

Landscape Appraisal

Barnstaple Flood Defences

August 2016

**North Devon Council
Brynsworthy Environmental Centre
BARNSTAPLE
Devon
EX31 3NP**

JBA Project Manager

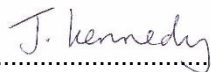
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Contract

This report describes work commissioned by Sally Nelson, on behalf of North Devon Council, by an email dated 24th November 2015. Jessie Kennedy and Nick Allin of JBA Consulting carried out this work.

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Purpose

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1 Introduction

1.1 Aim and scope of the study

The aim of this report is to identify any landscape or townscape designations and receptors, along with potential visual receptors, that may be impacted upon by options put forward for proposed flood defences and realignment of the river channel along the River Yeo from Pilton Bridge to Swing bridge in Barnstaple.

1.2 Location

The study area stretches along a section of the River Yeo from Pilton Bridge to the north down to Swing bridge to the south at the confluence of the River Yeo and River Taw. The River Yeo is a tributary of the River Taw and flows southwest through the northwest of Barnstaple, North Devon.

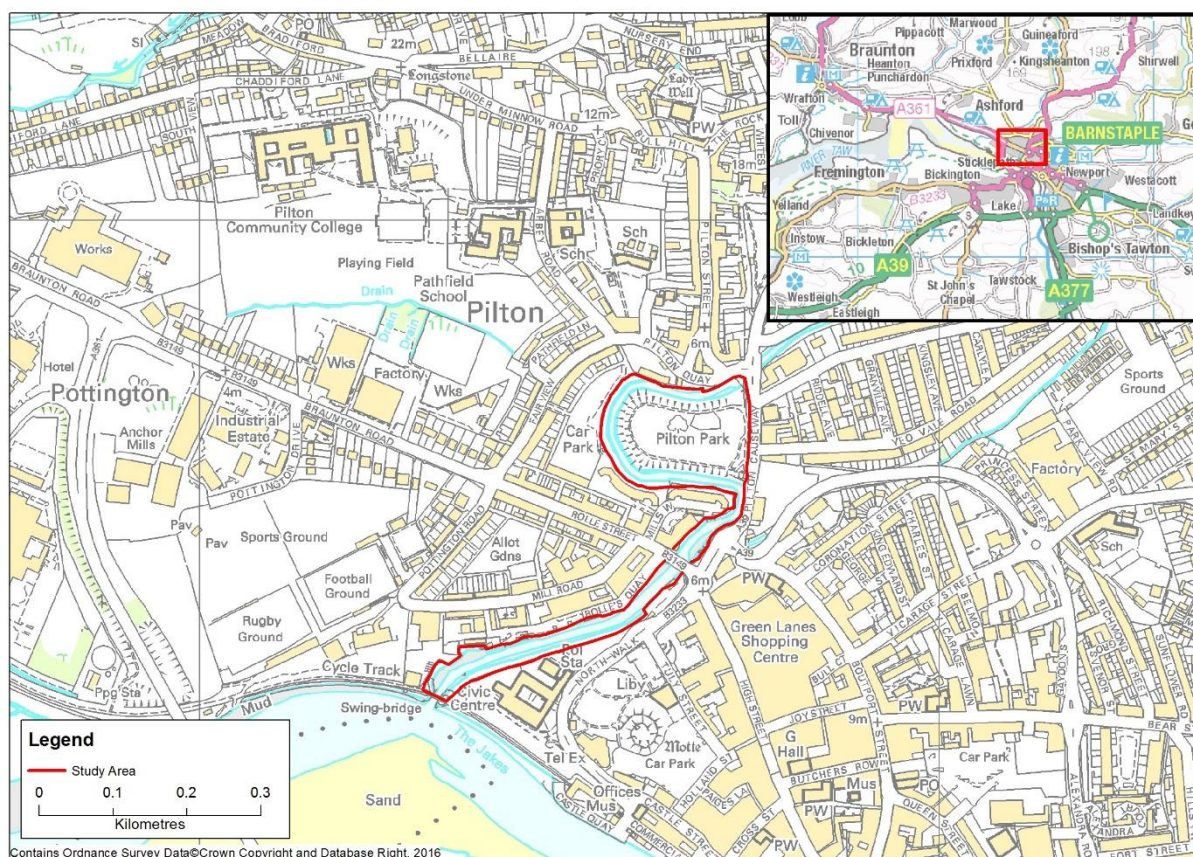


Figure 1-1: Location of study area

1.3 Project description

Barnstaple is the main town of North Devon and is situated on the tidal stretch of the River Taw, with substantial parts of the town at risk of flooding from the rivers Taw and Yeo, Coney Gut and Bradiford Water and their associated tributaries. Approximately a quarter of the built up area of Barnstaple is at risk of flooding (NDC and Torridge District Council, 2014).

The first phase of the scheme explored a variety of conceptual flood alleviation options and determined preferred options for the six flood cells identified by Devon County Council (DCC) and North Devon Council (NDC). An Environmental Options Appraisal was produced which identified potential significant environmental risks and opportunities associated with the flood risk management (FRM) options. The accompanying report provides a summary description of the

local baseline environment and identifies notable environmental features in the study area that have the potential to be affected by the proposed FRM options.

Phase Two is to further develop the design and assess the potential impacts, opportunities and constraints of the flood defences proposed for the River Yeo frontage for Flood Cell B comprising the right bank of the Yeo from Pilton Bridge to the north down to Swing bridge in the south at the confluence of the River Yeo and River Taw.

1.4 Preferred option

The preferred option is to re-route a section of the existing river channel, which currently flows around Pilton Park, through the park along the eastern boundary. The option will also include raising flood defences from the south of Pilton Park to the right bank of the river, along Saw Mill and Port Mill Court and along Rolles Quay. This is shown in Figure 1-2 below.

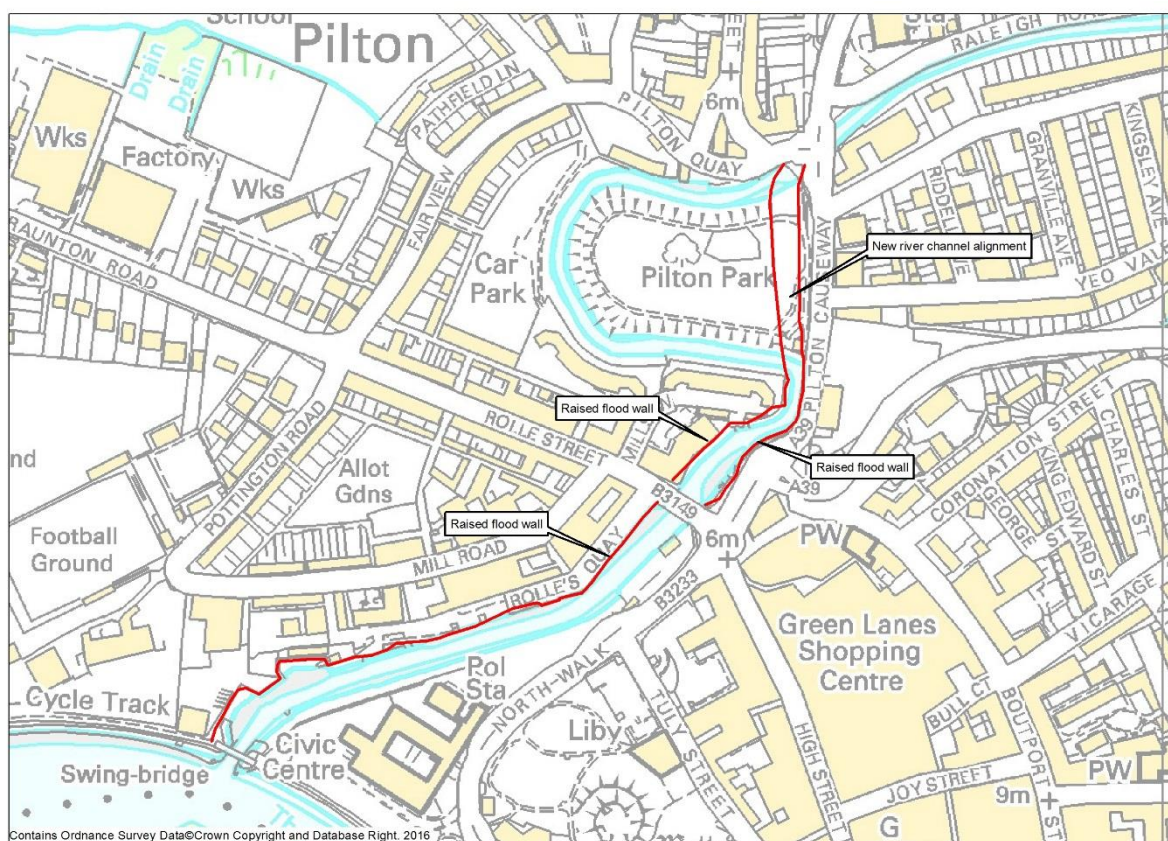


Figure 1-2: Approximate location of flood defence alignment

Option 2

This option follows the same route as Option 1 from Pilton Bridge taking a wide angle into the park, the channel straightens out in a slight southeast direction re-joining on the same alignment as the existing channel.

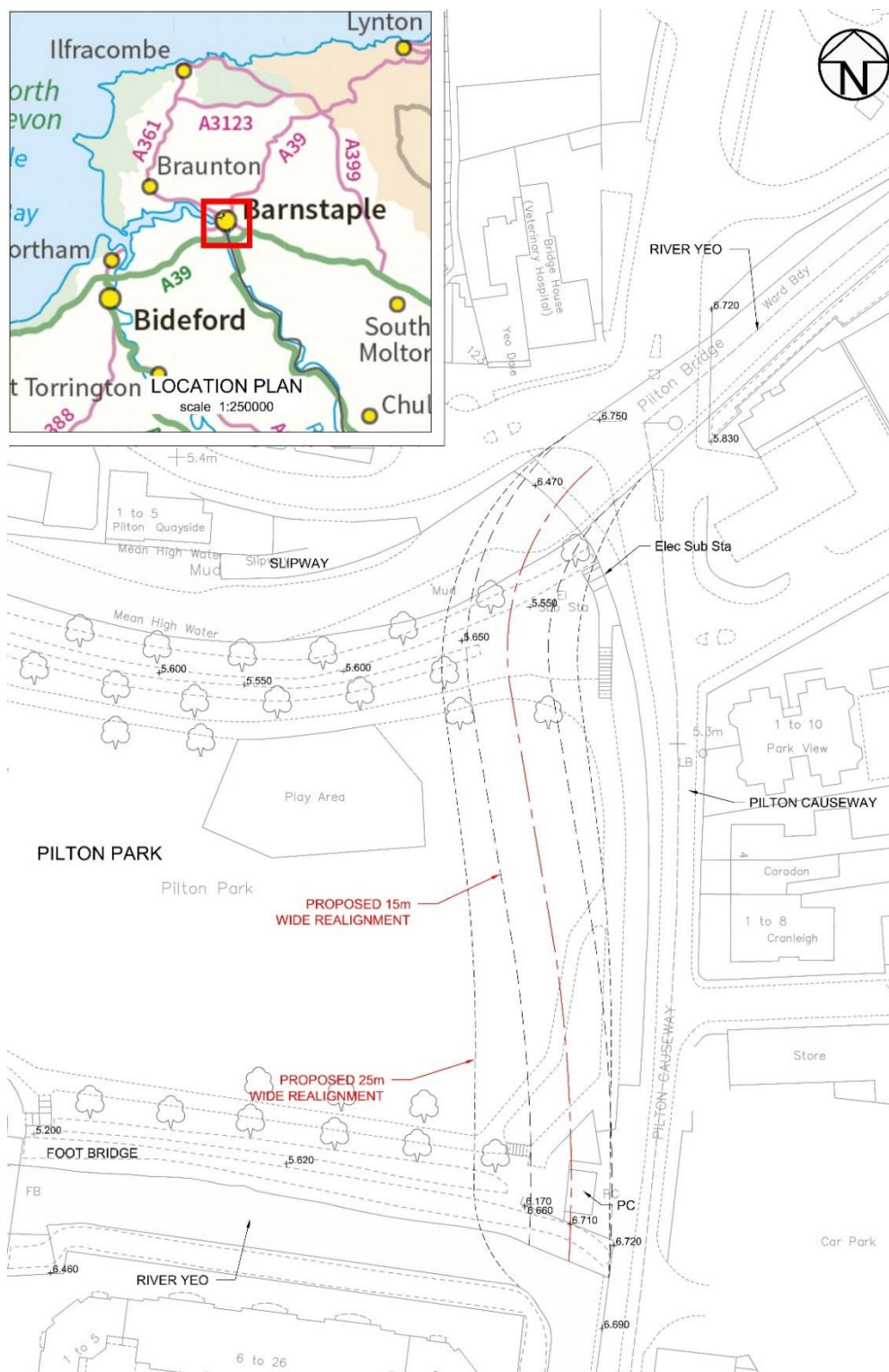


Figure 1-4 Alignment through Pilton Park - Option 2

The narrower 15m channel would require a hard engineered solution with limited opportunity for soft engineering of the river channel. The wider 25m channel would enable a soft engineered solution providing the opportunity to create a naturalised channel. This would deliver greater amenity and biodiversity value alongside an opportunity to enhance and mitigate against the realignment of the river through the park.

1.5 Landscape baseline

The landscape character of the area under consideration can be assessed at a variety of different scales, from national to site based. Desk based and site based studies considering these differing scales are outlined below. A number of existing published studies relate to the area under consideration and provide a basis for the assessment of the landscape character and impacts.

The existing desk-based assessments are primarily concerned with the rural landscape. The site is within urban Barnstaple; therefore, a townscape assessment may be more appropriate to determine local character. A detailed townscape assessment may be appropriate at the preferred final option stage. However, for the purposes of this study, a broad description of baseline townscape and landscape character is provided here.

1.5.1 Site landscape / townscape character and fabric

Barnstaple is located on the tidal stretch of the River Taw approximately 11km east of the North Devon coastline, 56km north-west of Exeter and 66km west of Taunton. It is within the broad valley of the River Taw and Yeo, and enclosed by rising ridges of open farmland interspersed with woodland blocks to the north south and east. Barnstaple is a former river-port exporting wool and later developed industries in shipbuilding, foundries and sawmills. The town grew to the south of the River Yeo with Pilton Village separated from Barnstaple by tidal marshy ground and the River Yeo. The town has grown and developed with residential properties infilling land between Barnstaple and Pilton, although Pilton Park remains as an open space. It is now the main commercial centre in North Devon with a population of approximately 31,600 (2011 census UK National Statistics).

The proposed flood defence will stretch along a section of the River Yeo from Pilton Bridge down to Swing bridge in the south at the confluence of the River Yeo and River Taw. The townscape is varied along the course of the river with a range of residential property types, retail and commercial properties, light industrial units and public open green space.

Pilton Park is one of ten formal parks in North Devon. It is an important public open green space 0.17km from Barnstaple town centre and within the Pilton Conservation Area. It provides a valuable recreational resource with a circular footpath around the perimeter of the park that is well used by local residents and dog walkers. Facilities include a small playground area and public toilets by the main entrance into the park. The north, west and south of the park is bound by the River Yeo with the east enclosed by a stone rubble wall beyond which is Pilton Causeway (A39). The majority of the park is general amenity grassland with a low embankment and mature trees around the perimeter. There are three entrances to the park. The main entrance in the southeast corner has a formal appearance with square stone rubble piers and cast-iron double gates (Grade II Listed) and ornamental planting beds around the ramped and stepped access which lead to an avenue of Horse Chestnut, Lime and Norway Maple along the southern boundary. The second entrance in the northeast corner of the park also has square stone piers and a single cast iron gate (Grade II Listed) with stepped access into the park. The third entrance is via an attractive timber framed footbridge over the River Yeo along the southern boundary of the park from Saw Mill and Orleigh Mill Court. The North Devon and Torridge District Councils' Green Infrastructure Study notes a deficiency in amenity areas of Green Infrastructure.

To the north of the site is Pilton Conservation Area which comprises residential and commercial properties and encompasses Pilton Street, The Rock, Bull Hill, Bellaire and Under Minnow Road, Pilton Bridge, Pilton Causeway (A39) and Pilton Park itself. Buildings date from the medieval period, identifiable by burgage plots and almshouses, to present day developments. North of Pilton Park along the right bank of the River Yeo is Pilton Quay and a former quayside building which has been converted into a 4 storey apartment block; adjacent to this is a commercial outlet and outbuildings (former quayside building - a locally listed heritage asset).

West of Pilton Park is Fairview carpark which backs onto rows of two storey C19 Victorian terraced housing. Boundary treatments including garages, sheds and outbuildings at the rear of the properties adjacent to the car park are of varied quality and create a slightly discordant character. The former ice factory in the southwest corner of the car park is a locally listed heritage asset which has been divided into a number of retail units. Views from the car park are enclosed by the housing to the north and west and retail units to the south. To the east the high flood embankment which runs along the right bank of the river restricts views of Pilton Park from the carpark.

To the east of Pilton Park is Pilton Causeway (A39), one of the main transport links into Barnstaple. There is a combination of commercial buildings, three storey C19 Victorian houses and three

storey modern apartments, including a bicycle shop (Carb Cycles) which was a former warehouse and is a locally listed heritage asset along Pilton Causeway with views of the park. Pilton Causeway is elevated, providing a vantage point with views across the park. Pilton Bridge, to the north-east corner of the park, alongside a stone rubble wall with granite stone coping which runs along the eastern boundary of the park, are Grade II Listed. These form a historic feature and boundary to the park.

South of Pilton Park and along the right bank of the River Yeo to Rolle Bridge the character is one of modern development with three and four storey residential apartments. When the development was built the land was raised and sheet piling and concrete walls were constructed to retain the raised land along the right bank of the river. The left bank between the park and Rolle Bridge is constructed from rubble stone flood walls which are approximately 1.25m above pavement level, with the river becoming canalised. Boundary treatment along the modern residential development is a combination of hedges and bow top fencing along the top of the concrete walls and sheet piling.

South of Rolle Bridge along the right bank the character is mixed, with a combination of two storey Victorian terrace properties alongside commercial units with large outbuildings and a four storey modern apartment block towards the end of Rolles Quay. The River Yeo is contained behind a stone flood wall with concrete coping which is approximately 1.2m high along sections of Rolles Quay. Small paved areas with benches and small pockets of planting provide welcome openings between parked cars which dominate the street scene along the flood defence and limit pedestrian access along the length of the river. Views of the river and across to the left bank, where there is a break in built form and with the exception of the high rise council building, are available from these small interludes, offering a sense of space. Boats moor up along the right bank with stepped access over the wall halfway along Rolles Quay and a ramped slipway into the River Yeo to the south of Rolles Quay. Beyond Rolles Quay are a number of outbuildings and yards including a timber building used by the Sea Cadets between Rolles Quay and the swing bridge at the confluence of the River Yeo and River Taw. These have a functional character and provide a visual association with the river and historical development of the area as a former port.

On the left bank from Rolle Bridge is a stone flood wall which has been raised with a concrete defence adjacent to a new housing development site. Downstream from the housing development the flood wall continues as a stone wall with concrete coping to the swing bridge at the confluence of the River Yeo and River Taw. Along the left bank is a 1970's high rise 10 storey building called the Civic Centre, which is used by Devon County Council, Barnstaple County Court and the police station, this dominates the skyline. A public carpark between the high rise building and the proposed housing development site provides a more open aspect between the river and Castle Mound, a Scheduled Monument which includes Barnstaple Castle, a Norman motte and bailey around 20m high.

Overall the site has a diverse character: man-made, historic and natural elements are generally balanced and in good condition. The combination of historic buildings and landscape features, Victorian terraces, modern 3 and 4 storey apartment blocks, retail and commercial units, and areas of open green space provide a recognisable although somewhat inconsistent character. The overall scenic quality is pleasant with only a few detractors such as the 1970's high rise building and car park, and various boats in poor condition along Rolles Quay which could be argued to have an unkempt maritime charm. Even through Pilton Park, the character is dominantly urban and the proposed alignment is always enclosed to within 150m by built development.

The course of the river has been subject to management for more than 200 years and has played a key part in the historic growth and layout of the town, including the development of Pilton Park. However, the height of existing flood defences in some areas has meant the visual link and setting of the river in relation to the town has become compromised.

Figure 1-5 Landscape Appraisal Context Plan provides an overview of key features such as Pilton Conservation Area, heritage assets and public rights of way within the study area.

1.5.2 National Character Area

England has been divided into areas with similar landscape character, which are called National Character Areas (NCAs); previously known as Joint Character Areas (JCAs).

This map subdivides England into 159 NCAs and provides an overview of the differences in landscape character at the national scale. Each NCA is accompanied by a character description explaining the influences and features which determine the character of the area.

The site falls within NCA145: Exmoor.

NCA's are high-level, strategic assessments, which cover a comparatively wide area. It is considered unlikely that the proposed flood defence works will have an influence on landscape character at a National Area scale and this study therefore focuses on Devon County Council's Devon Character Assessment.

1.5.3 Local Character Areas

Devon Landscape Character Assessment

The Devon Landscape Character Assessment was developed by Devon Landscape Policy Group formed in 2005 from representatives from each Devon planning authority. The Landscape Character Assessment provides an evidence base for local development frameworks and plans, and sets out strategies and guidelines for the protection, management and planning of the landscape. The Devon-wide landscape character assessment has been assessed at two levels: there are 68 Devon Character Areas (DCA) which are areas with a unique and distinct identity recognisable on a county scale, and 37 Landscape Character Types (LCTs) which share similar characteristics across the county.

The site is within **Devon Character Area: Taw-Torridge Estuary**. Key characteristics relevant to the site are:

- *Low-lying, open and flat topography, at or very close to sea level, surrounded by higher land to the south and north.*
- *Strong maritime history linked to trade, evidenced through historic quays and impressive bridges.*
- *Few settlements except for the peripheral towns of Braunton, Northam, Westward Ho!, Barnstaple and Bideford, which have a visual influence on nearby parts of the estuary.*
- *Numerous listed buildings, including the impressive historic bridges at Barnstaple and Bideford.*
- *Conservation Areas covering the historic cores of adjoining settlements including Northam, Appledore, Braunton, Barnstaple, Fremington, Instow and Bideford.*
- *Cultural associations with the popular composer John Gay (1685-1732) who was born in Barnstaple,*
- *South West Coast Path and Tarka Trail recreational route, both following disused railway lines along the estuary, then continuing along the inshore side of Braunton Burrows.*

Forces of change and their landscape implications include:

- *Visual impacts and light pollution from development at adjacent settlements, including Westward Ho!, Bideford and Barnstaple*
- *Modern engineered features such as bridges, main roads and sewage works that affect the traditional character of the estuary setting and impact on levels of tranquility*

The overall strategy for the character area is to:

...protect the landscape's high scenic quality within (or as a setting to) the North Devon Coast AONB, and to sustain its important nature conservation sites and rare historic landscapes. Development in surrounding areas is sensitivity designed and sited to minimise its intrusion into views from the estuary; and the area's distinctive seascapes are protected.

Guidelines include:

- *Protect and restore where appropriate historic features such as quays, bridges and agricultural structures (including those of Braunton Marsh and Braunton Great Field); provide sensitive interpretation where appropriate to increase the public's awareness of these features.*
- *Manage recreational use of the area to ensure that the correct balance between recreation and conservation interests is retained.*

- *Plan to mitigate climate change impacts (particularly the effects of sea level rise and coastal erosion), allowing natural process to take place where possible, whilst ensuring that local communities are involved in making decisions about their future landscape.*
- *Plan for the sensitive future expansion of towns on the estuary fringes, incorporating new development into the landscape setting of the estuary with great care; providing green infrastructure links to routes such as the Tarka Trail and South West Coast Path; and ensuring that any new development – particularly within or adjacent to the AONB – is sensitive in terms of its design and scale.*
- *Plan to reduce light pollution from Barnstaple, Bideford and other settlements and roads.*

Devon Landscape Character Types

Within the Taw-Torridge Estuary LCA, the site lies within the constituent **Landscape Character Type 7 - Main cities and towns**

The description for this landscape character type is:

- *Large settlement over 200ha in area, where the landscape is dominated by built development;*
- *Varied landform, often masked by development and only apparent when particularly pronounced;*
- *Nucleated historic cores, frequently including and surrounded by 19th century development, with more recent 20th century and later development on fringes.*

Character Zones

The Pilton Conservation Area Appraisal identifies different character zones within the conservation area which have differing architectural character and development densities. A townscape character assessment could be carried out as part of further study taking a similar approach to identifying character zones for areas surrounding the proposed development. It should be noted that Pilton Park is within the Pilton Conservation Area and the Pilton Street character zone. In addition, part of Rolles Quay lies within the Barnstaple Town Centre Conservation Area, which is itself situated in the High Street character area.

1.5.4 Assessment of Potential Landscape Impacts

Option 1A

Option 1A will involve the creation of a new 15m wide channel through Pilton Park along the eastern boundary. See Figure 1-3 Alignment through Pilton Park - Option1. This will result in the loss of an area of open green space within the park and removal of trees and vegetation in the northeast and southeast corners of the park including part of the avenue of trees along the southern boundary. The channel would be canalised by sheet piling introducing a new industrial element to the park and limiting opportunities to create a naturalised channel. Although downstream of Pilton Park the river channel has been canalised by sheet piling, the existing channel around the park is formed by soft engineering embankments and the proposed sheet piling would likely have an adverse impact on the amenity and character of the area. The magnitude of change is expected to be high.

Option 1B

This option follows the same alignment as option 1A, however, the river channel would be 25m wide. See Figure 1-3 Alignment through Pilton Park - Option1. This option allows for a soft engineering approach to the river channel formation and would allow for slight variations in the width and gradient of the river channel banks. The footprint of this proposed channel and associated soft embankments would result in a larger area of the park being used. As a consequence, there will be a loss of green space within the park, removal of trees and vegetation to the northeast and southeast and the avenue of trees along the southern boundary, and the removal or relocation of the play area. The magnitude of change is expected to be high. However, the soft engineered embankments provide the opportunity to raise the quality of the area with soft landscaping and improved park facilities as a result of mitigation measures, it could also provide

an opportunity to increase access into the park from the north and west which may result in beneficial effects.

Option 2A

Option 2A will involve the creation of a new 15m wide channel through Pilton Park along the eastern boundary, the channel would cross the park at a slight southeast angle to that of Option 1A and 1B re-joining on the same alignment as the existing channel. See Figure 1-4 Alignment through Pilton Park - Option 2. This option would result in the loss of the toilet block at the southeast entrance to the park, trees and vegetation around the southeast entrance and northeast corner of the park. The channel would be canalised by sheet piling introducing a new industrial element to the park and limiting opportunities to create a naturalised channel which would likely have a negative impact on the amenity and character of the area. The magnitude of change is expected to be high.

Option 2B

Option 2B follows the same alignment as option 2A, however, the river channel would be 25m wide. See Figure 1-4 Alignment through Pilton Park - Option 2. This option allows for a soft engineering approach to the river channel formation and would allow for slight variations in the width and gradient of the river channel banks. Where the river channel re-joins the existing channel in the southeast corner the left bank may require a hard engineering solution due to the proximity of the channel to Pilton Causeway. The footprint of this proposed channel and associated soft embankments would result in a larger area of the park being taken to accommodate the wider channel and embankments. Similar to Option 1B this would result in the removal of trees in the northeast and southeast corners of the park and play area, it is also likely to result in the removal of the toilet block at the southeast entrance to the park. The magnitude of change is expected to be high. However, there would be opportunities to implement mitigation and enhancement measures with soft landscaping and improved facilities which could result in beneficial effects.

For all the options the creation of a new river channel will result in the old channel becoming redundant and loss of the river channel alignment that has formed the boundary of the park and influenced the growth of the town for hundreds of years. The realignment of the river channel would change the character of the park, separating the existing green space and potentially compromising the integrity of the site. Given that the park is within the Conservation Area, it may result in harm to the significance of the site as a heritage asset, particularly with respect to historical, aesthetic and communal value. In addition, development within the Conservation Area may affect its special character and appearance. This significance informs the wider sensitivity of the townscape and overall setting of the river. The magnitude of change to the existing layout of landscape features in the park is likely to be high. There is likely to be a **notable effect during construction and operation** for all options to the park.

In order to mitigate the effects on the landscape and historical character of the park and existing river channel, further detailed design consideration is required. Options could include the re-profiling of embankments; use of appropriate materials including cladding; partially filling of the channel; creation of wetland habitat areas; new access points into the park; enhanced recreational facilities including seating; planting; and improved interaction with the river channel. These would accord with Local Planning policy and Green Infrastructure strategies. See Figure 1-6 Opportunities and Constraints.

Downstream of Pilton Park existing flood defence walls are to be raised to 7.05mAOD. During construction the impact is likely to be moderate-substantial which is notable within the vicinity of the proposed works due to access and compound areas. However, in both cases, this would be short-term and temporary. Operational impacts are likely to be slight-moderate providing there is careful consideration to materials. Given the nature and scale of the proposed development—within a relatively small area of the local DCA and LCT—a notable impact is not expected on the DCA or LCT as a whole.

1.6 Landscape Designations

The park forms a key element within a Conservation Area and the proposed alignment is likely to require works to the Grade II listed Pilton Bridge, park wall and entrance. In addition, works will be within the setting of listed buildings such as The Boathouse at Brunswick Yard along North Walk, the Warehouse on Pilton Causeway, 122 and 123 Pilton Street and Yeo Dale hotel and Bridge

House along Pilton Quay, as well as Locally Important Buildings such as the Old Ice Factory. There are also a number of listed buildings outside the study area along High Street, Boutport and Pilton Street.

Given the heritage sensitivities of the site, it is recommended that a full heritage and archaeological assessment is carried out to assess potential effects on the listed structures, conservation area and their setting.

1.6.1 National Parks

Exmoor National Park is located 14km east of Barnstaple. Given the distance from the site the proposed flood defence works will not have an effect on the National Park.

1.6.2 Area of Outstanding Natural Beauty (AONB)

The North Devon AONB is located approximately 8km west of Barnstaple. Given the distance from the site and the built-up, enclosed landscape surrounding the site, the proposed flood defence works will not have an effect on this landscape designation.

1.6.3 Historic Parks and Gardens

Youlston Park is a Grade II Registered Park and Garden which is the nearest to the site at 4km, given the distance from site the proposed flood defence works will not have an effect on the Historic Park and Garden.

1.6.4 Conservation Areas

Pilton Park is within Pilton Conservation Area which comprises residential and commercial properties and encompasses Pilton Street, The Rock, Bull Hill, Bellaire and Under Minnow Road, Pilton Bridge, Pilton Causeway (A39) and Pilton Park itself. Buildings date from the medieval period, identifiable by burgage plots and almshouses, to present day developments. Pilton Park forms a key element of the Conservation Area and informs the wider setting and approaches to Pilton Street. It also adds to the character of the townscape as a whole. In addition, the area of the site passes through Barnstaple Town Centre Conservation Area at Rolles Quay. Pilton Conservation Area Management Plan identifies issues and opportunities for the park which include issues with anti-social behaviour after dark and opportunities for improvements to the public realm through enhanced planting schemes and replacement trees. The realignment of the river channel and alterations to the existing channel and landscape features within Pilton Park and conservation area is likely to have a **significant effect which is notable**.

1.7 Visual baseline

Visual receptors are people that may experience views of the landscape. These may include residents and visitors to settlements, roads, footpaths, trails, visitor facilities or particular viewpoints. Desktop and site studies have been used to identify the key visual receptors likely to be affected by the proposal. A variety of receptors have been identified, these include:

- Residential (isolated properties and settlements).
- Roads (major and minor).
- Recreational routes (recreational trails, footpaths).
- Visitor destinations.

It is unlikely that any notable visual effects will occur at distances greater than 0.3km therefore receptors beyond 0.3km from the proposed flood defence alignment are not assessed further. For individual residential receptors, only those with potential views have been considered.

The built-up townscape along the proposed flood defence alignment results in a large number of receptors experiencing views of the proposed flood defences. However, the majority of these are contained to within 200-300 metres of the flood defence alignment.

Key Views

Pilton Conservation Area Appraisal identifies a number of key views from the conservation area and internally as shown on Figure 1-7 Key Views. These include views across Pilton Park from the southeast entrance to Pilton Park, views from Pilton Bridge in a northwest direction towards Pilton Street, views west along Pilton Quay and views along the River Yeo between Rolles Quay and the Swing bridge. Views over Barnstaple to the green hills and valley sides beyond are

available from the top of Pilton Street demonstrating Pilton's valley location and its connection with the River Yeo and Barnstaple.

Potential Residential receptors:

The assessment of visual effects on residential receptors is an outline assessment only; it is not a detailed Residential Amenity Assessment. Assumptions have been made about the types and use of rooms within houses and are based on site-based observations and aerial photography. Without undertaking the assessment from inside each room it is not possible to be certain that the assessment is completely accurate. For these reasons, effects are not described as 'notable' where this would otherwise be applicable. Only properties that are expected to have views have been considered below.

The areas of residential and commercial properties adjacent to the proposed flood defence works are shown on Figure 1-7 Key Views. Potential views and effects are described in the Table 1.1 below. Sensitivity to change for residential receptors is considered to be High.

Table 1-1 Potential views and effects

Property	Potential views and effect
Pilton Causeway - properties include: Cranleigh, Caradon (three storey) Park View (three storey)	Properties are orientated in a E-W direction towards the proposed river realignment. Views across the park to the mature trees around the north, west and southern perimeter of the park are widely available from all floors of the properties with limited filtering from a few young fruit trees along the eastern boundary of the park. The realignment of the river is proposed along the eastern boundary of Pilton Park. The height of the flood defences could limit views across the park from ground floor windows which is likely to have a medium-high magnitude of change.
Pilton Quay - properties include: Bridge House Veterinary Hospital, 2 storey (Grade II listed) Yeo Dale Hotel (three storey Grade II listed) 121-123 (three storey Grade II listed), 2, 3, and 7 (two storey)	Properties are orientated in a N-S direction. The properties are built along Pilton Quay road where the existing river channel flows to the south in an E-W direction. Trees and vegetation along the left bank of the River Yeo and northern boundary of the park screen views of the park during summer months, however views are available in the winter months when trees are bare of leaves. The proposed works would result in the removal of trees opening up views of the new aligned river channel. The magnitude of change is considered to be medium-high.
1-5 Pilton Quayside apartments (four storey)	The apartment building is orientated in a N-S direction and is located on the right bank of the River Yeo. The proposed works and realignment of the river, resulting in the old channel becoming redundant, would have a medium-high magnitude of change.
1-40 Fair View, two storey Victorian terraced properties	Properties are orientated in a E-W direction towards the proposed river realignment. Views across Pilton Park are available from first floor windows at the rear of the properties, ground floor views are screened by garden sheds and garages and the existing embankment around the right bank of the River Yeo. Available views across the park are partially filtered by mature trees around the western perimeter of the park in summer months. The sensitivity to change is considered to be medium. The realignment of the river would result in the existing flood defences and channel becoming superfluous, depending upon mitigation and enhancement measures of the flood embankments views from these properties may have a medium magnitude of change.
Orleigh Mill Court and Saw Mill Court, three and four storey modern apartments	Properties are orientated in a N-S direction towards the river and park. When this housing development was built the land was raised so flood defences are at ground level for these properties allowing views across Pilton Park from all four storeys. The existing river channel flows in a E-W direction adjacent to the properties. Views across the park are partially filtered by mature trees along the left bank of the river. The existing channel would

	become superfluous and properties would no longer have a riverside setting. The proposed realignment would also require the removal of some of the mature trees along the southern boundary of the park opening up views across the park and new defences. The magnitude of change is considered to be medium-high.
Port Mill Court, three and four storey modern apartments	Properties are orientated in a NW-SE direction along the right bank of the River Yeo. When this housing development was built the ground floor apartments were raised so flood defences are at the same level as the finished floor level of ground floor apartments allowing views of the River Yeo. Raising flood defences along the existing alignment would increase the height of the existing flood defence by 0.45m, therefore the magnitude of change is considered to be medium for ground floor apartments and low to negligible for first, second and third floor apartments
Rolles Quay - two storey Victorian terraced properties, Rolles Quay House (two storey) Mill Court (four storey)	Properties are orientated in a NW-SE direction, built along Rolles Quay road where the existing river channel flows to the southeast in an NE-SW direction. Car parking is available along the southeast side of the road adjacent to the existing flood defence wall. All these properties have raised ground floors allowing a slightly raised view over the existing flood defence across the river and Barnstaple's town centre, Barnstaple Castle, (Scheduled Monument) and Barnstaple's Council offices. Raising flood defences along the existing alignment would increase the height of the existing flood defence by 0.45m, and may limit views across the river from ground floor windows, therefore the magnitude of change is considered to be medium. Careful consideration of material choices should be undertaken at detailed design stage, such as using flood glass to retain views across the river or raising ground levels behind the flood wall.

There are likely to be **moderate-substantial effects which are notable during construction** for both raising of flood walls and all options for the realignment of the river, although these will be temporary and short-term.

Moderate-substantial effects which are notable may arise during operation for the realignment of the river. However, over time, mitigation through planting and appropriate design may help to reduce adverse visual effects. Careful consideration of material choices should be undertaken at detailed design stage, such as using flood glass to retain views across the river or raising ground levels behind the flood wall. For the realignment of the river regrading of levels to help integrate flood embankments into the park and planting of trees and vegetation to help mitigate the loss of trees and vegetation is recommended.

Potential Road receptors

There is a network of roads through Barnstaple generally used by local residents, commuters and commercial traffic. Where these routes pass the proposed flood defences the roads travel through an urban landscape and are heavily influenced by residential and commercial built form. Effects on road users are transitory in nature and unlikely to affect the primary function of the road. Sensitivity is generally medium or low, although may be higher along Pilton Causeway through the Conservation Area.

The main transport route in to Barnstaple is along the A39 which runs adjacent to Pilton Park and along the left bank of the River Yeo. The main transport route crosses the River Yeo at Rolle Bridge on to Rolle Street which later turns into the A361 continuing west to Braunton. **Short term notable effects during construction** are likely due to works to Pilton Bridge, site traffic and access to Pilton Park, Pilton Causeway and Rolle Street.

Rolles Quay is a quieter street providing access to residential properties and a few retail and commercial units. It runs along the right bank of the River Yeo and has parking on one side of the street against the existing flood defence wall. Short term effects during construction are likely

along the road and to car parking due to works on the existing flood defence wall, site traffic and access.

Potential Recreational Routes and Public Rights of Way (PRoW) receptors

There are a number of Public Rights of Way, one of which forms part of a recreational trail. Only those that are likely to be significantly affected by the development will be considered.

The *South West Coast Path* is a long distance trail from Minehead along the coast of Devon and Cornwall to Poole in Dorset. This route also forms part of a local cycle path, the Tarka Trail and National Cycle Route NCN27, between Ilfracombe and Plymouth. The path travels along the River Taw to Barnstaple crossing Barnstaple Long Bridge and continuing south. Where the path crosses the swing bridge over the confluence of the River Yeo there are views upstream of the River Yeo which are of a somewhat degraded character with burnt out buildings, informal moorings and fly tipping evident. Despite this, the National Trail designation means that sensitivity is High. The proposed flood defences will tie into higher ground near the swing bridge, however would only be visible for a very short section of the route, over the swing bridge. Construction impacts are considered to be moderate; operational impacts are likely to be slight. The proposed flood wall and alignment may improve the existing irregular appearance, with the potential to create new footpath and cycle route linkages to Barnstaple along the River Yeo resulting in beneficial effects.

The *circular footpath around Pilton Park* offers a well-used route for local residents, dog walkers and visitors. It provides a tranquil interlude and valuable amenity through an open green space between surrounding urban areas. The route is within the Pilton Conservation area and bound on three sides of the park by the River Yeo. The sensitivity is High. Works will involve the realignment of the river through the east of the park, construction of new ramped and stepped access into the park across the new river channel and removal of mature trees and vegetation. Construction will involve the closure of the eastern section of the path and entrances into the park from Pilton Causeway; impacts will be **moderate-substantial adverse for construction which is notable**. Operational impacts will arise from the change in views and nature of access into and around the park. The existing river channel and flood embankments will be redundant which could impact on views depending upon proposed mitigation measures. The **operational impacts are likely to be moderate-substantial which is a notable effect**. However, careful design development and material choices may mitigate some of the impacts and could provide benefits through mitigation and enhancement measures.

The public right of way from *Mills Way to Pilton Quay* travels along Mills Way through Port Mill Court, Orleigh Mill Court and Saw Mill Court and around the right embankment of the River Pilton, west of Pilton Park, through to Pilton Quay. Where the route passes along the top of the flood embankment this provides a vantage point of views across the River Yeo and Pilton Park to the east and Fairview carpark, garages, rear gardens and sheds of the Victorian properties to the west. The sensitivity to change is considered to be High. The proposed works would include the realignment of the river and subsequent alterations to the existing route of the river channel. Further detailed design development is required to understand what implications the realignment of the river will have on the existing channel and what mitigation measures are proposed for the existing channel and flood embankments. If the embankments are to be re-profiled this could result in temporary closure or changes to the PROW which would have a **notable effect during construction**. The **operational impacts are likely to be notable**; however, careful design development and material choices may mitigate some of the impacts and could beneficial effects.

Recreational receptors

Pilton Park is a valuable recreation resource 0.17km north of Barnstaple town centre providing open green space, a playground area for young children, circular footpath, and public toilets. The park is within the Pilton Conservation Area and the eastern boundary rubble stone wall and two entrances into the park are grade II listed all of which contribute to the setting of the surrounding residential area and approaches to Pilton Street and Barnstaple town centre. The sensitivity is considered to be High. Pilton Park is at a lower level than surrounding areas with all the entrances into the park having elevated views across the park. Trees around the north, west and south of the park filter views of the surrounding residential areas in the summer months. Works will involve the removal of mature trees and vegetation and realignment of the river through the east of the park. The height of the proposed embankments along the river corridor would limit views across the park from the east. The new channel would require construction of new ramped and stepped access into the park to prevent the park and access from being cut off along its eastern boundary.

Construction impacts will be along the east of the park with no access during construction, which will be a **notable effect**. Potential impacts around the north, south and west perimeter may occur depending upon the redesign of the current river channel. **Operational impacts are likely to be moderate-substantial which is notable**; however, there are opportunities to raise the quality of the area with soft landscaping and improved park facilities as a result of mitigation measures, it could also provide an opportunity to increase access into the park from the north and west which may result in beneficial effects.

Rolles Quay has a number of small paved areas with benches and small pockets of planting along the existing flood defence wall between car parking spaces. Views across the river are available towards the castle and council building on the left bank. Benches are orientated towards the wall and views of the river for users of the benches are currently screened by the height of the existing wall. The sensitivity is considered to be low-medium. The works would involve raising the flood wall which could increase the height of the wall above the eye level of a standing person. Construction effects are likely to arise from access routes, working area and compound areas although these will be short term. The operational impacts are likely to be moderate-substantial which is a notable effect. However, careful consideration of design development and material choices such as installing flood glass or raising ground levels behind the wall some of the impacts and could result in a slight neutral effect.

No other visual receptors were identified as part of this landscape appraisal.

1.8 Conclusion

Landscape designations and visual receptors have been assessed against the proposed options. It is recommended that potential effects on the setting and views from cultural heritage assets—including the Grade II listed Pilton Bridge, walls along Pilton Causeway and Pilton Conservation Area—are covered in a separate Heritage and Archaeological Assessment. The presence of these designations results in high landscape sensitivities within the immediate site area.

The alignment of the proposed flood defences is through a varied townscape of residential, retail and commercial properties, light industrial units and public open green space. Views are relatively well contained by built form enclosing views to within 200-300m of the development.

Construction effects are considered to be adverse, but short-term and are likely to be outweighed by the flood prevention benefits of the scheme. Operational effects may be adverse, but considered and appropriate design and detailing may mitigate and reduce these effects, such that they become neutral or even beneficial in the longer term.

Landscape and townscape effects are notable where the construction and operation will impact on key elements or resources within the landscape, such as valued views or features that inform the sensitivity of receptors.

Notable construction effects are expected for the whole length of the flood defence works and for all options through Pilton Park due to the urban location and likely impacts on access for construction.

All options through Pilton Park are likely to have a notable effect on the fabric and landscape character of the site during operation, prior to any mitigation and enhancement measures. These arise from the sensitivity and value of important, often historic features within the landscape fabric—such as Pilton Bridge, existing walls and entrances into Pilton Park and Pilton Conservation area—and the contribution these make to the overall character and perception of the area. The park may effectively be cut off by the new channel, in which case a footbridge would be required over the new river.

Visual effects are likely to be notable where the construction or operation will impact on key views or aspects from sensitive receptors, particularly where these have historic or aesthetic value, are directly oriented towards or are in close proximity to the works. Impacts arise from major changes to the alignment of the river, new flood embankments and removal of trees and vegetation.

Notable visual effects during construction and operation are likely on:

- a large number of residential receptors, many of which are in close proximity to and have valued views of the river
- the footpath around Pilton Park and footpath along the right embankment adjacent to Fair View car park

- existing views within and surrounding Pilton Park

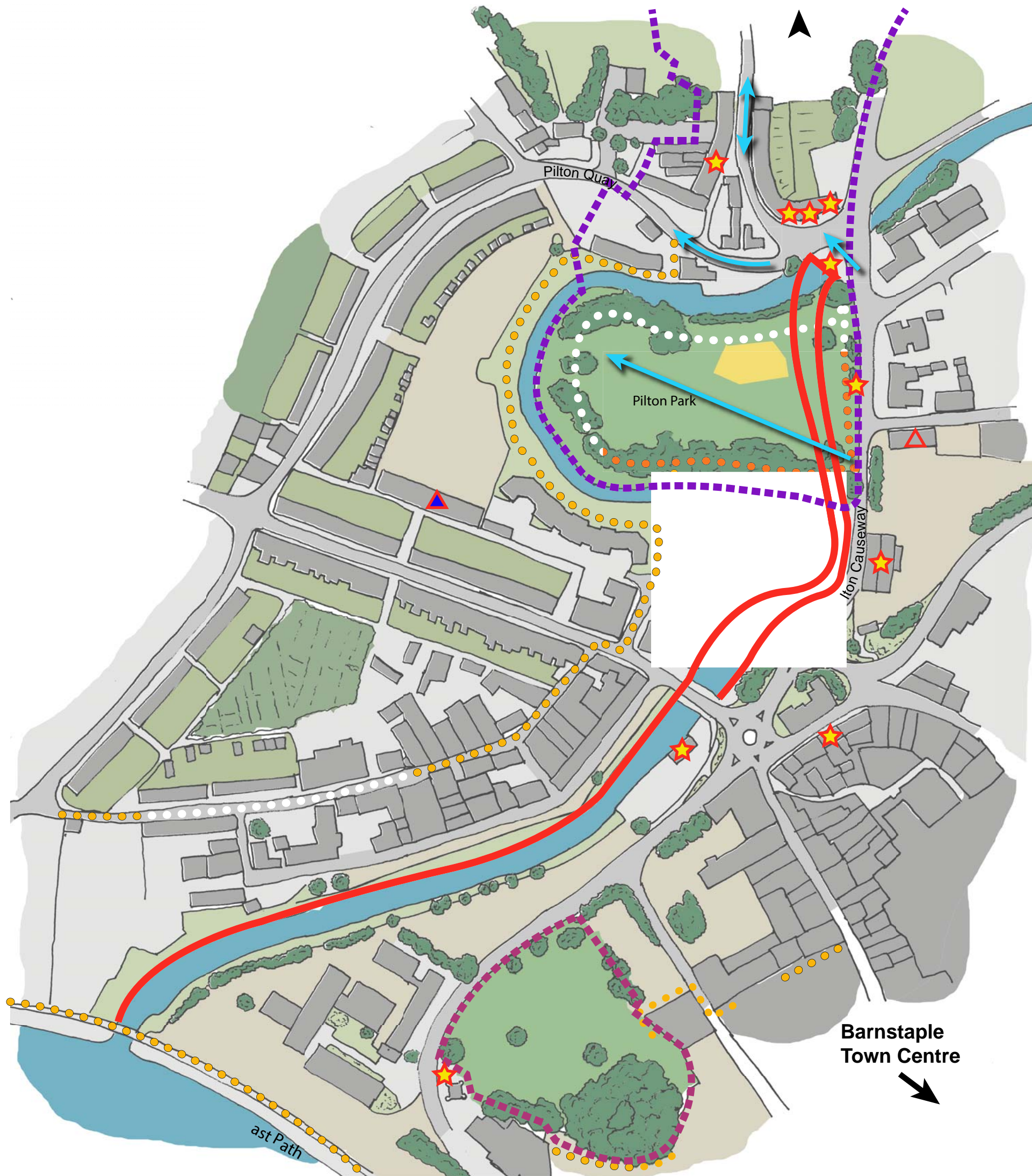
Short-term notable effects through construction are expected for road receptors of Pilton Causeway, Pilton Bridge and Rolles Quay.

The development of this scheme is an iterative process by which potentially adverse impacts should be addressed through continual appraisal and revision, including responses from public and stakeholder consultation. Mitigation of adverse impacts may include development of design aspects such as layout, circulation (steps, ramps) and wall height; finishes, such as cladding materials, boundary treatments and street furniture; and choice or layout of new planting, including trees. These should be appropriate to the context, setting and view where possible; for example, natural materials should be specified within the Conservation Area or where new features will impact on valued residential views. The local vernacular includes rubble stone walls with granite coping stones. Not all may be suitable for walling or cladding due to engineering and structural constraints, availability and cost. Sheet piling with concrete coping and concrete walls have also been used along sections of the river which may be appropriate in less sensitive locations. The inclusion of public art, a considered approach to detailing of street furniture and balustrading and sympathetic, natural paving materials could also better relate to the setting of the scheme. All new features within the Conservation Area will be informed by the Heritage and Archaeological Assessment. Planting strategies should balance ecological and biodiversity value with visual, seasonal and structural qualities appropriate to what is an important element within local Green Infrastructure.

The proposed realignment of the river channel with flood embankments offer an opportunity to masterplan and redesign Pilton Park, raising the quality and amenity of this valued green space. Whilst not all of these would be part of the flood protection remit, the redesign could introduce new entrances into the park, relocation of play equipment and infrastructure such as toilets, seating and lighting; as well as new planting and habitat creation that would increase biodiversity and ecological value.

Figure 1-5: Landscape Appraisal Context Plan

To be inserted

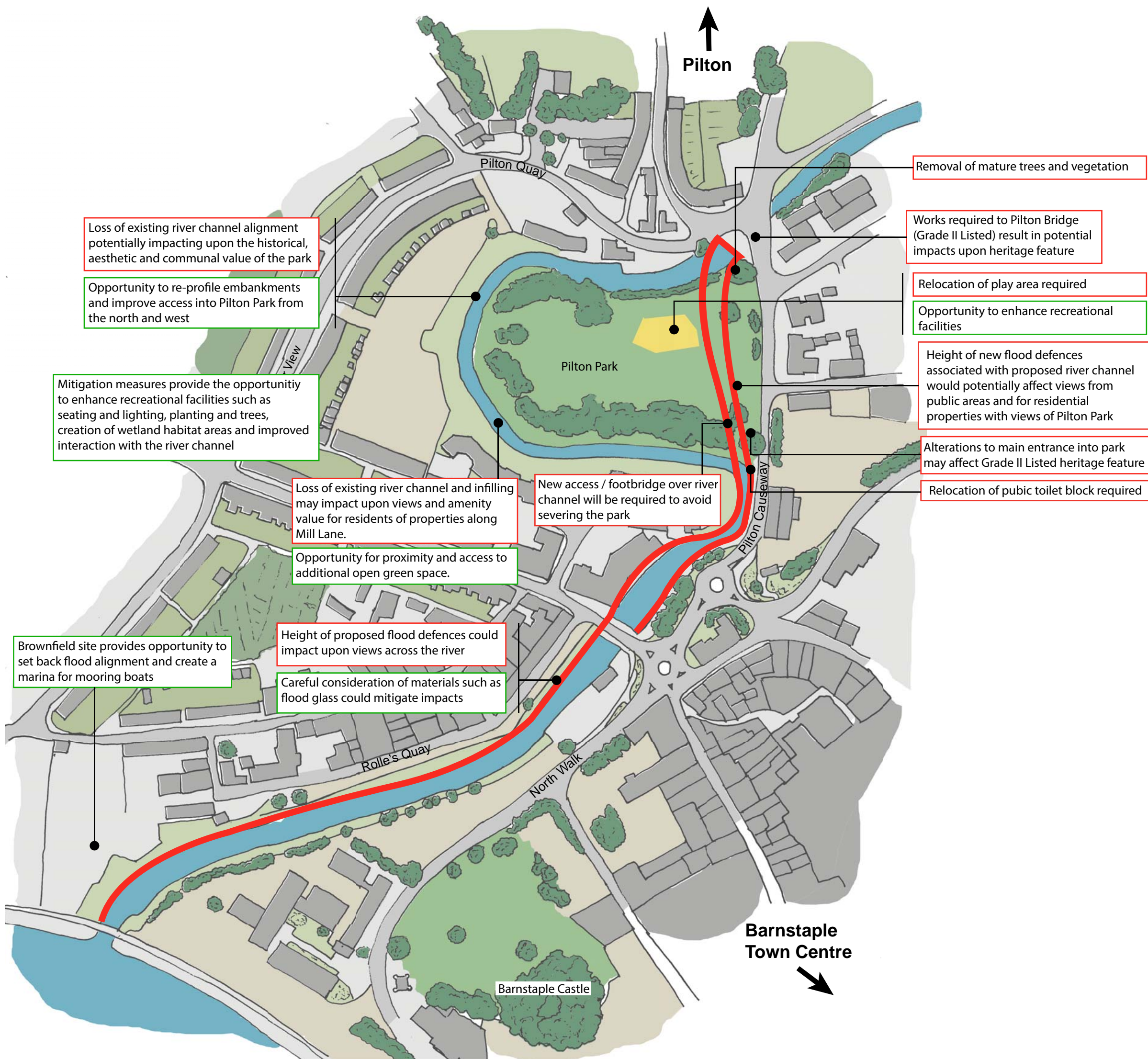


- Legend**
- Proposed flood defence alignment
 - - - Conservation Area boundary
 - Public right of way: Footpath
 - Other route with public access
 - - - Scheduled Monument
 - ★ Listed buildings
 - △ Locally Listed Heritage Asset
 - Conservation Area Key views
 - River Yeo
 - Public open space
 - Gardens
 - General green amenity
 - Allotments
 - Buildings
 - Roads
 - Urban fabric
 - Public car parks
 - Play area

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Barnstaple Flood Defence Scheme
 Landscape Appraisal Context Plan
 Figure 1-5
 for
Devon County Council

Figure 1-6: Opportunities and Constraints

To be inserted



Legend

- Proposed flood defence alignment
- River Yeo
- Public open space
- Gardens
- General green amenity
- Allotments
- Buildings
- Roads
- Urban fabric
- Public car parks
- Play area
- Constraints
- Opportunities

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 Landscape Appraisal -
 Opportunities and Constraints
 Figure 1-6
 for
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 NP20 1 QU

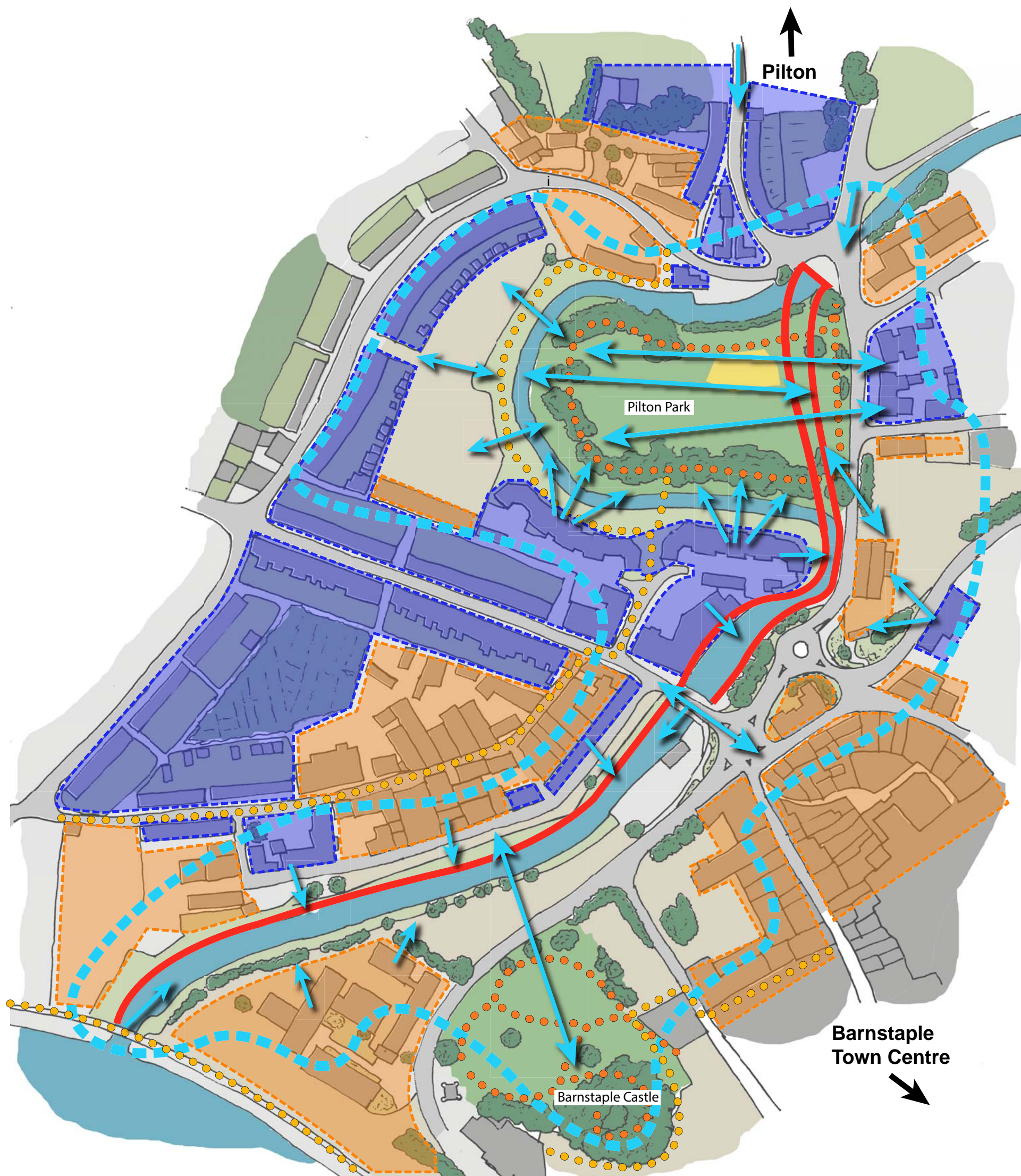
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Figure 1-7: Key Views

To be inserted



- Legend**
- Proposed flood defence alignment
 - Public right of way: Footpath
 - Other route with public access
 - Residential
 - Retail / Commercial
 - Visual Envelope
 - Key views

- River Yeo
- Public open space
- Gardens
- General green amenity
- Allotments
- Buildings
- Roads
- Urban fabric
- Public car parks
- Play area

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Barnstaple Flood Defence Scheme

Landscape Appraisal - Key Views
 Figure 1-7

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