

Hydrology and Flooding

All of the marina area is classified as category 3 tidal flood risk. This will impact upon the design of residential buildings and on the design of the flood defences. It is not deemed prohibitive to development which is important to the town since this classification covers the entire area.



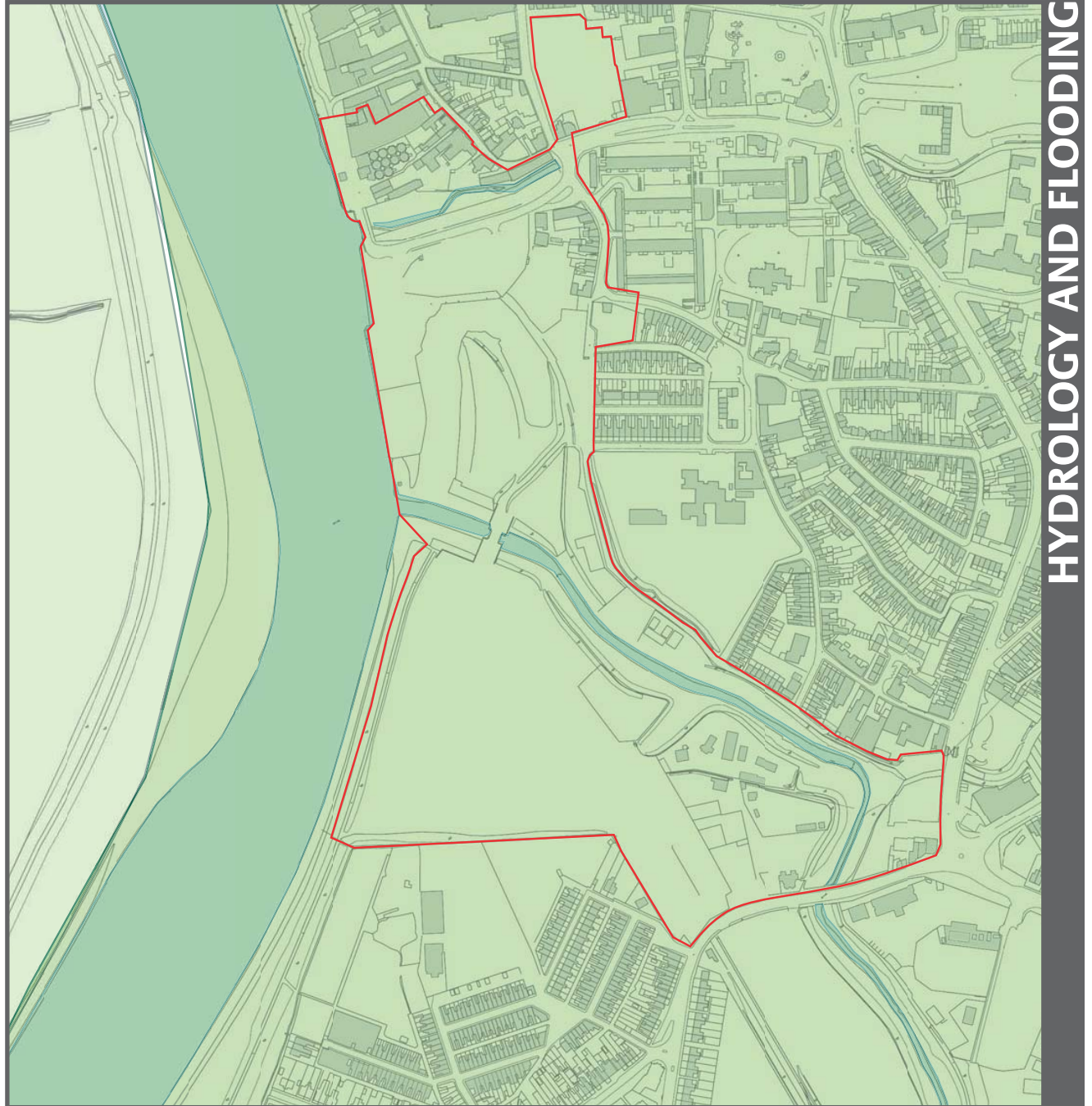
Site boundary



Category 3 tidal flood risk



Category 2 tidal flood risk



HYDROLOGY AND FLOODING

LAND CONTOURS



Land Contours

As can be seen from the diagram opposite, there is not significant vertical variation within the site. However, what little there is, is sufficient to provide a significant constraint in terms of the removal of unwanted material.

Consultation with DEFRA confirms that only recently deposited material in the loop will be accepted for disposal to a marine disposal site. The alternatives include disposal within the site itself – potentially selecting better material for building foundations and for extension and/or relocation of the flood defence structures.



However, it is anticipated that a significant proportion of the material will need to be disposed to terrestrial disposal sites, which may vary depending on the levels of contamination.

Since 1982, the development area has been dominated by the flood defence embankments and sluice structure, with a crest elevation of 7m AOD. The loop has accreted over the same period, rising from a fully tidal inlet to the present elevation, at approximately MHWS (Mean High Water Spring).

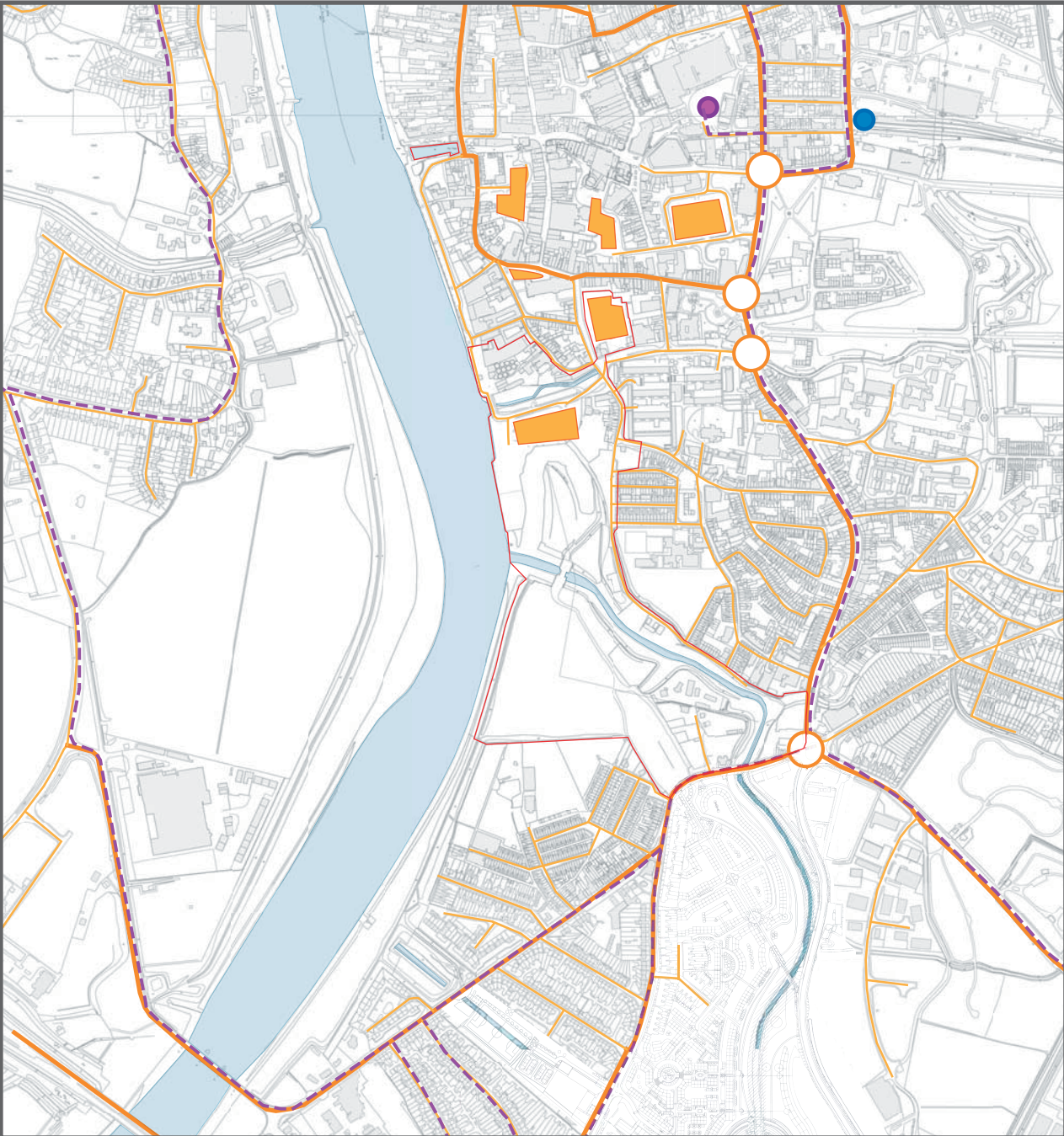
Geotechnical Profile

Parts of the Friars Fleet and Boal Quay area lies within the original boundary of the medieval town, and the former line of the town wall is recorded running through the potential basin area. Industrial occupancy of the site has largely, and unsurprisingly, principally been associated with maritime trade – fishing, whaling, shipbuilding and general cargo.

There was a rail link running along the water front toward the port, crossing a bridge at the northern apex of the Friars Fleet loop. The line was removed during the 1970s.

The basal geology at the site is the Kimmeridge Clay strata, overlain by more recent alluvial deposits.

With the exception of the very recent siltation in the bed of the loop and the material forming the central ridge in the basin area, a number of adjacent sites have been investigated and varying levels of potential contamination have been identified in locations to the north and south of the development area. Further physical investigation is anticipated within the main area of marina excavation.



Vehicular Movement

Many surface car parks are situated in the town centre area and within/to the north of study area (the Boal Street car park will form a development site under the master plan's proposals). While these provide instant or near instant access to visitors arriving by car, the Clough Lane multi storey car park is also situated a short walk away.

Major roads bypass the site. This restricts a lot of primary vehicular access, and secondary routes are also limited. Minor roads do not appear well connected and allow for very restricted vehicular movement within the site itself. Connection to West Lynn is via the A47 and involves a long journey, or via a passenger ferry.

Bus routes by-pass most of the site.



Pedestrian and Cycle Movement

The cycle network appears broken and disconnected.

The train and bus station is within walking distance, but available routes on foot are laborious.

The riverside walk is currently pleasant but uneventful. Few facilities are provided for walkers.

Pedestrian routes into and within the site are restricted and sometimes unclear. Existing routes within the site are predominantly car free as vehicular access is also limited.



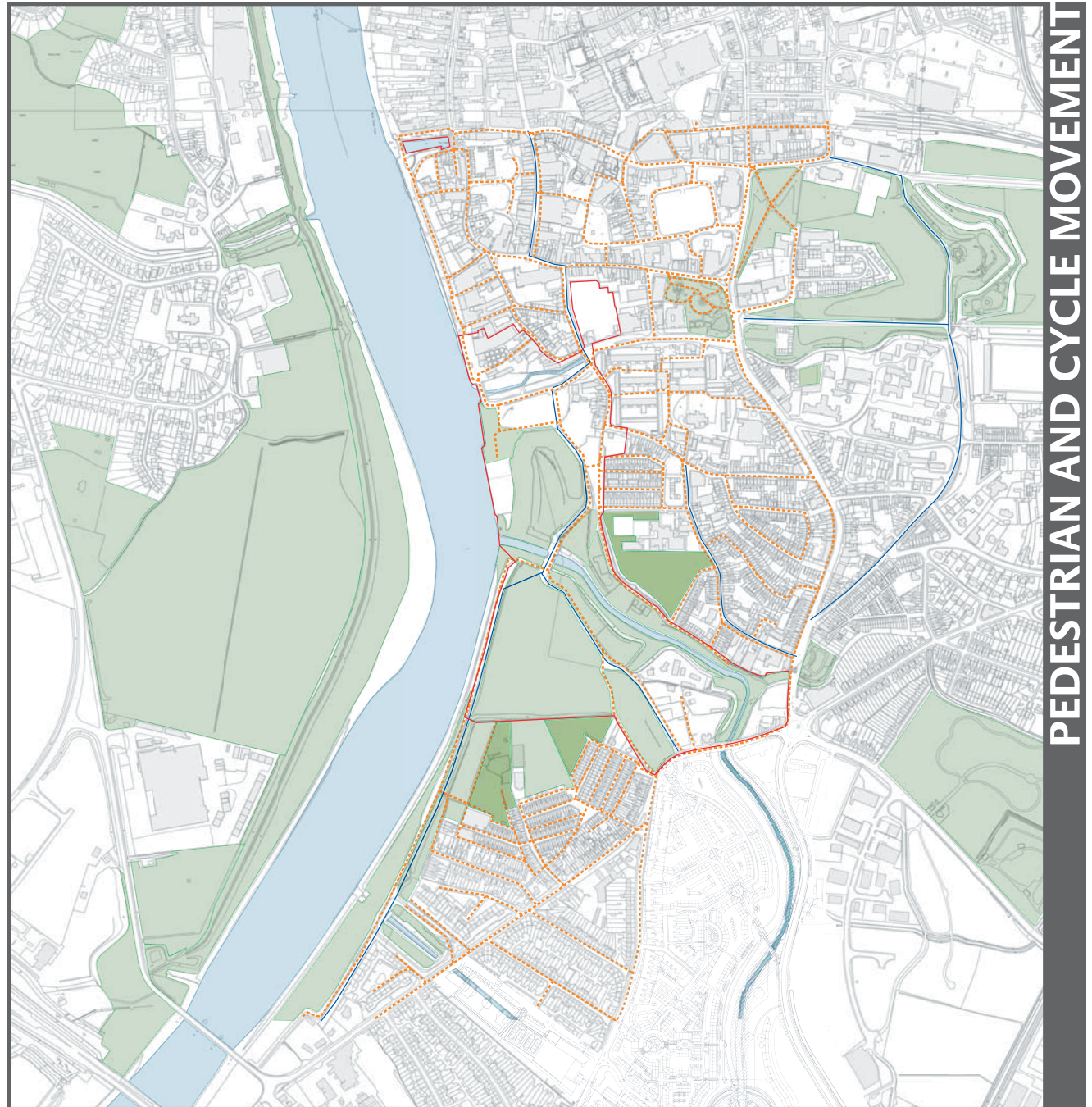
Site boundary



Pedestrian Routes



Cycle Routes



PEDESTRIAN AND CYCLE MOVEMENT

3 Design Statement

3.1 Introduction

This chapter builds on the analysis presented above to provide the design vision for the marina quarter. After introducing the principles on which development should be based and illustrating the over-arching design concept, detailed guidance is given on layout, building heights, land uses, public realm and movement. This guidance is expected to form the basis of an application for planning consent.

3.2 Development principles

In developing a marina and associated development at Boal Quay, the following principles should be adhered to:

1. **Be green:** high standards of environmental design will be insisted upon, reducing energy use and environmental impact, and providing diverse habitats for species.
2. **Protect views:** views of the historic town to the north, along and over the River Great Ouse and onto the open spaces of Harding's Pits should all be protected.
3. **Integrate with surrounding development:** areas with which the marina development must successfully and seamlessly integrate include the Friars housing area to the east, the former grain silo site and town centre fringe to the north, the emerging Nar Ouse Regeneration Area and South Gates roundabout to the south and Harding's Pits to the southwest. Of these, the Friars and Harding's Pits are the most sensitive.
4. **Face the water:** promoting and providing a focus for the Urban Development Strategy aim of reintroducing Lynn to its waterfront, almost all development should exploit the opportunity to front onto the rivers Great Ouse or Nar or, failing that, open space.





5. Promote quality of place: the marina itself must not be allowed to be simply a place to park boats, as is often the case. Rather, the creation of a quality mixed-use environment that puts the twin aims of regeneration and ‘placemaking’ to the fore to the benefit of the wider town and beyond is necessary.

6. Create a landmark: the marina will only put King’s Lynn on the map as a visitor attraction if it is high in the public consciousness. This will be facilitated by the quality of architectural, landscape and environmental design, without the need to resort to showy iconic buildings.



7. Make the connections: Boal Quay is the key nodal point that links the Nar Ouse Millennium Community with the existing town, meaning that north-south connections by foot, cycle and public transport must be optimised. However, in order to protect the Friars and the marina from excessive traffic, and to promote sustainable modes of travel to and from Nar Ouse, there should be no through route for private motorists.

8. Plan for people over traffic: the streets and spaces around the marina should be designed to promote the Government’s ‘Manual for Streets’ agenda that prioritises pedestrians and encourages appropriate activity and social interaction. Measures such as shared space will ensure that cars are not allowed to dominate.



9. Mix it up: whilst being residentially led, the development should provide a rich mix of uses to cement Boal Quay’s status as a destination. Marina uses, shops, cafes/bars/restaurants and a hotel will all form part of the offer.

10. Protect Harding’s Pits: the Doorstep Green status of Harding’s Pits must be preserved as a focal point of the development. Furthermore, its existing informal character should be maintained.

11. Accommodate the fishing co-operative: the fishing co-operative must be retained in-situ in the short term, but it is hoped that in the longer term a suitable alternative site can be found to enable relocation within King's Lynn.

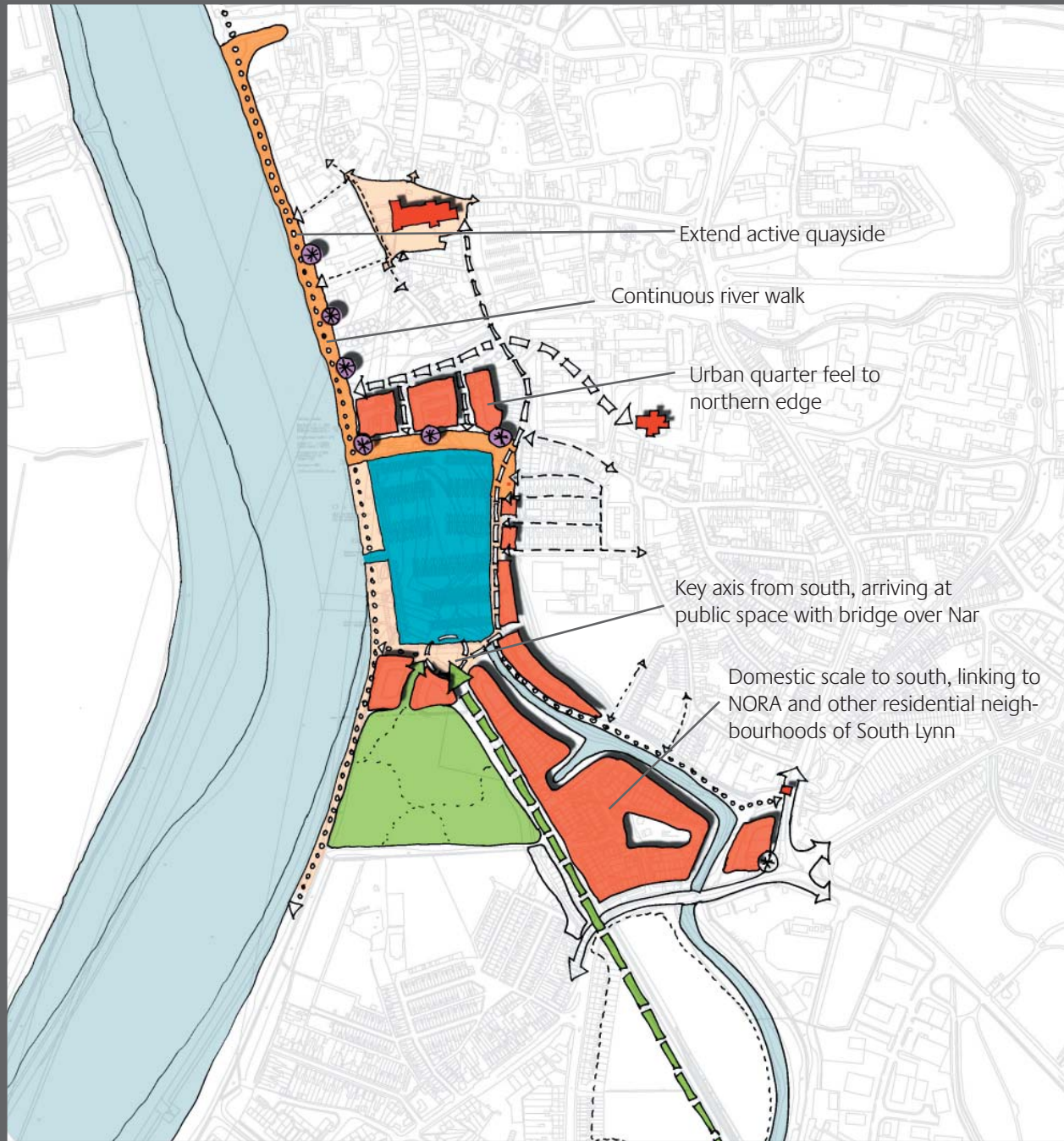
12. Be flexible: the master plan is intended to guide and illustrate the possibilities and to form the basis of a planning application, in doing so giving a degree of certainty to the development industry. It is important, however, that it is applied with some flexibility in order to be able to adapt to changing situations and a developer's own interpretation – within set parameters.

13. Draw on best practice: the master plan draws on a library of good practice guidance, including the Urban Design Compendium, Manual for Streets, Better Places to Live and Safer Places, to ensure that the lessons of other projects are applied.

3.3 The Master Plan

The following pages demonstrate how the principles should be implemented.





Design Concept

This plan outlines the key elements of the proposals, which are as follows:

- a 250-berth marina that can accommodate sea-going craft and allows for subsequent access by inland craft through re-opening of inland navigation.
- a continuation of activity along the east bank of the River Great Ouse, with a series of points of interest from the north to help to 'pull' people to the marina
- excellent pedestrian links with surrounding neighbourhoods
- use of the former railway line to connect the marina and the town with the Nar Ouse Regeneration Area
- the retention of Harding's Pits as a key community asset
- a series of development blocks bordering the rivers Nar and Great Ouse and the marina

Master Plan Zones

The master plan is based around a series of zones, each with its own distinct character and use.

The zones flow from the analysis summarised above and a consideration of the mix of uses deemed to be viable and desirable in the area. They are as follows:

Zone 1: Town transition, where the new development interfaces with the historic quarter to the north, with the scale and design of buildings taking a lead from those existing forms.

Zone 2: Marina, dedicated mainly to the functioning of the marina and related activities, but with an important and potentially delicate interface with the Friars residential area to the east.

Zone 3: Crucible, a key space which is pivotal to linking the town and South Lynn/Nar Ouse and includes a new bridge over the Nar for public transport, pedestrians and cyclists.

Zone 4: Open space, which is the retained Harding's Pits Doorstep Green.

Zone 5: Housing transition, an area of family housing (almost entirely houses, not flats).





The Master Plan

This page presents the key master plan drawing - our vision, arrived at with stakeholders - of how the marina quarter will look and function.

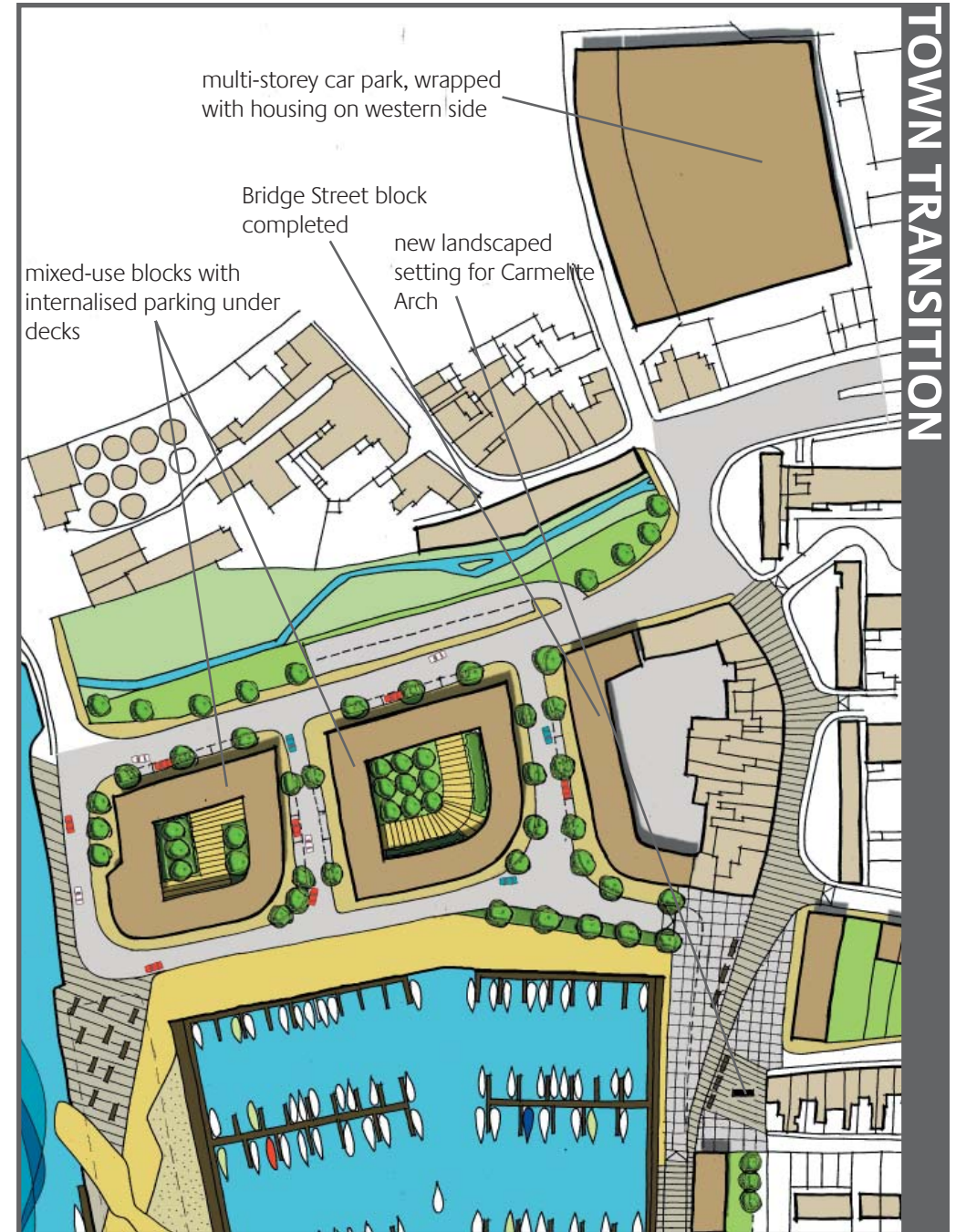
It is a vision that will utterly transform the site and boost the renaissance of King's Lynn. We feel that it is a balanced response to the issues, requirements and opportunities that Boal Quay offers.

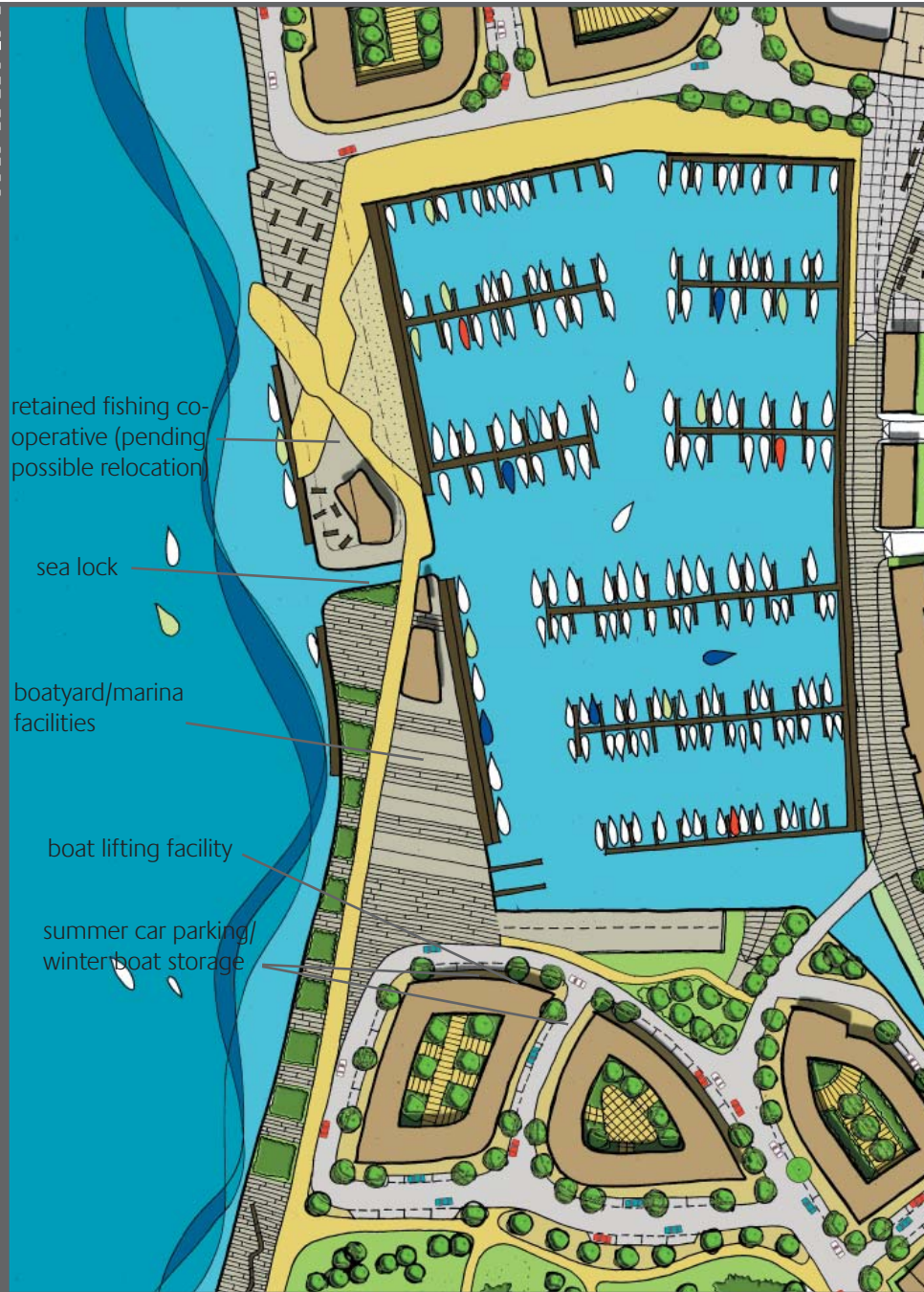
Its contents are explored in detail zone by zone in the following pages.

Town Transition

The key features of the town transition zone, which attempts to knit Boal Quay in with the southern end of the town centre, bringing new life to both, are:

- a multi-story facility on the site of the existing Church Street car park to serve marina traffic and replace the lost parking on Boal Street.
- a new frontage to Church Street - townhouses or flats, backing on to the new car park, to reinstate the historic urban grain and provide a proper setting for heritage streets such as Nelson Street.
- similar treatment to complete the block currently half-formed by Bridge Street, although the historic value and quality of these buildings calls for very sensitive treatment.
- mixed use blocks between Boal Street and the marina - apartments above shops and food and drink outlets, plus a 60-80 bed hotel.
- high quality, pedestrian-friendly public realm throughout, particularly on the marina edge, Bridge Street (signalling to car users that they are in a shared space environment) and forming an attractive riverside walk from Purfleet Quay.
- new landscaped setting, with appropriate seating and perhaps low-energy lighting, for the Carmelite Arch, rescuing it from its current 'marooned' situation
- landscape improvements to open up views of Millfleet.





Marina

The key features of the marina zone, which will be the main focus of the development, are:

- 250 berth marina to serve both sea- and inland waterway-going craft, with additional pontoons on the Great Ouse.
- necessary marina facilities including a chandlery, management office, facilities buildings (including lock maintenance) toilet/shower block, fuelling/pump-out facilities and laundry.
- additionally, a boat maintenance yard with a boat lift out facility (either a 50M slipway, wheel hoist over a jetty or crane). These marina facilities are grouped between the marina and the Great Ouse.
- the anticipated retention of the fishing co-operative in-situ in the short term. However, it may be preferable in the long-term for it to be relocated elsewhere in King's Lynn. This would then free up their site for a high quality public space, as shown in the master plan, or for development.
- 150 car parking for boat owners. 75 of these are immediately adjacent to the basin and are intended to double up as over-wintering space for boats out of season, when a semi-temporary secure fence will be raised.
- a walkway around the basin and along the Great Ouse.

Crucible

The key features of the crucible zone, the importance of which to the whole scheme results from its position as a bridging point and a pivotal node between the town and the Nar Ouse Regeneration Area, are:

- a new pedestrian, cycle and bus bridge over the River Nar, with bus gates at each end to stop cars from having a route through the site.
- apartment blocks with parking below decked garden space at the ground floor and some on-street parking.
- a green garden square between the apartment blocks and the marina, offering a place for residents and visitors to sit, contrasted with the less formal Harding's Pits.





Open Space

The open space zone is effectively the designated Doorstep Green part of Harding's Pits. This works well as a relatively 'wild' open space and, through the efforts of those involved in its evolution and maintenance, is constantly improving. The master plan proposes no changes to this space.

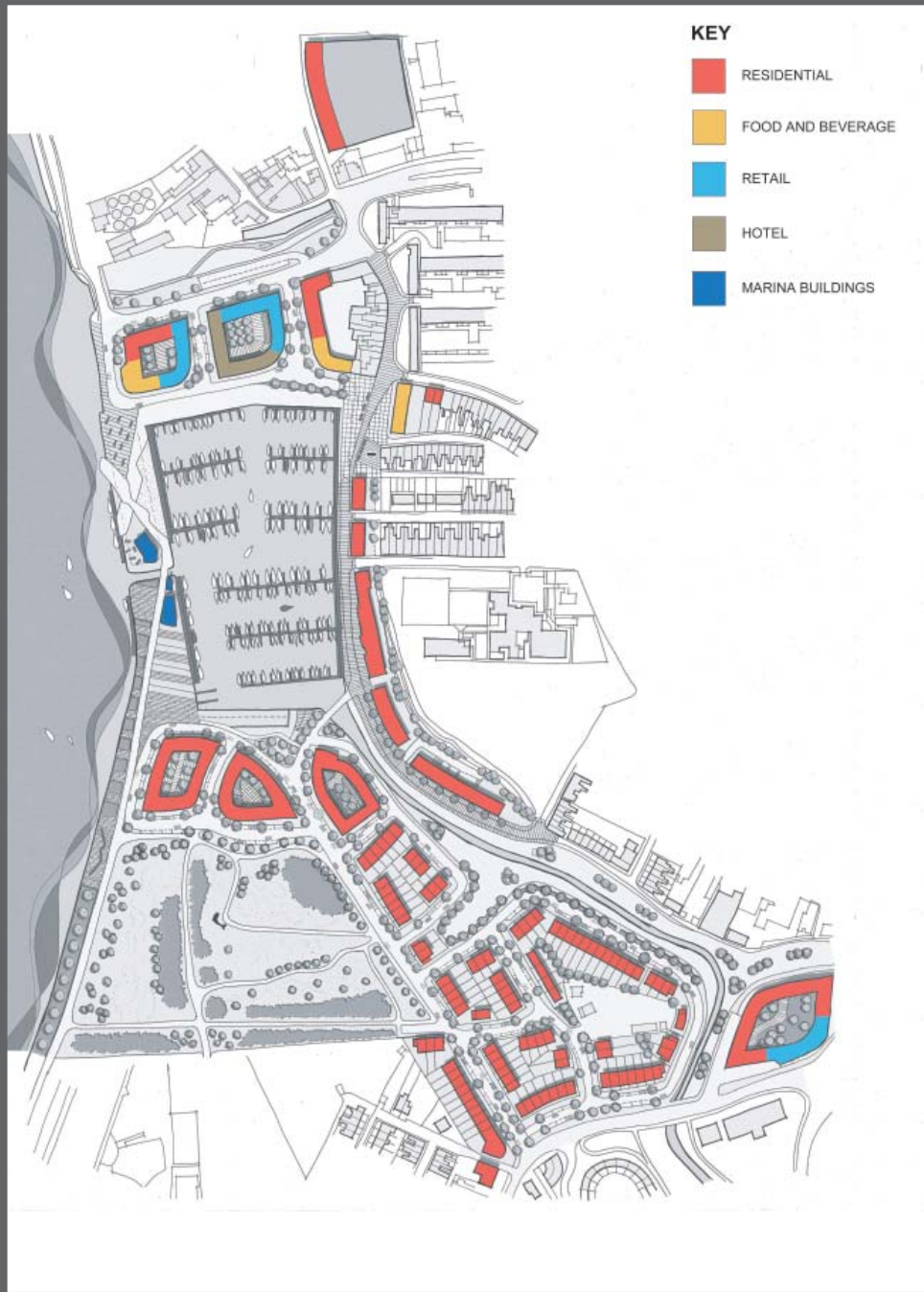
Safety and security will be improved, however, particularly around the edges, where residential buildings will directly overlook the park and its main routes. This will offer natural surveillance of the spaces.

Housing Transition

The key features of the housing transition zone, which is dominated by family houses, are:

- traditional pedestrian-friendly streets fronted by family housing (including private back gardens) laid out in response to the constraints posed by the site
- topography, protected open space, the ecologically-sensitive River Nar, access and the Anglian Water pumping station.
- parking at a ratio of 1.5 spaces per unit as a mix of on-street and in-curtilage. The on-street parking will need to be controlled to stop the area being saturated by marina parking. It is recommended that a similar scheme is also implemented in the Friars for the same reason, subject to consultation with residents.
- a larger mixed-use block (retail and flats) fronting South Gates roundabout.
- the continuation of the Nar Ouse bus route, to be shared with all other modes of transport.
- subtle exploitation of the pleasant environment offered by the River Nar, fronted where possible by housing (for reasons of security and sense of place, no housing should back on to the river).





Uses

The marina quarter will incorporate a wide mix of complementary uses, including:

- 250 berth marina plus facilities including boat repair yard and over-wintering space, mainly west of the basin
- approximately 800 flats around the marina and at South Gates roundabout
- approximately 110 family houses in the housing transition zone
- cafes/bars/restaurants (c.1000 sq.m.), shops (c.1700 sq.m.) and a hotel (60-80 beds), mainly clustered in the town transition zone to help integration with the town centre.
- the retained fishing co-operative, at least in the short term pending an alternative location being made available.
- a 680-capacity multi-storey visitor car park

Building Heights

In keeping with the surrounds, this is generally a low-rise scheme, predominantly two to three storeys.

The exceptions are:

- the four to six storey flats and townhouses fronting the South Gates roundabout and Wisbech Road, where some height is needed to counteract the open-ness of the highway; and
- the four to six storey flats at either end (north and south) of the marina basin, where height is needed to provide 'enclosure' to the expanse of the basin, and, with reference to Boal Street to the north, responding to the height of the existing adjacent buildings.

The proposed heights also respect the need to preserve views of the town, and specifically of St Margaret's Church, from the riverside walkway by Harding's Pits and from the A47 road bridge. This is explored further below.

The perspective drawing on the following page further illustrates the approach to building heights.

