public spaces. Corner buildings should have an animated façade, designed on both façades. It is not considered good practice to leave blank façades on one side of a corner building.

Building Frontage

Design Element	Design principles	How to achieve this
Decoration	New development that has considered the local context and will reinforce and enhance the local identity should be encouraged.	Proposals will be encouraged that show the design and materials used, the amount and type of decoration and functional elements such as the position and type of doors and windows, flues, chimneys, gutters and flashings have been considered to complement the local vernacular.
Design	It is expected that design proposals make reference to local buildings considered of merit.	Making reference should not result in pastiche but instead reflect key aspects such as elevations, symmetrical layout and proportions.
Facade	The Neighbourhood area has a relatively consistent architectural style and the arrangement of façades has slight variations. Building façades should be considered in the design of new developments.	Building façades should be arranged simply with windows and doors vertically aligned. Proposed building façades should indicate the importance of each storey through a combination of composition of building elements, increased height for the most prominent floor and the level of architectural detailing used. Contemporary interpretations of local traditional architectural forms should be explored.
Windows	Windows in new houses should complement the vertical pattern and scale of windows reflected in local architectural detailing.	Windows should be inclusive to the overall design approach. In more traditional designs, the positioning of windows within their reveals is important to add visual interest. Windows of 19th century properties have multiple small panes as a result of the method of manufacturing of glass at the time. Contemporary designs should consider the location and scale of existing windows within the area.
Window paint	The choice of paint colour for windows can have a dramatic effect on the appearance of a building.	Window paint colours should respect traditional, local colours. For Plymouth white and grey tones are common with brighter colours used as part of an individual scheme.
Doors	Doors are noticeable features and, as with windows, they can have a dramatic impact on the appearance of a property. Doors as part of new or existing proposals should be chosen to complement the local vernacular.	Use doors that reflect the design approach. Doors should be simple and well-proportioned; pastiche of historical designs should be avoided.
Entrances	Entrances should contribute to the legibility of the streetscape and should relate to the function they provide.	Building entrances should be welcoming and identifiable. The scale and design of entrances should represent the function; municipal and commercial properties will be grander in design than residential properties. Entrances for new properties should be integral to the design proposal rather than a later addition.



Window openings highlighted through change of material or moulding

Contrasting colour palette



Repetition in building style provides rhythm along the street

High quality sash windows

Shallow pitched roof set back behind parapet wall





Design Element	Design principles	How to achieve this
Detailing	Architectural detailing in new development shall typically display elements that balance with those of existing traditional buildings in terms of interest, scale, texture and form. Architectural detailing is rich with a variety of different styles and decoration used in buildings across the area; the design of extensions and new buildings should reflect this level of detailing to ensure that the development is in context with its surroundings.	Traditional elements often include: • Detailing around windows including cills • Quoins and masonry detailing • Door surrounds and porches • Sash windows • Symmetrical façades • Sash windows • Windows and doors set back from brick face • Stonework at entrances to create grandeur with classical pillars, pediments and porches • Decorative iron railings • Balconies and French windows • Parapets • Shallow pitched roofs • Decorative mouldings • Render Attention to high quality architecture and architectural detailing which avoids pastiche is encouraged. Existing period detailing should be retained and the covering over or removal of such elements should not be encouraged. Proposals for new developments must demonstrate a respect for the existing level of detailing displayed in the original buildings whilst allowing for contemporary architectural detailing.
Roofscape	Utilities and services within the roofscape should be integral to the design to avoid the addition of elements as an afterthought.	Down pipes and guttering should be integral to the roof and building design.
Chimneys	Chimneys are a traditional feature in the architecture within the area.	Developments should be encouraged to use chimneys that reference the form and scale of examples in surrounding properties.
Dormers	Dormers or pediments are traditional features of architecture within the area.	Dormers can be used in modern development. However, care should be taken to ensure the design and proportions reflect the local vernacular.

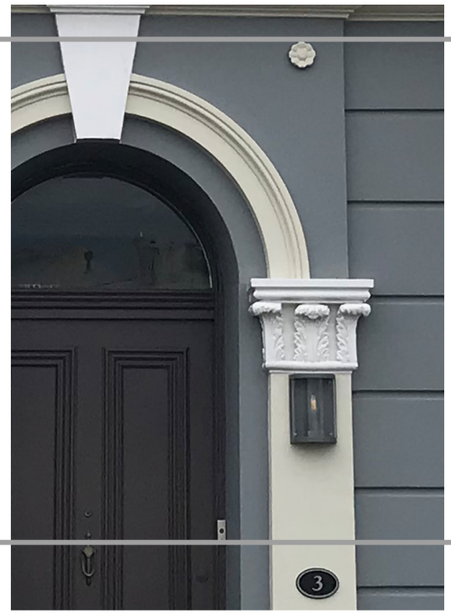
Detailing and design elements found within the Hoe Neighbourhood Area



Traditional moulding



Traditional tiling



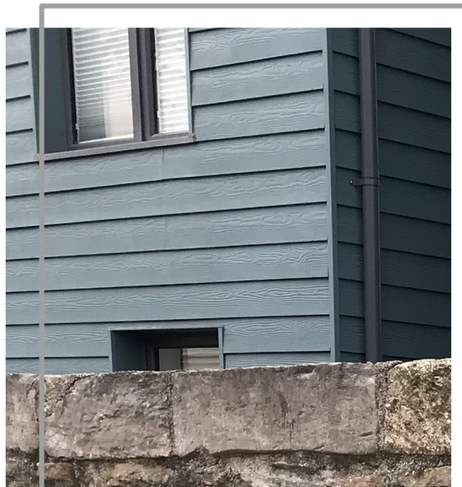
Moulding on door surrounds



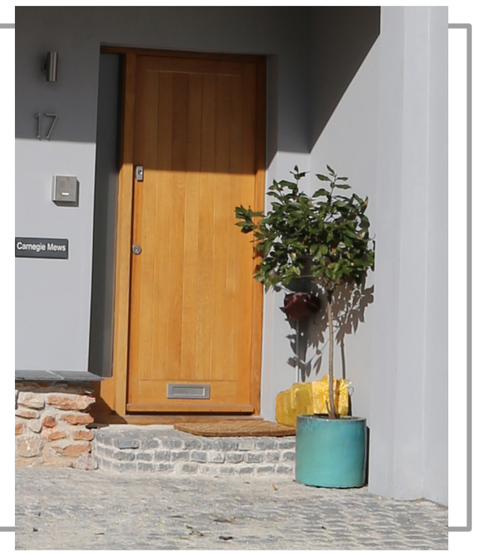
Ornate detailing around window including balustrade, moulding and sash window panes



Glass balustrade



Weatherboard cladding



Contemporary timber door



Zinc cladding

Materials and Surface Treatments

Design Element	Design principles	How to achieve this
Materials	Use locally appropriate materials. Materials proposed for use in new development and building extensions shall match or be guided by those used in the existing buildings	Historically, the choice of wall materials in Plymouth was largely dictated by those materials that could be sourced locally, and this largely comprised Plymouth Limestone and granite for walls. In more recent times the range of materials has broadened to include concrete, brick and rendered block. A typical materials in the Neighbourhood area includes limestone, granite, slate (available from quarries in Tavistock), and timber painted windows, slate roof tiles and detailed door and window surrounds. If other quality materials are proposed they should be considered on their merits and appropriateness, as well as cost.
Materials	Materials used for the repair or alteration of buildings, for new buildings, and for surfacing and boundaries shall complement the existing high quality palette of materials that typifies the character of the area.	• Traditional houses are designed either with exposed stone façades or rendered. • Rustication (deliberately rough finish) has been used to accentuate one storey while those above are left clean and lighter aesthetically. The heavy lines of rustication also give the sense of large stone blocks. • The roofs are covered in flat tiles or slates. • Iron work on balconies and railings is typical.
Materials	New buildings or extensions should propose materials based on the existing building or surrounding vernacular. Proposals for innovative and complementary material options should also be encouraged.	Differing materials on an extension or a different design approach may result in a development appearing incongruous. Whilst, exceptionally, an extension may intentionally be designed to be contrasting, such an approach will need to be carefully justified and its success will rely on a high quality design.
Materials	Materials used in new development should complement the materials typical of the existing buildings in the street, the streetscape or the existing building in the case of extensions.	New developments shall demonstrate a respect for the existing materials palette used in the area, which is likely to vary subtly by street. Architectural detailing shall typically display elements that equate to those on existing traditional buildings which provide interest, scale and texture to form and elevations Materials that are durable, high quality and easy to maintain should be used.









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Sustainable Design

Areas 1 Residential and
Area 2 Hoe Park Waterfront and Citadel



Contemporary Design

In Plymouth there are many examples of contemporary architecture among the latest dwellings and commercial buildings. This is likely to continue with additional eco design features incorporated in future developments. The case studies in this page represent good examples of existing/proposed contemporary design in Plymouth and Devon. All these buildings reflect an innovative approach to heritage restoration.



Azure



Contemporary extension,
to terrace property
Plymouth, Living Space
Architects



Zion Road, Torquay,
Conversion of Methodist
Chapel,
gillespie yunnie architect



Residential conversion,
Millfieds, Plymouth
gillespie yunnie architects

Sustainability and Eco Design

The following section elaborates on energy efficient technologies that could be incorporated in buildings. The use of these technologies is not compulsory, but their use should be encouraged in order to contribute to sustainability aims as well as to lower consumption of energy. This section elaborates on the main principles of what is known as “green building”, as well as the main features that tend to influence design issues.

The main principles of green building

A high performance, energy efficient home may include features like geothermal heating, wind power and solar panels, but these are not the only features that make a house a green building. Research has shown that these features come in second, and some may not be essential to contribute towards achieving a green building. However, what is essential for a building to be a green home starts with being well-designed, well-insulated, and possibly, has glazing oriented to the south for passive heat gain.

The following points represent the core principles of green building:

- Energy efficiency, insulation and orientation,
- A reasonably-sized house.
- A flexible house (fit for alternative funtions),
- Water recycling and water management,
- Using reclaimed and local materials,
- Waste reduction,
- Mechanical systems,
- Appliances and electrical.

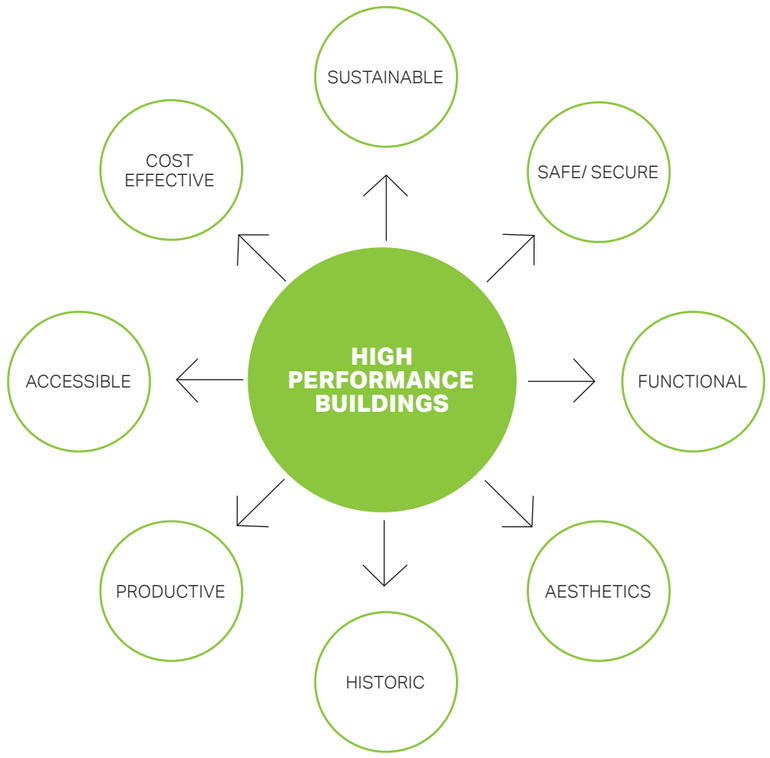
The following pages elaborate on energy saving, sustainable systems and their design implications and appearance of buildings.

High Performance Residential Buildings

Energy efficient or eco homes combine all around energy efficient construction, appliances, and lighting with commercially available renewable energy systems, such as solar water heating and solar electricity.

Starting from the design stage there are strategies that can be incorporated towards passive solar heating, cooling and energy efficient landscaping which are determined by local climate and site conditions.

The aim of these interventions is to reduce home overall home energy use as cost effectively as the circumstances allow for. Whereas, the final step towards a high performance building would consist of other on site measures towards renewable energy systems.



Green roofs

A green roof or living roof is a roof of a building that is partially or completely covered with vegetation and a growing medium, planted over a waterproofing membrane. It may also include additional layers such as a root barrier and drainage and irrigation systems.Container gardens on roofs, where plants are maintained in pots, are not generally considered to be true green roofs, although this is debated. Rooftop ponds are another form of green roofs which are used to treat greywater. Vegetation, soil, drainage layer, roof barrier and irrigation system constitute a green roof.

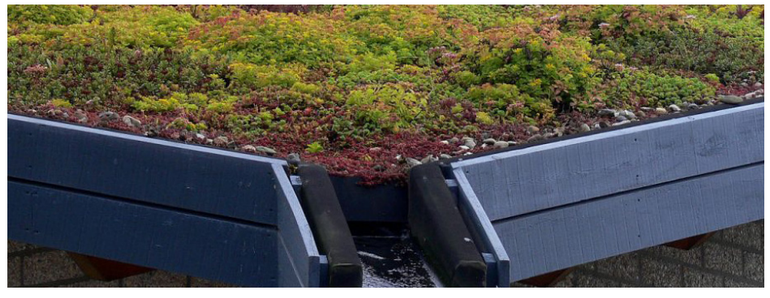
Green roofs serve several purposes for a building, such as absorbing rainwater, providing insulation, creating a habitat for wildlife, increasing benevolence and decreasing stress of the people around the roof by providing a more aesthetically pleasing landscape, and helping to lower urban air temperatures and mitigate the heat island effect.

However the aesthetics of green roofs might not always be positive. If not planned correctly, an unsightly, overgrown appearance could result.

Also, the organic nature of plants needs to be acknowledged in that seasonal fluctuations and periods of severe drought and heat will be reflected in the look of the plants themselves. Therefore, colours, heights, and plant density will most likely change with the seasons.

Some people may feel organic architecture is inappropriate or “unnatural” for any building, and that is their own aesthetic value. If no or low maintenance is desired, then the design must dictate the correct choice and placement of plant material. A hands-off program may result in a wild and overgrown look.



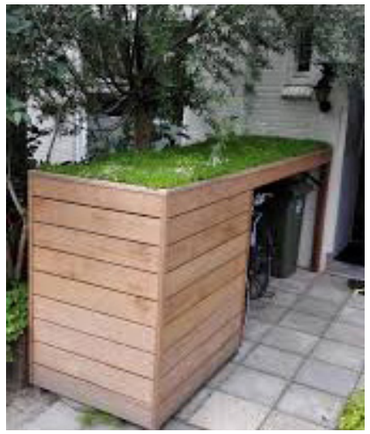


Waste Collector/Bin Storage

Consideration should be taken to provide an aesthetic solution for the waste collectors themselves which are located either at the front, side or the rear of property. Various examples show, that there are discreet and contemporary takes in regarding the design and camouflage on these large waste collectors.







Solar roof panels

Solar panels work by converting the sun's light into electricity which you can use to power your home with free energy. Solar panels capture the sun's energy using photovoltaic cells. One solar panel is made up of many small solar photovoltaic cells.

From the design perspective, the aesthetics of solar panels over a rooftop can be a matter of concern for many homeowners. Homeowners often hesitate buying a solar panel because they think solar panels diminish the home aesthetics. Especially in the case of historic buildings and home associations, there has been a lot of objection for setting up solar panels on visible roof areas.

Yet, when designed from the start, roof panels can form part of the intended aesthetic of the roof. It is therefore suggested that designing this feature from the start would produce better results.

Building Integrated Photovoltaic (BIPV) systems are a solution for reducing the visual impact of solar panels. They combine PV cells with roofing materials hence becoming a part of the roof. Some attractive options in BIPVs are: Solar shingles and Photovoltaic slates.

Solar shingles and PV slates are aesthetically better versions of asphalt shingle and slate roofs respectively, and are designed to emulate them. There has been increased interest in black panels due to their enhanced attractive features. Black solar panels with black mounting systems and frames can be an appealing alternative to blue panels.



Advantages of Solar Photovoltaic Systems

- Are a great investment because they substantially lower the electric bill (cost efficiency),
- They work on daylight so they will work on days when the sun is not shining, all they need is light to create energy,
- They can generate up to 40 percent of the electricity used on an annual basis,
- Low level of maintenance required,
- Available in sleek contemporary design which complements the aesthetics of the roof,
- Protects the environment by switching from fossil fuels to green energy usage.



Rainwater Harvesting

Refers to the systems allowing to capture and store rainwater as well as those enabling the reuse in-situ of grey water. These systems involve pipes and storage devices that could be unsightly if added without an integral vision for design. Therefore some design recommendation would be to:

- Conceal tanks by cladding them in complementary materials,
- Use attractive materials or finishing for pipes,
- Combine landscape/planters with water capture systems,
- Underground tanks,
- Utilise water bodies for storage.





Permeable Pavement

Permeable pavement is a pavement type with a porous surface that is composed of concrete, open pore pavers or asphalt with an underlying stone reservoir. Also considered as green pavement, it allows water to run through it rather than accumulate on it or run off of it. The precipitation and water get stored in the reservoir from where it slowly infiltrates the soil below or is drained via a drain tile. The stone or gravel acts as a natural filter and clears the water of pollutants.

There are three common types of permeable pavements:

- Traditional Concrete/Asphalt: The standard mix minus the fine particles which are left out to make it more porous.
- Plastic Pavers: The plastic grids have a honeycomb shape that allows vegetation, such as grass, to grow through the holes.
- Concrete Pavers: There are spaces between the concrete blocks which aid better drainage and water permeability.

Using these different types of pavement could result in attractive paving solutions whilst contributing to sustainable water management.









Wind turbines

By harnessing the power of the wind to generate electricity, it's possible for homeowners to run their appliances on renewable energy and export excess electricity to the grid, saving money on household bills and earning cash as part of a government-initiated renewable energy feed-in tariff scheme.

From the aesthetic point of view, there are two main types of domestic wind turbine to consider, pole mounted and building mounted. Pole-mounted turbines are large, free-standing units that can be erected in a suitably exposed position, allowing them to take advantage of the highest available wind speeds on your property (the faster the wind, the faster the blades of the turbine will spin, generating more kinetic energy and, as a result, more electricity).

Building-mounted turbines are generally smaller than pole-mounted turbines. Due to their limited size and the fact that nearby obstructions can affect the air flow that reaches them, building-mounted turbines





Plymouth South West Devon Joint Local Plan (Submission)

Policy DEV1

Protecting health and amenity

Development proposals will be required to safeguard the health and the amenity of local communities.

Policy DEV2

Air, water, soil, noise, land and light pollution

Development proposals which will cause unacceptable harm to human health, the natural environment and general amenity by unacceptable levels of soil, air, water or noise pollution or land instability will not be permitted.

Policy DEV34

Delivering low carbon development

The need to deliver a low carbon future for Plymouth and South West Devon should be considered in the design and implementation of all developments, in support of the UK's legally binding target to reduce the UK's greenhouse gas emissions by at least 80% in 2050 from 1990 levels (Climate Change Act 2008).

Sustainable Design Elements

Design Element	Design principles	How to achieve this
Amenity	People living in houses or flats should expect to enjoy a good level of residential amenity. This amenity is influenced by a range of factors such as private outdoor space, privacy, outlook and natural light.	New and existing development should ensure: • New dwellings provide an appropriate amount of amenity space; • New and existing dwellings benefit from an appropriate degree of privacy; • New and existing dwellings receive appropriate levels of natural light and have an appropriate outlook.
Building performance	New developments should consider specification details that go above and beyond the requirements of Part L of the Building Regulations. Building orientation should fit into existing spatial layouts in the surrounding context and maximise passive gains (energy from the sun). Building layouts should sensitively designed to maximise natural lighting.	Potential elements for inclusion: • Highly insulated building envelope • Materials with high thermal mass to stabilise internal temperatures and reduce energy consumption. • Solar shading incorporated into large south facing windows to prevent overheating.
Natural Surveillance	Natural surveillance takes place when people can see what is happening where they live. Crime rates are less in locations where people believe they are being watched.	Maximise opportunities for communities to become self-policing through design include: • Interconnected public spaces; • Visual links to public space from residential properties; • Grouping and clustering of properties resulting in identifiable neighbourhood units; • Properties orientated to provide natural surveillance.
Noise	New development should aim to reduce, manage and mitigate noise to improve health and quality of life.	Noise disturbance should be managed and reduced by: • Positioning habitable rooms away from the noise sources. • Barriers such as garages and retaining walls. • Planned location of external activities such as play areas.
Overshadowing	New housing development should provide a suitable outlook and level of natural light for both new and neighbouring dwellings.	Dwellings should have sufficient daylight to allow the comfortable use of habitable rooms (living rooms, dining rooms, bedrooms), kitchens and patio areas in gardens immediately adjoining the building.
Utilities	The location of utilities, meters and services in new development should be considered in the initial stages of the design process.	Utilities although usually located below ground still impact on the location of trees and vegetation. Utilities should therefore be included in the early stages of the design process to avoid conflict with the landscape elements. Meters should be integral to the design of new buildings as opposed to being a later addition.
Storage	Provide secure storage for cycling equipment.	Cycle and bin stores should be integrated into the garden and screened from the street.
Refuse and recycling	Unsightly bins can damage the visual amenity of an area. Storage facilities for refuse and recycling should be integral to the design of new developments.	Facilties should be: • Positioned in an accessible location • Unobtrusive • Correctly sized for the number of residents • Well designed • Innovative solutions for existing properties should be encouraged

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Opportunity Areas

Opportunity areas have been identified across the Neighbourhood area where future development and management could have a positive impact on character and setting. Design principles have been created specifically for each opportunity area.

Principles included here can be specific to development and capable of being interpreted to define policies on character and design. In addition principles below could be financed through the Community Infrastructure Levy (CIL) and Section 106 (S106) contributions, or if the project is not eligible for these mechanisms, through other means of funding or delivery. CIL is a tool for local authorities to levy contributions from developers to help deliver infrastructure projects which benefit the local community – for more information, see http://planningguidance.communities.gov.uk/blog/guidance/ community-infrastructure-levy/.

Section 106 agreements are site-specific and put in place to make it possible to approve a planning application that might not otherwise be acceptable in planning terms – for example, the provision of new green space. It is recommended to seek advice from the Local Planning Authority on what types of project can be funded through CIL and S106.

Policy

Policies within the Plymouth South West Devon Joint Local Plan, which have relevance to the design and development of the Plymouth Hoe Neighbourhood Area are considered below.

Strategic Objective SO3: Delivering growth in Plymouth's City Centre and Waterfront Growth Area

To realise the potential of the Plymouth City Centre and Waterfront Growth Area as a regionally significant growth hub.

Policy PLY6 - Improving Plymouth's city centre

Plymouth City Centre will be renewed and enhanced through a combination of major new developments, proactive management of change and support for community and trader led initiatives. This will deliver a modern, high quality, vibrant, accessible and adaptable centre that reflects its status alongside the waterfront as the showcase of Plymouth.

Policy PLY20: Managing and enhancing Plymouth's waterfront

Plymouth's waterfront will be renewed, enhanced and maintained as Plymouth's showcase and as a unique, sustainable and vibrant asset that drives the city's economic, cultural, social and environmental well-being.



Policy PLY27 - Register office, Lockyer Street, The Hoe

Policy PLY27 - Register office, Lockyer Street, The Hoe

Land at Lockyer Street, The Hoe, is allocated for mixed use development,including a quality hotel and housing. Provision is made for in the order of 52 homes.

Policy PLY28 - Land north of Cliff Road, The Hoe

Land north of Cliff Road, The Hoe, is allocated for hotel led mixed use regeneration, including housing and potentially complementary uses which supports the tourist function of area. Provision is made for in the order of 80 homes.

Policy PLY29 - Millbay waterfront

Development will create a new sustainable mixed use neighbourhood which meets the needs of the new community as well as acting as a major destination and attractive international gateway. The proposals provide for 742 new homes, including extra care homes, 12,500 sq.m. B1 offices, as well as small-scale retail, food and drink uses, leisure, hotel, marine related uses and facilities for marine and other events and a multi-storey carpark.

Policy PLY30 - Bath Street west

Land at Bath Street West is allocated for a comprehensive residential led mixed-use redevelopment. Uses which will be supported include residential, offices, small scale retail, cultural and community uses. Provision is made for 300 new homes.

Policy PLY31 - Bath Street east

Land at Bath Street East is allocated for a comprehensive mixed-use redevelopment. Uses which will be supported include residential, arena facilities, offices, small scale retail, hotel, leisure, cultural and community uses. Provisions made for 323 new homes.

Policy DEV18 - Protecting local shops and services

Regarding Primary Shopping Area (PSA) West Hoe Road

The LPAs will consider proposals which result in the loss of retail and local services and facilities, both within and outside designated centres.

Policy DEV29 - Green and play spaces (including Strategic Green Spaces, Local Green Spaces and undesignated green spaces)
The LPA's will protect and support a diverse and multi-functional network of green space.

Figure 13: Opportunity Areas



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1. Opportunity Area Hoegate Street: North/south direction perpendicular to Notte Street, one of the primary roads to the waterfront in the city. Hoegate Street is a secondary road, however, it does provide access to residential properties within the Barbican and connects to the Hoe.

Opportunities: The strategic importance of Hoegate Street is reflected in its name 'gate'. There is opportunity to improve the visual appeal of street scene to create a gateway and arrival point to the Hoe. Improvements should increase pedestrian legibility and connectivity and enhance the heritage assets within the street.



Design Element	Design opportunities	How to achieve this
Building Enhancements	The redevelopment/restoration of buildings of architectural merit should be encouraged to retain the strong sense of place.	Development proposals to redevelop/restore buildings located on the west side of the street into mixed use workshops and space for employment should be encouraged. Proposals should: • Enhance heritage assets; • Provide active frontage; and • Improve the visual quality of the streetscape.
Access	Access routes connecting to the Hoe should be high quality public spaces.	Access routes should be enhanced and maintained to a high standard including: • Bins stored off the street, provision for bin stores in mixed use buildings; • Buildings should be well maintained. Building façades should be able to tolerate marine environments; and • Roads and footways should be well maintained.
Arrival	Visual and functional improvements should be encouraged to enhance the 'gateway' experience of the street to the Hoe.	Potential elements for inclusion: • Traffic calming measures to safeguard pedestrians; • Detailing/resurfacing of the road to create shared spaces for pedestrians and traffic; • Bollards at entrance points, to provide a visual sense of arrival; and • Street lighting to improve the visual appearance of the street at after dark.
Signage	High quality signage should be located at nodal points that provide access to the Hoe.	Signage should be: • Well located; • Legible; and • Reflective of the Neighbourhood area context.
Green Infrastructure	New development should incorporate elements of green infrastructure within design proposals to enhance both the visual and ecological quality of the street.	Green infrastructure proposals should: • Link to existing green networks at Hoe Park; and • Include Sustainbale Urban Drainage Solutions where appropriate.



Hoegate Street

2 Opportunity Area Hoe Approach: North/south direction perpendicular to Notte Street which is one of the primary roads to the waterfront in the city. Hoe Approach provides vehicular access to the Hoe and is widely utilised by both residents and visitors.

Opportunities: There is opportunity to increase legibility for both pedestrian and vehicular movement, to create a greater sense of arrival, linking the city centre to the Hoe.



Design Element	Design opportunities	How to achieve this
Arrival	Visual and functional improvements should be encouraged to enhance the 'gateway' experience of the street to the Hoe.	Potential elements for inclusion: • Traffic calming measures to safeguard pedestrians; • Detailing/resurfacing of the road to create shared spaces for pedestrians and traffic; • Bollards at entrance points, to provide a visual sense of arrival; and • Street lighting to improve the visual appearance after dark and increase public safety.
Legibility	Increase the legibility of this gateway to the Hoe and waterfront area to enhance the sense of arrival and to encourage pedestrian and cyclist movement into the Neighbourhood area.	• Potential elements for inclusion: • Improved signage and information boards; • Cycle lanes in areas with capacity; and • A street furniture and lighting strategy.
Permeability	Improve pedestrian and cycle routes to increase sustainable movement across the area.	• Opportunity for links across the area at Hoegate place and Hoe Street. • Improvements to surfacing and lighting should be encouraged.
Signage	High quality signage should be located at nodal points that provide access to the Hoe.	Signage should be: • Well located; • Legible; and • Reflective of the Neighbourhood area context.
Green Infrastructure	New development should incorporate elements of green infrastructure within design proposals to enhance both the visual and ecological quality of the street.	Green infrastructure proposals should: • Link to existing green networks at Hoe Park; and • Provide appropriate habitat enhancements where suitable. • Include Sustainbale Urban Drainage Solutions where appropriate.



Hoe Approach

3. Opportunity Area Sussex Street: North/south direction perpendicular to Notte Street which is one of the primary roads to the waterfront in the city. There is pedestrian access from Notte Street through the Astor House development to the northern end of Sussex Street via steps. Sussex Street is dominated by the rear of the Crown Plaza Hotel and provides access for delivery vehicles and car parking.

Opportunities: There is opportunity to enhance the pedestrian experience on Sussex Street to compliment the public realm outside Astor House thus providing an additional positive link to Hoe Park and the waterfront from the city.



Design Element	Design opportunities	How to achieve this
Street scene	Encourage design proposals that improve the rear façade of the Crown Plaza Hotel which fronts Sussex Street, to improve the visual amenity at street level.	Potential elements for inclusion: • Creative uses of cladding to improve the street scene; • Incorporate green walls or living façades; and • Street furniture and lighting.
Permeability	Improve pedestrian and cycle routes to increase sustainable movement across the area.	Continue the high quality public realm from Astor House off Notte Street into Sussex Street to create a continuous pedestrian approach to the Hoe.
Access	Access routes connecting to the Hoe should be high quality public spaces.	Access routes should be enhanced and maintained to a high standard including: • Bins stored off the street, with provision for bin stores in mixed use buildings; • Buildings should be well maintained. Building façades able to tolerate marine environments; and • Roads and footways should be well maintained.
Off-street parking	Encourage the inclusion of off-road parking concepts which minimise street level clutter and inhibit pedestrian safety.	Parking proposals should include: • Good inter-visibility to promote security; • Break parking into blocks to promote opportunities for pedestrian movement and mitigate the massing of high levels of parking; and • Where on-street parking is a necessity, ensure regular breaks to facilitate safe crossing points with good visibility.
Green Infrastructure	Developments that provide connected green infrastructure networks should be encouraged.	Continue the amenity tree planting at Astor House off Notte Street into Sussex Avenue. Green wall against Crown Plaza Hotel.



Sussex Street

4. Opportunity Area Lockyer Street (Lower): North/south direction perpendicular to Princess Street which connects to the southern end of the city centre. Lockyer Street is multi-tiered; the lower section is predominantly car parking; the upper section which is accessed from Notte Street, is a mix of business and residential use providing access to the Hoe. A pedestrian crossing on Notte Street connects the two sections of Lockyer Street.

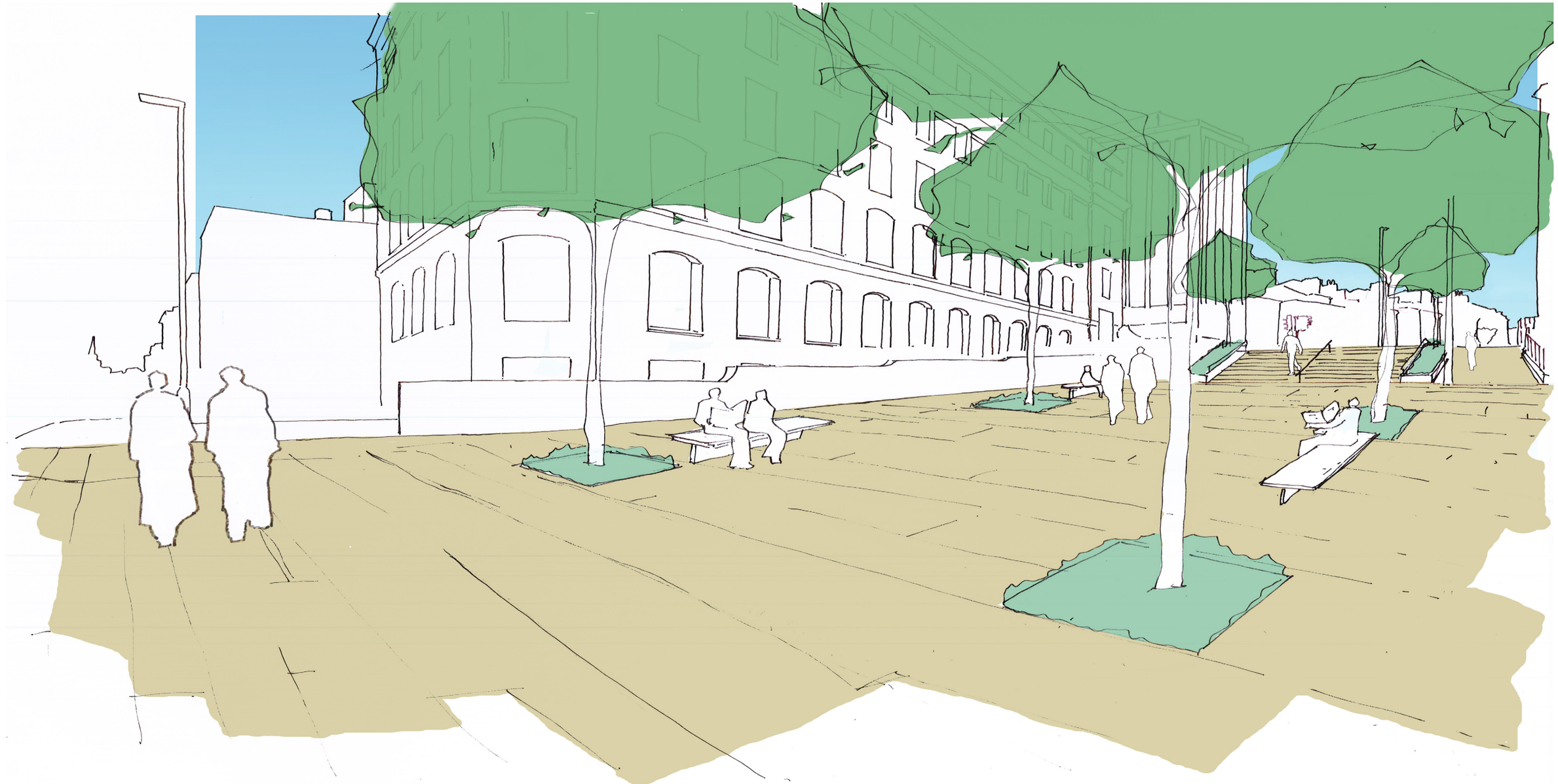
Opportunities: Enhance the visual appearance of the lower and upper section of the street to increase connectivity to the city centre and the Hoe.

Upper Lockyer Street





Design Element	Design opportunities	How to achieve this
Connectivity	Enhance connectivity through Lockyer Street from the city centre to the Hoe. Provide links to the Civic Centre which is a allocated for development. Provide strong visual connections to Royal Parade.	Civic Centre projects that provide opportunity to boost visual and pedestrian connectivity through quality urban design. Improved pedestrian legibility and access to create a legible route north/south along Lockyer Street.
Permeability	Pedestrian and bicycle links should be provided to encourage sustainable movement within the area and across the city.	Enhance the visual appearance of lower Lockyer Street to aid legibility and increase permeability. Increase the provision of signage and way marking.
Access	Access routes connecting to the Hoe should be high quality public spaces.	Access routes should be enhanced and maintained to a high standard including: • Bins stored off street, with provision for bin stores in mixed use buildings; • Buildings in prominent areas should be well maintained. Building façades able to tolerate marine environments; and • Well maintained roads and footpaths.
Off-street parking	The inclusion of off-road parking concepts which minimise street level clutter and inhibit pedestrian safety should be encouraged. Off street car parking should be well designed and appropriate for the space, ensuring footways are clear at all times.	Parking proposals should include: • Good inter-visibility to promote security; • Break parking into blocks to promote opportunities for pedestrian movement and mitigate the massing of high levels of parking; and • Where on-street parking is a necessity, ensure regular breaks to facilitate safe crossing points with good visibility. • Include Sustainbale Urban Drainage Solutions where appropriate.





Lockyer Street (Lower)

5. Opportunity Area West Hoe Road/ Great Western Road: Provides an important connection from Millbay directly to West Hoe, the Hoe and waterfront area.

Opportunities: Increase the sense of arrival into the Hoe and waterfront area, and maximise connectivity with city centre.

Design Element	Design opportunities	How to achieve this
Arrival	Visual and functional improvements should be encouraged to enhance the 'gateway' experience of West Hoe Road to the Hoe.	Potential elements for inclusion: • Street art to increase sense of arrival; • Signage to promote the South West Coast Path as an asset for the city; • Traffic calming measures to safeguard pedestrians; • Detailing/resurfacing of the road to create shared spaces for pedestrians and traffic; • Bollards at entrance points, to provide a visual sense of arrival; and • Street lighting to improve the visual appearance after dark and increase public safety.
Building enhancements	The redevelopment/restoration of buildings of architectural merit or buildings in prominent locations should be encouraged to retain the strong sense of place.	Numerous properties on Great Western Road back onto the street. This is a primary route to the waterfront and a section of the South West Coast Path and National Cycle Network route. As a result, proposals to improve the visual quality of these properties should be encouraged. Future development should ensure a positive frontage within prominent or sensitive areas.
Legibility	Increase legibility for pedestrian and cyclists.	Potential elements for inclusion: • Improved signage and information boards; • Increase legibility of National Cycle Network route 27; and • A street furniture and lighting strategy.
Shop fronts	Shop frontages at West Hoe Road should be encouraged to have a cohesive style and layout to boost the visual amenity of the street scene.	• High quality signage which avoids clutter. • Clean windows and good lighting to improve the visual appearance. • Alignment of signage along the block. • Restore elements of architectural detail and heritage. • Include Sustainbale Urban Drainage Solutions where appropriate.
Connectivity	Improved vehicular and pedestrian access from the west/ Millbay to be considered.	• Review movement and coonection as new development at Millbay comes forward.





West Hoe Road

General questions to ask and issues to consider when presented with a development proposal and could be used as a basis for policies within the NP?

This section provides a number of questions against which a design proposal should be judged. The aim is to assess all proposals by objectively answering the questions below.

Not all the questions will apply to every development. The relevant ones, however, should provide an assessment overview as to whether the design proposal has taken into account the context and provided an adequate design solution.

The Design Proposal should:

A. Harmonise and enhance the existing settlement in terms of physical form pattern or movement and land use.

- What are the particular characteristics of this area which have been taken into account in the design?
- Is the proposal within a conservation area?
- Does the proposal affect or change the setting of a listed building or listed landscape?

B. Relate well to local topography and landscape features, including prominent ridge lines and long distance views.

- Does the proposal maintain or enhance the identified views?
- Does the proposal harmonise with the adjacent properties? This means that it follows the height massing and general proportions of adjacent buildings and how it takes cues from materials and other physical characteristics.
- Has careful attention been paid to height, form, massing and scale?
- If a proposal is an extension, is it subsidiary to the existing property so as not to compromise its character?
- Does the proposal maintain or enhance the existing landscape features?
- How does the proposal affect the trees on or adjacent to the site?
- How are long distance views incorporated in the design?

C. Reinforce or enhance the established townscape character of grid patterned streets, squares and other spaces.

- Does the proposal maintain the character of terraced properties stemming from the main road?
- What is the character of the adjacent streets and does this have implications for the new proposals?
- Does the new proposal respect or enhance the existing area or adversely change its character?
- Does the proposal positively contribute to the quality of the public realm/streetscape and existing pedestrian access?
- How does the proposal impact on existing views which are important to the area? Can any new views be created?

D. Reflect, respect and reinforce local architecture and historic distinctiveness.

- Has the local architectural character and precedent been demonstrated in the proposals?
- If the proposal is a contemporary design, are the details and materials of a sufficiently high enough quality and does it relate specifically to the architectural characteristics and scale of the site?

E. Retain and incorporate important existing features into the development.

- What are the important features surrounding the site?
- What effect would the proposal have on the streetscape?
- How can the important existing features including trees be incorporated into the site?
- How does the development relate to any important links (both physical and visual) that currently exist on the site?

F. Respect surrounding buildings in terms of scale, height, form and massing.

- Is the scale and height of the proposal appropriate to the area?
- Should the adjacent scale be reflected?
- If a higher than average building(s) is proposed, what would be the reason for making the development higher?
- Would a higher development improve the scale of the overall area?
- If the proposal is an extension, is it subsidiary to the existing house?
- Does the proposed development compromise the amenity of adjoining properties?
- Does the proposal overlook any adjacent properties or gardens?

G. Adopt appropriate materials and details.

- What is the distinctive material in the area, if any?
- Does the proposed material harmonise with the local material?
- Does the proposal use high quality materials?
- Have the details of the windows, doors, eaves and roof been addressed in the context of the overall design?

H. Integrate with existing paths, streets, circulation networks and patterns of activity.

- What are the essential characteristics of the existing street pattern?
- How will the new design or extension integrate with the existing arrangement?
- Are the new points of access appropriate in terms of patterns of movement?
- Do the points of access conform to the statutory technical requirements?
- Do the new points of access have regard for all users of the development (including those with disabilities)?

I. Provide adequate open space for the development in terms of both quantity and quality.

- Is there adequate amenity space for the development?
- Does the new development respect and enhance existing amenity space?
- Have opportunities for enhancing existing amenity spaces been explored?
- Are there existing trees to consider?
- Will any communal amenity space be created? If so, how this will be used by the new owners and how will it be managed?

J. Incorporate necessary services and drainage infrastructure without causing unacceptable harm to retained features.

- What effect will services have on the scheme as a whole?
- Can the effect of services be integrated at the planning design stage, or mitigated if harmful?
- Has the lighting scheme been designed to avoid light pollution?

K. Ensure all components e.g. buildings, landscapes, access routes, parking and open space are well related to each other, to provide a safe and attractive environment.

- Has the proposal been considered in its widest context?
- Is the landscaping to be hard or soft?
- What are the landscape qualities of the area?
- Have all aspects of security been fully considered and integrated into the design of the building and open spaces?
- Has the impact on the landscape quality of the area been taken into account?
- Have the appropriateness of the boundary treatments been considered in the context of the site?

L. Make sufficient provision for sustainable waste management (including facilities for kerbside collection, waste separation and minimisation where appropriate) without adverse impact on the street scene, the local landscape or the amenities of neighbours.

- Has adequate provision been made for bin storage?
- Has adequate provision been made for waste separation and relevant recycling facilities?
- Has the location of the bin storage facilities been considered relative to the travel distance from the collection vehicle?
- Has the impact of the design and location of the bin storage facilities been considered in the context of the whole development?
- Could additional measures, such as landscaping/boundary treatments be used to help integrate the bin storage facilities into



The Crescent





5. Plymouth Hoe

Tree Values and Ecosystem Services Report

Background

AECOM has been instructed by the Hoe Neighbourhood Forum to carry out an assessment of trees within the Plymouth Hoe study area and their associated benefits. The study has been used to inform design principles on the management of trees within the area.

The assessment is intended to inform an analysis of the existing tree population, identify the benefits and ecosystem services associated with the trees and to provide proactive advice on the future management of the tree resource in this part of Plymouth. Recommendations should be tied into wider city wide objectives for tree cover and management where possible. A key part of the assessment is an iTree study.

iTree is a peer reviewed suite of software from the USDA Forest Service. It is developed and supported by The Forest Service, Davey Tree Expert Company, National Arbor Day Foundation, the Society for Municipal Arborists, the International Society of Arboriculture and Casey Trees. iTree is a suite of free to use tools which can be used to analyse the nature and associated benefits of the urban forest, it has been applied to many cities and other conurbations across the world.

As part of the assessment AECOM have conducted the following:

I. iTree Canopy assessment. To identify the level of canopy cover for trees within the Plymouth Hoe study area boundary.

II. A Capital Asset Valuation of Amenity Trees (CAVAT) has also been carried out to identify the capital asset value of the trees within the study area boundary.

III. iTree Eco v6 assessment using existing Plymouth City Council inventory data – this data has been processed through the iTree Eco v6 tool to identify values for structural and ecosystem services values provided by the trees within the study area boundary. AECOM has been supported by Treeconomics Ltd, leading iTree practitioners in the UK in relation to the iTree Eco application.

The following chapter provides a summary of the Plymouth Hoe Tree Values and Ecosystem Services Report. However, the full report can be found in Appendix B.

The Benefits Associated With Trees

There is a growing recognition of the importance of trees to society.

Nowhere is this more relevant than in the urban environment, where the urban forest has the potential to provide a broad range of ecosystem services and other associated benefits to local people.

These benefits range from tangible improvements in local air quality, flood water attenuation, reducing high urban temperatures, reducing heating and cooling costs for buildings and improving mental and physical well-being. Trees are also central in place making, are a key structural component of urban biodiversity and encourage investment.

Many of the potential benefits trees can provide are not fully realised and this represents a significant missed opportunity in the strategic management of the urban environment.

As a society we need to define and understand the benefits that trees provide so that they can be afforded proportionate weight in decision making.

Key to maximising the benefits provided by trees is a full understanding of the existing tree resource and the benefits currently provided and how this can be further developed for the greatest overall gain. Building resilience into the urban forest is essential to ensure long term viability.

Tree species and planting specifications which have been the stalwart of urban landscape planning may be exacerbating urban problems and may not be future proof in the face of a changing climate and the increased pressures of pests and disease.

Understanding the optimal structure and composition of the urban forest for a given area is central to ensuring a high return of ecosystem services and a resilient future urban tree population.

Trees grow slowly and the steps we put in place today will have a significant impact on the legacy of urban forest cover and green infrastructure provision for future generations. Whenever a tree is planted it needs to be the right tree, planted in the right way, to provide the greatest benefit for its immediate surroundings.



Summary

Benefit	Description	Value	Monetary Value (£)
Number of Trees Assessed		291	n/a
Total Canopy Cover	'the layer of leaves, branches, and tree stems that cover the ground' when viewed from above (Treeconomics Ltd, 20171	9.15%	n/a
Most common Tree Species			n/a
CAVAT Value	Capital Asset Value system for Amenity Trees (used commonly by local authorities.	n/a	£4,998,334.00
Structural Value		n/a	£313,000.00
Carbon Sequestered	Carbon is taken out of the air and sequestered in wood and stored	2868 tons per year	£620.10 per year
Carbon Stored	Carbon is taken out of the air and sequestered in wood and stored	83.31 tons	£18,011.50
Avoided Stormwater Runoff	amount of storm water per cubic foot attenuated	97.8 cubic metres per year	£148.00 per year
Air Pollution Removed	Reduction to the urban heat island effect, removal of pollutants from the air, affec on the movement of airflow and reduction to energy consumption from buildings.	£96.79 pounds per year	£411.77 per year
Oxygen produced		7649 tons per year	n/a

Report Summary

Canopy cover for Plymouth Hoe is nearly half that of the wider Plymouth urban forest. The trees on Plymouth Hoe have a significant capital asset value and provide valuable amenity and ecosystem services to the study area. This inherent value which will increase over time as trees grow in stature justifies current and future investment in this important resource.

Most of the trees on the Hoe are semi mature and this underlines both the increased value of the existing mature trees which are present and the positive future cohort of the next generation of mature trees as the currently semi mature stock increases in size and age.

Predominant species are limited to a few key types such as lime, cherry, rowan and whitebeam. Many of these trees are relatively short lived and do not form large canopies with extensive leaf areas. This limits their longer term contribution to amenity and ecosystem services. It is clear that larger trees with a greater leaf area provide the greatest return in terms of capital asset and amenity value as well as ecosystem service provision.

Recommendations

- Plant new trees to increase canopy cover to a target of 15% where this does not conflict with other landscape priorities.
- Adhere to the principle of 'right tree right place'.
- Maintain and protect those existing mature trees which provide the greatest benefits.
- Plant trees which will achieve significant ultimate size and age.
- Build on existing species diversity, increasing the numbers of the most beneficial trees such as London plane, honey locust, English oak, sycamore and maidenhair where they are performing well.
- Select new trees to increase resilience to pests and disease and site conditions. Suggested species include: Corsican pine, scots pine, silver lime, small leaved lime, wellingtonia, coast redwood, pin oak, lucombe oak, pride of India, swamp cypress, hornbeam and sweet gum for areas of open space. For more constrained areas see the planting palette on page 74.
- This list is not exhaustive and represents a selection of tree species which are likely to be suited to site conditions. Other long lived and large canopied species are also likely to be appropriate. Species selection should be informed by past experience in the wider locality.
- Work towards a future level of species diversity where no single species makes up more than 15% of the total tree population on the Hoe. New planting schemes should be vetted in relation to the baseline situation detailed in this report (Appednix B), to ensure they contribute positively to this goal.
- Avoid over reliance on smaller more ornamental tree species which are generally shorter lived.
- Avoid over reliance on a particular species or genus (e.g. Sorbus, Tilia or Prunus).
- Adhere to good biosecurity practices for all tree work and new planting and be vigilant for pests and diseases.
- Reassess canopy cover in 5 years.





6. Next steps

Next Steps

The recommended next steps for how to use the outcomes of this design options study are to:

- Embed the guidelines in the Draft Neighbourhood Plan;
- Engage with the Council to develop policies supporting the guidelines;
- Engage with developers and to seek support for ensuring the implementation of the guidelines in upcoming applications;
- Promote a site where design guidelines are to be applied and tested; and,
- Consider establishing a design review panel.

Embed the masterplan and guidelines in the Draft Neighbourhood Plan

The objective of this report is to develop a series of design guidelines for development possibilities in the Hoe. The neighbourhood plan can only include land use policies that guide applications that constitute 'development'[1]. Where public realm improvements require planning permission the neighbourhood plan can include criteria-based policy and principles that guide future change within the neighbourhood area. The design guidelines can form part of such criteria.

The report can be used as evidence to support the forthcoming neighbourhood plan (and its draft policies) where the analysis highlights relevant issues and opportunities that can be influenced by land use planning interventions.

The focus of this report has primarily been on important local character assets and urban design guidelines to be considered in future development proposals. These suggestions should be considered alongside other non-design interventions, such as exploring opportunities for supporting or restricting certain types of development/land uses and allocating the key sites identified for development. Any policies put forward must be capable of meeting the basic conditions[2] (e.g. having regard to national policies and general conformity with the strategic policies contained in the development plan).

Specific proposals could include:

Urban design guidelines - The neighbourhood plan can include urban design policy where specific local circumstances demand a neighbourhood approach. The plan could transpose many of the urban design guidelines within this document into statutory land use planning policy where the Local Plan or National Planning Policy Framework does not provide a similar or sufficiently detailed steer on design matters.

Land uses – The plan could specify what uses would be preferred in particular locations or set out design-based policies such as general residential design guidelines, which could provide a hook to a more detailed residential design guide that sits within the plan as an appendix. The appendix could detail the basic principles and criteria that would be expected within the neighbourhood area.

Community use buildings - The neighbourhood plan could potentially use site allocations (or a separate Neighbourhood Development Order) to de-risk and incentivise the delivery of new social infrastructure. The plan may also detail what use classes would be acceptable and the most conducive to local needs locally e.g. community café, sports facilities, meeting/leisure spaces etc. Flexibility and a mixed use approach is likely to be required but this will need to be considered in the context of complementary Local Plan policies that address strategic matters such as the retail hierarchy and treatment of existing commercial floorspace.

Open spaces/local green space designations policy – The masterplanning work provides an indication of where landscaping and open space would be appropriate. Existing green space should also be considered for the Local Green Space Designation where they are locally valued and can be incorporated into future redevelopment of the area; ensuring sufficient green infrastructure is delivered.

Engage with the Council to develop policies supporting the proposals

The inputs from the Council's policy and development management specialists would be invaluable in advance of formal consultation and submission. The steering group should consider how our recommendations can be transposed into policy through discussions with the Council and use the best practice guidance from Locality to prepare daft policies for consultation. Locality's 'Writing Planning Policies' [3] guidance sets of how different planning policies are designed to achieve different things. The guide describes the three most common as:

Generic – a simple policy which applies universally to development across the entire neighbourhood plan area;

Criteria based – a policy with a series of requirements that should be met by development proposals. These can be set out as separate bullet points; and

Site specific – this is where a policy applies to particular areas of land. One of the most powerful tools for a neighbourhood plan is to allocate land for a particular type of development. As well as allocating land you can use your plan to set out the principles which need to be followed in developing a particular site. This might include specifying what needs to be covered in a design brief to accompany any planning application. If you have site specific policies then you need to include a clear map showing the location and boundaries.

Site specific allocations are the hardest to do well. They would normally include associated policy related to land uses, quantum of development, configuration and design. The steering group should request a Strategic Environmental Assessment (SEA) screening opinion from the Council as soon as the objectives and nature of the plan are firmed up. SEA is a process for evaluating, at the earliest appropriate stage, the environmental effects of a plan before it is made. Masterplanning and allocating sites will typically trigger a requirement for SEA. An SEA will provide objective information for local residents and businesses on the positive and negative environmental effects of your plan and wider policy proposals.

In addition, the steering group should check with the Local Planning Authority that their emerging preferred options are planning matters (i.e. suitable for inclusion as land use planning policy). Those that are not can be considered as community projects or neighbourhood infrastructure to be included within a delivery and implementation section of the neighbourhood plan (see Section 5).

Engage with developers to seek support for the proposals

In order for the neighbourhood plan to be effective, the policies put forward in support of the design guide will require close liaison and cooperation with the Local Authority, landowners, and developers. Related to Section 1 the cooperation of these bodies can be used initially to ensure the proposed policies and strategy are robust and future proofed. At a later date these discussions will to help refine proposals leading to future planning applications.

Consulting with these key stakeholders in advance of formal consultation will help to establish buy-in to the broad objectives.

Promote a site where design guidelines are to be applied and tested.

To complement statutory policy it is good practice for the neighbourhood plan to consider implementation. Identifying a site for application of the design guidelines should be considered alongside policy interventions. The neighbourhood plan should also include a schedule of neighbourhood infrastructure and community projects which prioritise items or initiatives that have received support through public consultation or that are required to deliver the wider neighbourhood plan vision and objectives. Delivery schedules are generally disaggregated depending on whether it is social, green or physical infrastructure. This could include improvements that deliver what is envisaged.

Consider establishing a design review panel

Because the design guidelines developed as part of this document cannot cover every eventuality or design solution. The steering group could agree with the Local Authority to have a local panel of experts or to be able to convene a design panel in order to review and assess design proposals. This would provide a fresh opinion on design solutions presented.

Footnotes.

1. Section 55 of the Town and Country Planning Act 1990

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Glossary of Terms

Building line
The line formed by the frontages of buildings along a street.

Built form
Buildings and structures.

Edge
The boundary between two areas, these can be natural topographical features
or man-made features.

Enclosure
The use of buildings and structures to create a sense of defined space.

Gateway
The design of a building, site or landscape to symbolise an entrance or arrival to a specific location.

Historic Environment Record
A record held by the local authority of known archaeological sites, historic
buildings, and designed landscapes.

Land Cover
The surface cover of the land, usually expressed in terms of vegetation cover or lack of it. Related to but not the same as land use.

Land Use
What land is used for, based on broad categories of functional land cover, such
as urban and industrial use and the different types of agriculture and forestry.

Landscape
An area, as perceived by people, the character of which is the result of the
action and interaction of natural and/or human factors.

Landscape Character
A distinct, recognisable and consistent pattern of elements in the landscape
that makes one landscape different from another, rather than better or worse.

Landscape Character Areas (LCAs)
Landscape character areas are unique areas which are the discrete geographical areas of a particular landscape type.

Landscape Types
Distinct landscape types that are relatively homogeneous in character. They are generic in nature in that they may occur in different areas in different parts of the country, but wherever they occur they share broadly similar combinations of geology, topography, drainage patterns, vegetation and historical land use and settlement pattern, and perceptual and aesthetic attributes.

Listed Building
A listed building is one that has been placed on the Statutory List of Buildings of Special Architectural or Historic Interest. There are three categories of listed buildings in the United Kingdom:

- Grade I buildings, which are of exceptional interest and make up 2.5% of all listed buildings in the United Kingdom.
- Grade II* buildings, which are particularly important buildings of more than special interest and make up 5.5% of all listed buildings in the United Kingdom.
- Grade II buildings, which are of special interest and make up 92% of all listed buildings in the United Kingdom.

National Character Area (NCA)
A National Character Area is a natural subdivision of England based on a combination of landscape, biodiversity, geodiversity and economic activity. There are 159 NCAs and they follow natural, rather than administrative, boundaries.

Rural
Relating to, or characteristic of the countryside rather than the town.

Setting
The context or environment in which something sits.

Tranquillity
A state of calm and quietude associated with a peace, considered to be a significant asset of landscape.

Tree Preservation Order (TPO)
A Tree Preservation Order is an order made by a local planning authority in England to protect specific trees, groups of trees or woodland in the interests of amenity.

Vernacular
The way in which ordinary buildings were built in a particular place, making use of local styles, techniques and materials and responding to local economic and social conditions.

Views
Views that can be seen from an observation point to an object (s) particularly a landscape or building.

Appendix A

Schedule of Heritage Assets

Schedule of Listed Buildings

ID NUMBER	LISTED ENTRY	NAME	GRADE	EASTING	NORTHING
1	1386214	*FISHERS NOSE ARTILLERY TOWER AND SE WALL FACING INTO PLYMOUTH SOUND*	II	248143	53629
2	1113297	*NUMBERS 23 TO 39 AND ATTACHED FORECOURT WALLS AND RAILINGS*	II	247243	53632
3	1113300	*WALLS AND RAILINGS TO ROAD FRONTAGE BY WEST HOE PIER*	II	247322	53665
4	1271847	*TINSIDE LIDO AND CHANGING ROOMS*	II	247742	53666
5	1113298	*THE WATERFRONT*	II	247352	53682
6	1380066	*TINSIDE COLONNADE PROMENADE AND SUN TERRACE INCLUDING RAILINGS ABOVE*	II	247691	53717
7	1386446	*OBSERVATION TOWER BY THE DOME (DOME NOT INCLUDED)*	II	247709	53751
8	1067141	*ROYAL CITADEL CHURCH OF ST CATHERINE*	II	248067	53752
9	1067144	*ROYAL CITADEL GREAT STORE*	II*	248114	53763
10	1067151	*ROYAL CITADEL TRANSIT ACCOMMODATION*	II	248174	53783
11	1386447	*SHELTER BY SMEATONS TOWER, THE PROMENADE*	II	247773	53789
12	1067149	*ROYAL CITADEL OFFICERS QUARTERS AND MESS*	II	248030	53789
13	1386470	*THE SMEATON TOWER*	I	247762	53799
14	1386448	*SHELTER IMMEDIATELY WEST OF SMEATONS TOWER, THE PROMENADE*	II	247651	53804
15	1386216	*WAR MEMORIAL WEST OF THE WEST BASTION OF THE CITADEL*	II	247877	53804
16	1067148	*ROYAL CITADEL MARRIED QUARTERS AND SERGEANTS QUARTERS*	II	247985	53822
17	1113330	*BELVEDERE*	II	247585	53824
18	1067147	*ROYAL CITADEL MAIN BARRACKS*	II	248138	53844
19	1386449	*SHELTER IMMEDIATELY WEST OF THE BELVERDERE, HOE ROAD*	II	247520	53853
20	1067143	*ROYAL CITADEL GOVERNOR'S HOUSE AND STEPS TO DOORWAYS*	II*	248008	53878
21	1386465	*PARK KEEPERS LODGE*	II	247877	53887
22	1386466	*K6 TELEPHONE KIOSK (ADJACENT TO PARK KEEPERS LODGE)*	II	247880	53889
23	1067142	*ROYAL CITADEL COOKHOUSE*	II	248069	53898
24	1386462	*DRAKE STATUE*	II*	247700	53902
25	1386461	*ARMADA MEMORIAL*	II*	247779	53903
26	1067145	*ROYAL CITADEL GUARDHOUSE*	II	248038	53906
27	1067150	*ROYAL CITADEL SCHOOL*	II	248012	53908
28	1067146	*ROYAL CITADEL JUNIOR RANKS CLUB*	II	248112	53924
29	1113344	*GATE PIERS AT SOUTH END OF STREET*	II	247634	53924
30	1386464	*PLYMOUTH NAVAL WAR MEMORIAL*	I	247740	53940
31	1386468	*THE ESPLANADE NUMBERS 1 TO 8 AND FORECOURT WALLS AND RAILINGS*	II*	247598	53947
32	1386469	*THE GRAND HOTEL*	II	247465	53949
33	1386463	*ELLIOT TERRACE NUMBERS 1 TO 8 INCLUDING 6A AND WALLS AND GATE PIERS*	II*	247513	53953
34	1096045	*VICTORIAN DRINKING FOUNTAIN MEMORIAL IN HOE PARK*	II	247835	53970
35	1113339	*PLYMOUTH CONSERVATIVE CLUB AND ATTACHED FORECOURT RAILINGS*	II	247624	53979
36	1113340	*NUMBERS 3 AND 4 AND ATTACHED FORECOURT WALLS AND RAILINGS*	II	247626	53995
37	1113332	*NUMBERS 9 AND 11 AND ATTACHED FORECOURT WALLS AND RAILINGS*	II	247578	54002
38	1386467	*PRINCE CHRISTIAN VICTOR MEMORIAL*	II	247934	54005
39	1113331	*NUMBERS 5 AND 7 AND ATTACHED FORECOURT WALLS AND RAILINGS*	II	247585	54016
40	1113346	*WAR MEMORIAL AT NORTH WEST CORNER OF THE HOE*	II	247663	54051
41	1113345	*INVICTA HOTEL*	II	247630	54054
42	1330547	*LIMA AND ATTACHED FORECOURT WALLS AND RAILINGS*	II	247552	54055
43	1330546	*LANSDOWNE PLACE AND FORECOURT WALLS AND RAILINGS IN FRONT OF NUMBER 262*	II	247532	54056

ID NUMBER	LISTED ENTRY	NAME	GRADE	EASTING	NORTHING
44	1330545	*NUMBERS 214 TO 220 AND ATTACHED FORECOURT WALLS*	II	247447	54079
45	1129992	*NUMBERS 30 AND 31 AND ATTACHED FORECOURT WALLS AND RAILINGS*	II	247511	54103
46	1129988	*NUMBERS 1 TO 14 AND ATTACHED FORECOURT WALLS AND RAILINGS*	II	247482	54113
47	1113326	*NUMBERS 1 TO 4 AND ATTACHED WALLS, STEPS AND RAILINGS*	II	247979	54116
48	1330544	*NUMBERS 59 TO 73 AND ATTACHED FORECOURT WALLS AND RAILINGS*	II	247410	54119
49	1113347	*WINDSOR VILLAS*	II	247667	54136
50	1113329	*NUMBERS 5 TO 8 AND ATTACHED FORECOURT WALLS, STEPS AND RAILINGS*	II	247996	54140
51	1113348	*WINDSOR VILLAS*	II	247665	54149
52	1129983	*NUMBERS 1 TO 15 AND ATTACHED ROAD FRONTAGE WALLS AND RAILINGS*	II	247571	54156
53	1129991	*NUMBERS 22-29 AND ATTACHED FORECOURT WALLS AND RAILINGS*	II	247512	54156
54	1113349	*WINDSOR VILLA*	II	247669	54167
55	1129989	*NUMBERS 10-14 AND ATTACHED FORECOURT WALLS AND RAILINGS*	II	247483	54172
56	1393246	*THE ROMAN CATHOLIC CHURCH OF CHRIST THE KING*	II	247708	54176
57	1386245	*DUKE OF CORNWALL HOTEL AND ATTACHED FORECOURT WALLS AND RAILINGS*	II	247214	54181
58	1113351	*WINDSOR VILLAS*	II	247669	54182
59	1113353	*WINDSOR VILLAS*	II	247665	54200
60	1113342	*LOCKYER COURT*	II	247625	54200
61	1129990	*NUMBERS 15 TO 19 AND ATTACHED FORECOURT WALLS AND RAILINGS TO NUMBER 19*	II	247512	54201
62	1113359	*WINDSOR VILLAS*	II	247663	54217
63	1386445	*NUMBERS 2 TO 12 AND ATTACHED FORECOURT WALLS AND RAILINGS*	II	247442	54227
64	1386444	*NUMBER 1 AND ATTACHED FORECOURT WALL AND RAILINGS*	II*	247480	54236
65	1113343	*22, 23 AND 24, LOCKYER STREET*	II	247608	54268
66	1386246	*NEW CONTINENTAL HOTEL AND ATTACHED FORECOURT WALLS AND RAILINGS*	II	247275	54283

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Appendix B

Plymouth Hoe

Tree Values and Ecosystem Services Report

(Full report)



AECOM Imagine it. Delivered.

Plymouth Hoe

Design Guide: Tree Value and Ecosystem Services Assessment

Locality

Project number: 60538603

September 2018

Quality information

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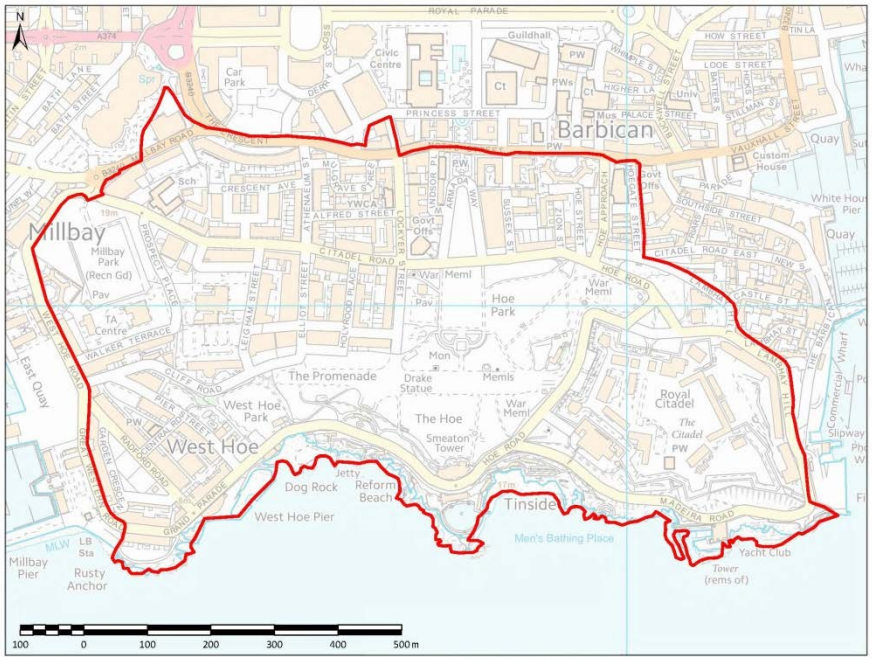
1. Introduction

1.1. Background

AECOM has been instructed by Locality to carry out an assessment of trees within the Plymouth Hoe study area and their associated benefits.

Plymouth Hoe is a large area of public open space to the south of Plymouth City Centre. It is situated on a raised low limestone cliff to the north of the seafront. The assessment is part of a wider green infrastructure review in support of the development of a Neighbourhood Plan.



Plymouth Hoe Neighbourhood Plan Area

The assessment is intended to inform an analysis of the existing tree population, identify the benefits and ecosystem services associated with the trees and to provide proactive advice on the future management of the tree resource in this part of Plymouth. Recommendations should be tied into wider city wide objectives for tree cover and management where possible. A key part of the assessment is an iTree study.

iTree is a peer reviewed suite of software from the USDA Forest Service. It is developed and supported by The Forest Service, Davey Tree Expert Company, National Arbor Day Foundation, the Society for Municipal Arborists, the International Society of Arboriculture and Casey Trees. iTree is a suite of free to use tools which can be used to analyse the nature and associated benefits of the urban forest, it has been applied to many cities and other conurbations across the world.

As part of the assessment AECOM have conducted the following:

I. iTree Canopy assessment. To identify the level of canopy cover for trees within the Plymouth Hoe study area boundary.

II. A Capital Asset Valuation of Amenity Trees (CAVAT) has also been carried out to identify the capital asset value of the trees within the study area boundary.

III. iTree Eco v6 assessment using existing Plymouth City Council inventory data – this data has been processed through the iTree Eco v6 tool to identify values for structural and ecosystem services values provided by the trees within the study area boundary. AECOM has been supported by Treeconomics Ltd, leading iTree practitioners in the UK in relation to the iTree Eco application.

Notes on the methodology applied in each case are included in Appendix A.

2. The Benefits Associated With Trees

The aesthetic benefits of trees are well understood, including the provision of screening, a sense of scale, flower, fruit and autumn colour interest along with the myriad variation in canopy form, leaf shape, bark type and other variables which add diversity and interest to gardens, parks, streets and woodlands.

There is an increasing awareness of the non-visual benefits of trees which form a key component of green infrastructure. Tree cover can contribute significantly to health outcomes and well- being, reduced traffic speeds and crime rates. The presence of trees can significantly increase retail sales, property values and well placed trees can substantially reduce heating and cooling costs. Trees provide a valuable reduction in ambient temperatures which can be key in reducing the urban heat island experienced by many cities and which is likely to increase with climate change.

Trees can help to improve local air quality and reduce the levels of harmful pollutants. Trees help to slow and reduce the movement of storm water reducing flooding and soil erosion. They store carbon and produce oxygen, helping to combat the negative impacts of climate change.

Many of these benefits are relatively un-tangible. They are not generally assigned a value and partly because of this the importance of tree cover is often overlooked in both policy and practice. Recent developments in the valuation of ecosystem services and Natural Capital accounting now facilitate a recognised valuation process to allow the value of some aspects of natural resources to be calculated. It must be recognised that this valuation process is limited to key measurable parameters and do not provide a full assessment of the overall contribution of trees and other green infrastructure.

While trees can provide many benefits it must be recognised that they can also have a negative impact in certain circumstances. This is largely due to poor species choice, poor management or poor location. Some species of tree can produce Volatile Organic Compounds (VOCs) which can contribute to ozone formation and have a negative impact on air quality (this includes oaks, willow, poplar and London plane). This issue is most significant in areas of high ozone and where a tree population is dominated by VOC producing species.

In street canyons (narrow urban streets) dense linear tree belts can trap pollution and prevent it from dissipating, exacerbating pollution concentrations.

On shrinkable clay soils trees can lead to subsidence of structures on shallow foundations and all trees deposit some form of leaves, flowers or fruits each year which may be a nuisance to guttering or hard surfacing. Finally trees are dynamic living things, often achieving significant size and mass which may form a hazard or may grow to obstruct access, light or views. These potential negative impacts can generally be prevented by common sense planting, proactive management or reactive works.

Trees can be cheaper to maintain than grass (Woodland Trust ‘Trees or Turf’ report 2011) and research suggests that for every £1 spent on tree management up to £4.96 is recouped in associated benefits (Sunderland et al, 2012).

3. Canopy Cover

Canopy cover can be defined as *“the layer of leaves, branches, and tree stems that cover the ground”* when viewed from above (Treeconomics Ltd, 2017[1]). It is a key metric in determining the contribution of trees for a given area, particularly as many of the most significant benefits associated with trees relates to their size, visual amenity and leaf area. Understanding canopy cover is the first step in valuing and managing the urban forest.

The iTree Canopy assessment revealed that canopy cover for Plymouth Hoe is 9.15%. This is significantly lower than the average level of canopy cover for UK towns and cities which is 16%. Plymouth itself has an overall level of canopy cover which is slightly higher than average at 16.9%. The generally accepted optimal level of canopy cover of is 20%, however for coastal areas, canopy cover recommendations are often reduced to15% to account for exposure, difficult growing conditions and restricted species options for coastal sites. The recent assessment of Plymouths canopy cover resulted in a recommendation for a canopy cover goal of 20%.

[1] http://www.urbantreecover.org/urban-forest-cover/

Plymouth Hoe's canopy cover is therefore 5.85% lower than the optimal level for its location and 9.85% lower than the target canopy for Plymouth.

This must be considered in tandem with other landscape and land use priorities, such as the requirement for open vistas, however where feasible, increasing canopy cover to achieve a target of 15% is strongly recommended and represents a tangible target against which progress can be measured over time. A reassessment of canopy cover within the Plymouth Hoe study area is recommended to be undertaken after 5 years to track progress against this goal. Increasing canopy cover within the Hoe will also contribute towards the wider target to increase canopy cover across the city. Whilst planting any new trees will contribute towards increasing canopy cover, planting those trees which will achieve larger dimensions in maturity (such as oak, lime or pine) will provide an exponentially greater increase in canopy than smaller tree species (such as cherry or rowan).

4. Capital Asset Valuation

The capital asset value of the trees has been calculated in monetary terms using the Capital Asset Value for Amenity Trees (CAVAT) system (Full Method) developed by Chris Neilan. Many local authorities use this system to inform decision making and compensation valuations in relation to publicly owned trees.

The following describes how the CAVAT value is derived:

CAVAT works by calculating a unit value for each square centimetre of tree stem, by extrapolation from the average cost of a range of newly planted trees. In the Full Method this basic value is adjusted to reflect the degree of benefit that the tree provides to the local population. The adjustment is designed to allow the final value to reflect realistically the contribution of the tree to public welfare through tangible and intangible benefits. (Chris Neilan, 2010).

The valuation for trees within the Plymouth Hoe study area boundary is **£4,998,334.00.**

5. The Characteristics of Trees on Plymouth Hoe

5.1. Species

The tree stock on Plymouth Hoe features a fairly wide range of species, however only a small number of species are present in significant numbers. Common lime and two species of cherry (Japanese and sour cherry) are the most common species. Sorbus (whitebeam and rowan) and sycamore are also fairly well represented. The remaining trees include varieties of oak, plane, ash, maple and birch.

It is generally recognised that within the wider urban forest a single species should not make up more than 5-10% of the overall tree population to ensure diversity and resilience. Whilst this approach does not specifically apply to the relatively small area such as Plymouth Hoe, species diversity should generally be as high as possible and the management of individual areas or sites can have a significant contribution to the wider diversity of the urban forest. Whilst cherry and Sorbus (rowan and whitebeam) provide considerable amenity benefits in the form of fruits, flowers and autumn colour they are not long lived or large canopied species and therefore their amenity and ecosystem services contribution is limited.

Figure 1 below illustrates the relative proportion of different tree species on Plymouth Hoe.

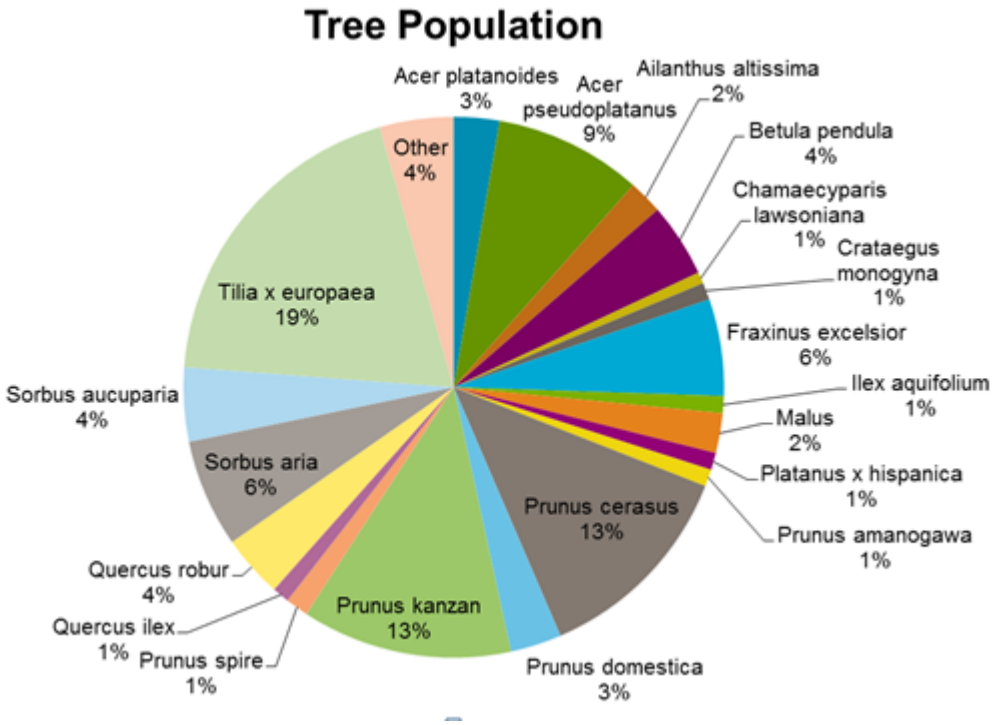


Figure 1 Tree Population by Species

5.2. Leaf Area

Leaf area is a key metric to understand tree benefits as many ecosystem services and amenity factors relate specifically to the size of the tree canopy. Common lime, which forms nearly 20% of the total tree population provides nearly 30% of the total leaf area within the Hoe, despite providing over 26% of the overall tree population cherry species provide only 16% of the leaf area. This demonstrates that tree size and leaf area are intrinsically linked to the benefits associated with canopy cover.

Table 1 Leaf Area by Species

Species Name	Population Percentage	Leaf Area Percentage	Total
Common Lime (Tilia x europea)	19.6	29.3	48.9
Sycamore (Acer pseudoplatanus)	8.9	16.3	25.2
Japanese cherry (Prunus kanzan)	13.7	9.2	23
Sour cherry (Prunus cerasus)	12.7	6.8	19.5
Ash (Fraxinus excelsior)	5.8	6.7	12.5
Whitebeam (Sorbus aria)	6.5	4.2	10.8
English oak (Quercus robur)	3.8	4	7.8
Norway maple (Acer platanoides)	2.7	4.8	7.5
Silver birch (Betula pendula)	4.5	2.3	6.7
Rowan (Sorbus aucuparia)	4.5	1.9	6.4

The data identified 291 trees with a total tree canopy cover of 3.632 acres. The majority of the trees are common lime (Tilia x europea), Japanese cherry (Prunus kanzan) and sour cherry (Prunus cerasus). Trees described as ‘other’ relate to trees that were the only representative of their species or if the species was unknown/unidentified in the inventory data provided.

5.3. Age Class

Age diversity is an important component of resilience. Too many trees in one age class can result in a significant proportion of trees becoming over mature at the same time. As these trees are removed for health and safety reasons important canopy cover and amenity benefits will be lost while younger trees develop to provide equivalent benefits. The aim is for a diverse population of trees covering all age classes so that as mature trees become less viable there is a new generation of mature trees ready to take their place.

The most common age range by far is semi mature. Trees of this life stage can be described as a *Tree in the first third of its normal life expectancy for the species (significant potential for future growth in size).*

This is positive in that there is a strong population of younger trees which will form the mature tree stock of the future, however, approximately 45% of the semi mature tree population could be considered to be relatively short lived, small canopied, ornamental species (e.g. cherry, rowan, apple) . These trees are important for visual amenity, interest and species diversity however their contribution is arguably limited due to their reduced life span and canopy size. Species diversity is high in both the young and semi mature classes including species which will achieve a significant ultimate size and life span including honey locust, London plane, English oak, sycamore and maidenhair tree. These trees are present in relatively low numbers and would benefit from increased planting where feasible.

The younger tree stock is less well represented, however this is easily addressed with new tree planting where space allows. Younger trees include an increased prominence for oak and ash species. Cherry and rowan are still relatively frequent. Young trees are generally considered to be recently planted or less than 10 years of age.

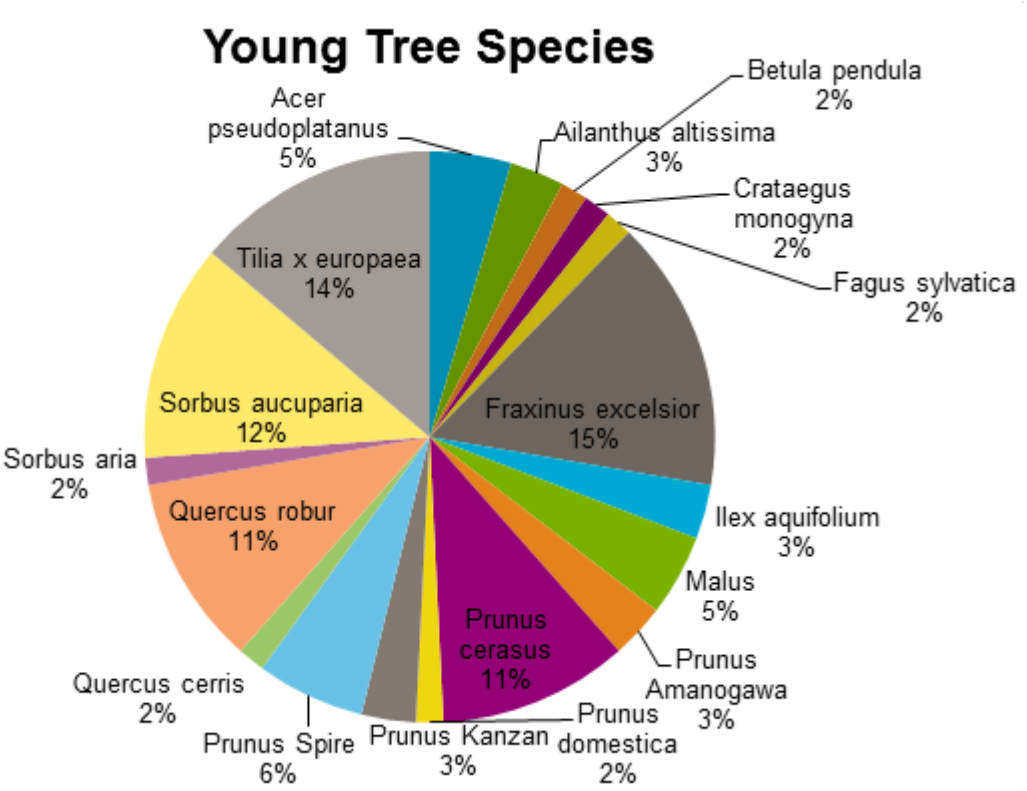


Figure 2 Young Trees by Species

Mature trees can be defined as *a tree in the final third of its normal life expectancy for the species (having typically reached its approximate ultimate size)*. The relatively scarcity of mature trees makes such trees even more important and well placed mature trees should be afforded full protection wherever possible.

Of the mature trees, the majority are common lime which reflects both the historic planting strategy on the Hoe and also the longevity of this tree species. Trees such as cherry typically have shorter life spans than larger growing and less ornamental species. Cherry in particular is not considered a long lived species, partially due to its susceptibility to disease.

No trees were classified as early mature (*a tree in the middle third of its normal life expectancy*) in the inventory data due to the classification system adopted.

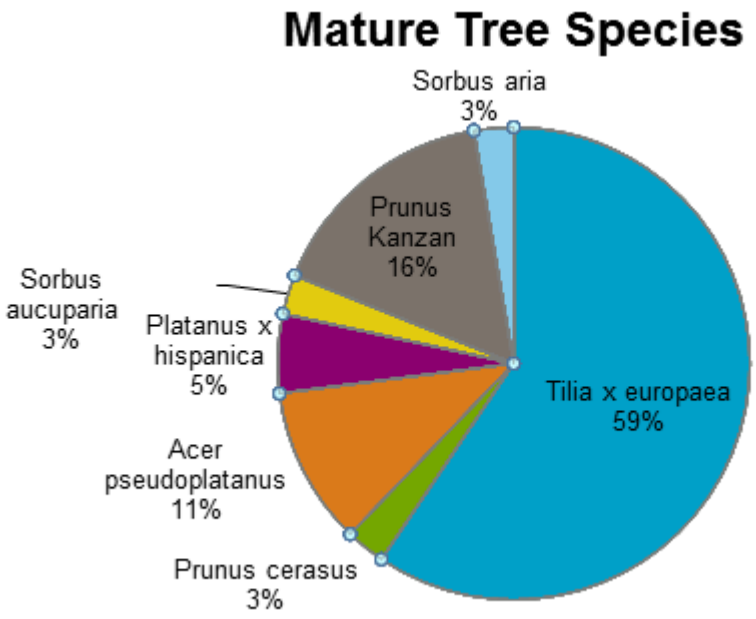


Figure 3 Mature Trees by Species

5.4. Tree Condition

The vast majority of trees are described as being in very good condition (assigned to 100% canopy condition) which is really positive and demonstrates the health, suitability to the site and appropriate level of aftercare.

Local authority tree plantings have reported failure rates as high as 25% (Trees in Towns II, 2008) which is likely to be attributable to the cost and difficulty in providing aftercare and the quality of planting and planting stock.

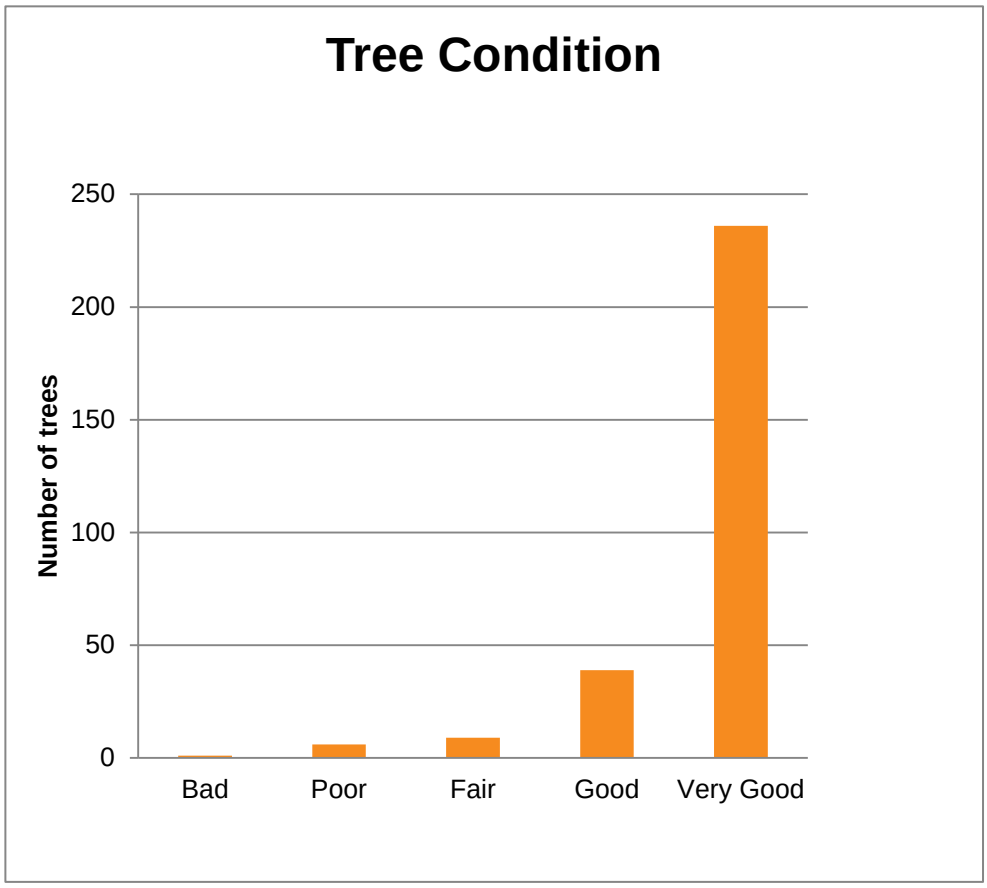


Figure 4 Tree Condition

6. Ecosystem Services

6.1. Avoided Storm Water Run Off

Research by Stovin et al (2008) suggests that urban trees help to intercept and store rainfall, reducing soil erosion and 'run-off' by buffering the impact of raindrops on the soil. Flooding in urban areas currently costs the UK over £270 million annually with related significant impacts on water quality and the environment associated with over run drainage systems.

Current climate change forecasts indicate an increased likelihood for storm water events; "*Winters will become wetter with more days of rain and greater volume of precipitation. This can lead to an increased flood risk by up to 200%"* (Forestry Commission, 2010) and trees are likely to become increasingly important as a cost effective contribution to Sustainable Urban Drainage Solutions (SuDs).

The 291 trees assessed within the Plymouth Hoe study area helped to attenuate an estimated 97.8 cubic metres of storm water run off per year (equivalent to £148.00). As trees increase in size and leaf area and the overall percentage of canopy cover extends even greater storm water control benefits can be expected and therefore with new planting and future growth of existing trees this figure could increase substantially. The current contribution reflects just a small part of the wider contribution of Plymouths urban forest.

6.2. Air Pollution Removal

Poor air quality can be a key problem in many urban areas, it can have negative effects on human health, cause damage to landscape materials and ecosystem processes as well as reducing visibility. Urban trees can provide part of the solution to air quality improvements in tandem with other landscape, technological and cultural solutions.

They can achieve this by reducing the urban heat island effect, removing pollutants from the air, affecting the movement of airflow and reducing energy consumption from buildings, which in turn reduces the energy demand from the power source. The trees within the Plymouth Hoe study area contribute nearly £412 of air pollution removal annually. This figure could be increased substantially if a greater proportion of large canopied trees with a greater leaf area were planted along with an overall increase in canopy cover.

6.3. Carbon Storage and Sequestration

Trees help to mitigate climate change by the sequestration of carbon (part of the carbon cycle) in new growth each year. Carbon is taken out of the air and sequestered in wood and stored. This accumulated carbon stored is known as Carbon Storage. Dependant on the tree species and size over its lifetime several tons of atmospheric carbon dioxide can be absorbed and stored.

The trees in the Plymouth Hoe study area are estimated to sequester approximately £620 of carbon per year. Carbon Storage (non-annual benefit) is valued at £18,011.50.

7. Climate Change and Pests and Disease

The climate in the UK is changing and this is typically likely to result in hotter, drier summers and warmer, wetter winters (Defra 2009). As a consequence trees may be exposed to higher levels of drought. On this basis the selection of drought tolerant tree species is likely to be important. As temperatures rise trees are likely to become increasingly important to mitigate the impacts of a changing climate.

With the onset of climate change and increased movement of goods globally, the risk associated with pests and diseases is increasing. In many cases diseases which do not cause a significant impact in the country of origin can have a very significant negative impact on tree species in another country. This is reflected by pests such as the Emerald Ash Borer which is devastating ash forests in the USA and Canker Stain of London Plane which has killed large numbers of plane trees in France.

The key to managing the risk of pests and disease is resilience, vigilance and adherence to good biosecurity measures (https://www.trees.org.uk/Trees.org.uk/media/Trees-org.uk/Documents/AA-Biosecurity-Policy.pdf). This means promoting a wide variety of tree species across the urban forest so that if a single species is affected the impact will be reduced. Tools and equipment used in tree work and planting should be disinfected and new trees should be locally sourced and grown where possible. Trees should be regularly assessed and where potential pests or disease are identified the advice of an arboriculturist should be obtained. Pests and disease can be reported to the Forestry Commission via the Tree Alert website (https://treealert.forestry.gov.uk/) and they may also give pest and disease identification and management guidance.

Many species of pests and disease could pose a threat to the trees on Plymouth Hoe. Ash in the UK is now at serious risk due to ash dieback (*Chalara fraxinia*), oak is affected by acute oak decline, ornamental cherry species are highly susceptible to bacterial canker disease.

Figure 5 below sets out some of the potential impacts of four selected pests and disease which could impact on trees within Plymouth Hoe if introduced. The most significant of these is the Asian Longhorn Beetle which was reported in Kent in 2012, it was treated and the area is still being monitored. If this pest arrived in Plymouth it could affect more than 50% of the trees within the study area. *Xyella fastidiosa* can affect cherry species along with oaks and other hardwoods including maples, planes and elms. The control method for this disease is the removal of all host trees within 100m of a diseased tree. As a majority of the species on site are host species this could have huge impacts on the population of trees present. Another pest that could have major effects on the tree population is the Citrus Longhorn Beetle, this is not currently present in the UK however a significant number of trees on site would be affected if it is introduced.

Future planting schemes must take these potential threats into account by selecting a wider variety of tree species that are resilient to these pests and diseases.

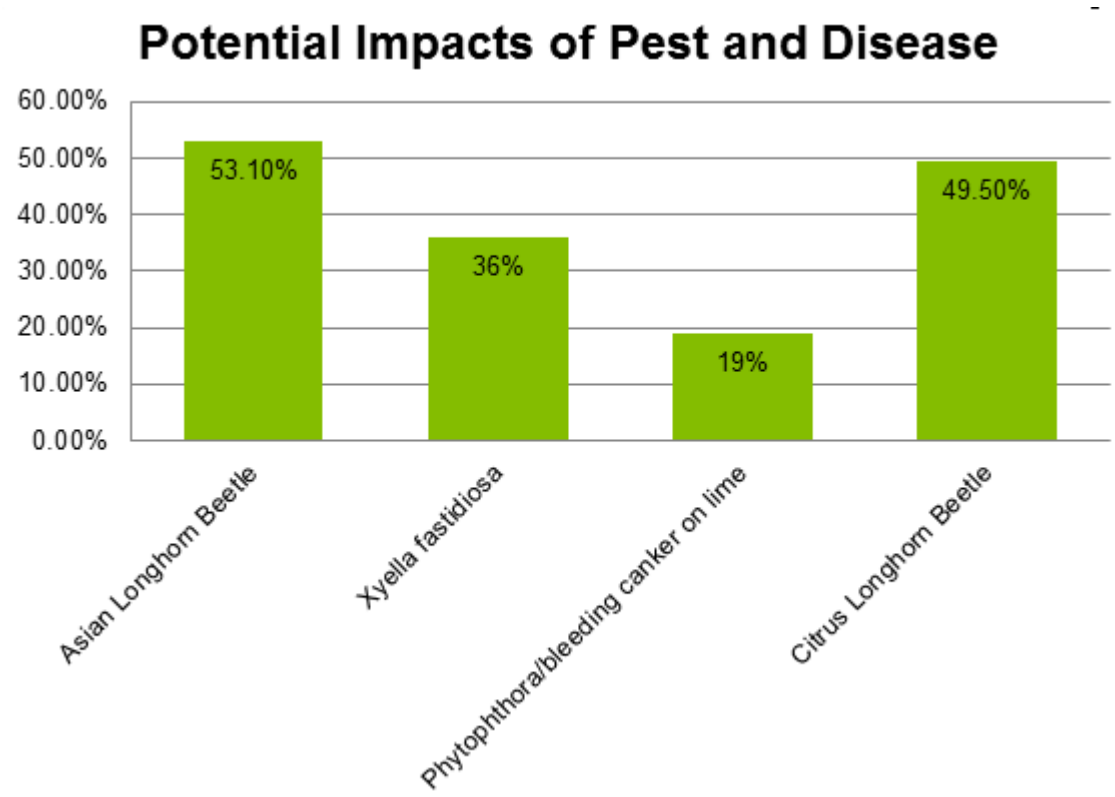


Figure 5 Potential Impacts of Key Pest and Diseases

8. Summary and Recommendations

8.1. Summary

Canopy cover for Plymouth Hoe is nearly half that of the wider Plymouth urban forest.

The trees on Plymouth Hoe have a significant capital asset value and provide valuable amenity and ecosystem services to the study area. This inherent value, which will increase over time as trees grow in stature, justifies current and future investment in this important resource.

Most of the trees on the Hoe are semi mature and this underlines both the increased value of the existing mature trees which are present and the positive future cohort of the next generation of mature trees as the currently semi mature stock increases in size and age.

Predominant species are limited to a few key types such as lime, cherry, rowan and whitebeam. Many of these trees are relatively short lived and do not form large canopies with extensive leaf areas. This limits their longer term contribution to amenity and ecosystem services. It is clear that larger trees with a greater leaf area provide the greatest return in terms of capital asset and amenity value as well as ecosystem service provision.

The trees within the study area are at risk from a changing climate and pests and disease. These threats can be managed by promoting the diversity and resilience of the tree stock and with careful vigilance and adherence to robust biosecurity measures.

Table 2 Summary of Tree Values and Ecosystem Services

Benefit	Value	Monetary Value (£)
Number of Trees Assessed	291	n/a
Total Canopy Cover	9.15%	n/a
Most common Tree Species	Common lime, sour cherry and Japanese cherry.	n/a
CAVAT Value		£4,998,334.00
Structural Value		£313,000.00
Carbon Sequestered	2868 tons per year	£620.10 per year
Carbon Stored	83.31 tons	£18011.50
Avoided Storm water Runoff	97.8 cubic metres per year	£148.00 per year
Air Pollution Removed	96.79 pounds per year	£411.77 per year
Oxygen produced	7649 tons per year	n/a

8.2. Recommendations

I. Plant new trees to increase canopy cover to a target of 15% where this does not conflict with other landscape priorities.

II. Adhere to the principle of *'right tree right place'*.

III. Maintain and protect those existing mature trees which provide the greatest benefits.

IV. Plant trees which will achieve significant ultimate size and age.

V. Build on existing species diversity, increasing the numbers of the most beneficial trees such as London plane, honey locust, English oak, sycamore and maidenhair where they are performing well.

VI. Select new trees to increase resilience to pests and disease and site conditions. Suggested species include: Corsican pine, scots pine, silver lime, small leaved lime, wellingtonia, coast redwood, pin oak, lucombe oak, pride of India, swamp cypress, hornbeam and sweet gum for areas of open space. This list is not exhaustive and represents a selection of tree species which are likely to be suited to site conditions. Other long lived and large canopied species are also likely to be appropriate. Species selection should be informed by past experience in the wider locality.

VII. Work towards a future level of species diversity where no single species makes up more than 15% of the total tree population on the Hoe. New planting schemes should be vetted in relation to the baseline situation detailed in this report, to ensure they contribute positively to this goal.

VIII. Avoid over reliance on smaller more ornamental tree species which are generally shorter lived.

IX. Avoid over reliance on a particular species or genus (e.g. Sorbus, Tilia or Prunus).

X. Adhere to good biosecurity practices for all tree work and new planting and be vigilant for pests and diseases (as detailed in section 7).

XI. Reassess canopy cover in 5 years.

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Appendix A Methodology

A.1 iTree Eco V6

AECOM was provided with inventory data for 294 trees within the Plymouth Hoe study area. The inventory data is understood to have been provided by the Plymouth City Council Tree Officers. Of these, 291 tree records were suitable for use in iTree Eco, the remaining three records contained missing information (such as species) and were not suitable for inclusion. The iTree Eco assessment is based solely on this data.

In line with iTree procedure, tree species were assigned to species codes within iTree Eco v6. DBH (stem diameter at breast height – measured at 1.5m) and total tree height were recorded for all trees. Tree crown condition was converted from the descriptive text in the inventory data (dead, poor, fair, good and very good) to a percentage of live canopy.

The overall land use description for all trees in the study was described as ‘Park’.

The pollution year and weather station details utilised in iTree were the most recent available for the UK which was 2013.

Due to the limitations of the inventory data set no other inputs where utilised for the assessment. Further information and access to the iTree suite of tools is available here: https://www.itreetools.org/eco/index.php

Treeconomics Ltd supported AECOM in the calculation of carbon storage, carbon sequestration and air pollution removal values.

A.2 iTree Canopy

To determine canopy cover, AECOM uploaded a shapefile of the Plymouth Hoe study area boundary onto the iTree Canopy website (https://canopy.itreetools.org/). 1418 points were analysed to arrive at a result with a standard error calculated as 0.80.

A.3 Capital Asset Value for Amenity Trees (CAVAT)

The publically available CAVAT Project calculation sheet was used as the basis for the asset valuation. Inventory data in the form of stem diameter values were added into the calculation spreadsheet. All trees were considered to have an accessibility of 100% as the site is a public open space. Functional value was derived from the crown condition percentages used in the iTree Eco assessment. No changes were made to adjusted value and all trees were assigned to a default life expectancy factor of 40-80 years. Further information and calculation sheets are available at https://www.ltoa.org.uk/resources/cavat.

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Project Role	Name	Position	Actions Summary	Signature	Date
Qualifying Body	Hoe Neighbourhood Forum	Chairman	Review first draft and provide comments	Penny Tarrant	
Director / QA	Jon Rooney	Technical Director	Site visit, concept plan; Revision and approval of Final Report	Jon Rooney	16/06/18
Director / QA	Adam King	Associate Landscape Architect	Site visit, technical review and approval of final report	Adam King	05/06/18
Researcher	Emma van der Velde	Landscape Architect	Research, site visit, concept plan, drawings	Emma van der Velde	04/06/18

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