



CRINDAU DEVELOPMENT BRIEF PLANNING AND DESIGN GUIDELINES

DRAFT SUPPLEMENTARY PLANNING GUIDANCE
June 2008



NEWPORT CITY COUNCIL

This development brief comprises a written statement and associated plans and illustrations, to provide guidance to developers and the public on the planning framework and specific requirements of Newport City Council in respect of the development of this area.

Newport City Council Contacts:

Susan Hall

Planning Officer - Policy
Newport City Council
email: susan.hall@newport.gov.uk

James Hooker

Planning Contributions Manager
Newport City Council
email: james.hooker@newport.gov.uk

Eluned Jones

Principal Urban Designer
Newport City Council
email: eluned.jones@newport.gov.uk

Biodiversity Officer

Biodiversity Officer
Newport City Council
Email: dolore.byrne@newport.gov.uk
t: 01633 656 656

CONTENTS

INTRODUCTION	4
SITE CONTEXT	5
POLICY CONTEXT	7
DEVELOPMENT VISION	13
THE DEVELOPMENT PROPOSAL	14
DEVELOPMENT CONSTRAINTS	24
ECOLOGY AND WILDLIFE	24
DESIGN PRINCIPLES	30
PUBLIC SPACE DESIGN	34
PEDESTRIAN/CYCLE ACCESS	37
TRANSPORTATION	40
CANAL AND MARINA PROPOSALS	43
FLOOD RISK	48
REMEDIATION AND RECLAMATION	49
PLANNING OBLIGATIONS	50
APPENDIX I	51

I. INTRODUCTION

- I.1 The redevelopment of the Crindau Area is seen by the City Council as an important opportunity to secure the sustainable regeneration of a prominent area of the city centre. It represents a high profile development opportunity in the city, identified in the Draft Supplementary Planning Guidance (SPG) - City Centre Master Plan, which has been derived from the Central Area Master Plan: 2020 Unlimited Vision prepared by Newport Unlimited, the City's Urban Regeneration Company.
- I.2 In order to facilitate the comprehensive mixed use regeneration of the Crindau Area this development brief has been prepared as draft Supplementary Planning Guidance (SPG). The objective of this brief is to interpret the relevant Unitary Development Plan Policies, identify development constraints, and set out design considerations to ensure that new development integrates with the local environment to create beneficial improvements. The SPG sets out the basis upon which Newport City Council requires proposals to be brought forward and outlines the principles and criteria against which the proposals will be assessed.
- I.3 This Guidance will remain informal until such time as it is adopted by the City Council. Statutory public consultation will be undertaken in advance of its adoption. Once formally adopted as SPG, the guidance will be a material consideration in determining applications for planning permission for the development area.

2 SITE CONTEXT

- 2.1 The site is located approximately 1 kilometre north east of Newport City Centre on the west bank of the River Usk between the A4042 and the river. To the north is the elevated section of the M4 Motorway which crosses the Usk, and to the south is the residential area of Shaftesbury. The area is a key gateway site into Newport City Centre, being highly accessible and visible from the M4 and Heidenhiem Way. Its successful redevelopment is therefore important in both visual and image terms.
- 2.2 The site is currently home to a mixture of uses, including residential, commercial and industrial. The residential properties are made up of mainly pre 1919 terraced properties together with a 1980's development known as the Turnstiles. This area includes the Crindau Infant and Junior School.



1970s development on Alderney And The Turnstiles



Rows of traditional early 1900s terraced properties on Adelaide St and Albany Street

- 2.3 A former gasworks site has been cleared and is now the subject of a new mixed use development proposal incorporating a replacement Sainsbury's store. Land in various industrial and commercial uses occupy the remainder of the site to the west of Crindau Pill.
- 2.4 Crindau Pill forms an inlet into the area from the River Usk, with land to the east forming a peninsula. The southern part of which is occupied by the playing fields of Shaftesbury Park. Allotment gardens occupy the peninsula.
- 2.5 Crindau Pill itself meanders through the south-eastern corner of the site and is culverted under the A4042 before running adjacent to the Monmouthshire and Brecon Canal. The Canal, which formerly ran to the docks area of the town, now comes to an end at Barrack Hill.
- 2.6 The area covered by the brief has been extended to include additional land which may be necessary to facilitate implementation of the scheme and fulfil the wider regeneration objectives. This land extending along the canal corridor at Barrack Hill has been incorporated along with an area extending southwards along the River to the current Sainsbury's site, and northwards to the edge of Grove Park (see plan below).



3 POLICY CONTEXT

3.1 The redevelopment of the site must be in accordance with the relevant national and local policies.

National Policy

Planning Policy Wales - Welsh Assembly Government

3.2 Planning Policy Wales (March 2002) sets out the land use planning policies of the Welsh Assembly Government together with their commitment to sustainable development. The Assembly has a duty under Section 121 of the Government of Wales Act 1998 to promote sustainable development in the exercise of its functions. There are four broad sustainability objectives:

- Social progress which recognises the needs of everyone;
- Maintenance of high and stable levels of economic growth and employment;
- The prudent use of natural resources; and
- Effective protection of the environment.

Waterways for Tomorrow – DETR (June 2000)

3.3 The Crindau regeneration proposals are consistent with government policy on the future of inland waterways as set out in the DETR document, Waterways For Tomorrow (June 2000). This sees inland waterways as an important asset which should be maintained and developed in a sustainable way so that they fulfil their social, economic and environmental potential. It notes the valuable contribution that the improvement and restoration of the inland waterways and the development of adjoining land makes to regeneration, by creating pleasant places in which to live, work and play; and attracting private sector investment. The Government wishes to increase such benefits by promoting the waterways as a catalyst for urban and rural regeneration.

Planning A Future For The Inland Waterways (DEFRA, IWAAC and DTLR), 2000)

3.4 Restoration and regeneration proposals relating to inland waterways should have regard to Planning a Future for the Inland Waterways – A Good Practice Guide (June 2000). This document recognises the valuable role that water based regeneration proposals can have on a community and sets out practical terms and good practice advice of how best to achieve beneficial outcomes with such projects. It sets out a number of key recurring themes and features of a successful project:

- The waterways itself.
- The vision for the waterway corridors should promote their accessibility and integrate land areas as part of a co-ordinated approach to regeneration.
- Improvements to the waterway and its environs will generate people based activity, enhance development value and so act as a catalyst for regeneration.
- Principles of quality design should be applied to waterside locations. The amenity value of the waterways creates the opportunity for high quality development, incorporating open space, recreation uses and public realm areas as part of the overall mix.
- Visionary and innovative projects are important in engaging project partners and creating the flagship catalysts for investment from both public and private partners.

Waterways For Wales – The Way Forward, British Waterways (June 2003)

3.5 In June 2003, British Waterways consulted on Waterways for Wales – The Way Forward. This was the start of a process aimed at bringing interested parties together to develop a ‘made in Wales’ plan for Waterways. The document sets out a strategic approach to the revitalisation of the waterways of Wales. It identifies five key themes where water can make a significant contribution, with specific relevance to Wales.

- Economic Regeneration – the power of waterways to act as a catalyst and focus for regeneration and creation of jobs.
- Rural recovery – the waterway is part of a rural community’s past having served industry and agriculture. It now offers a modern role as a focus for leisure and tourism.
- Sustainable Living – waterways are biodiversity and history corridors, which help to create a more attractive environment.
- Cultural Heritage Vitality – waterways are an intrinsic part of Wales’ past and future success.
- Wales in the wider world – Wales’ waterway have the potential to represent the best of Wales’ green and cultural tourism assets and could generate year-round income.

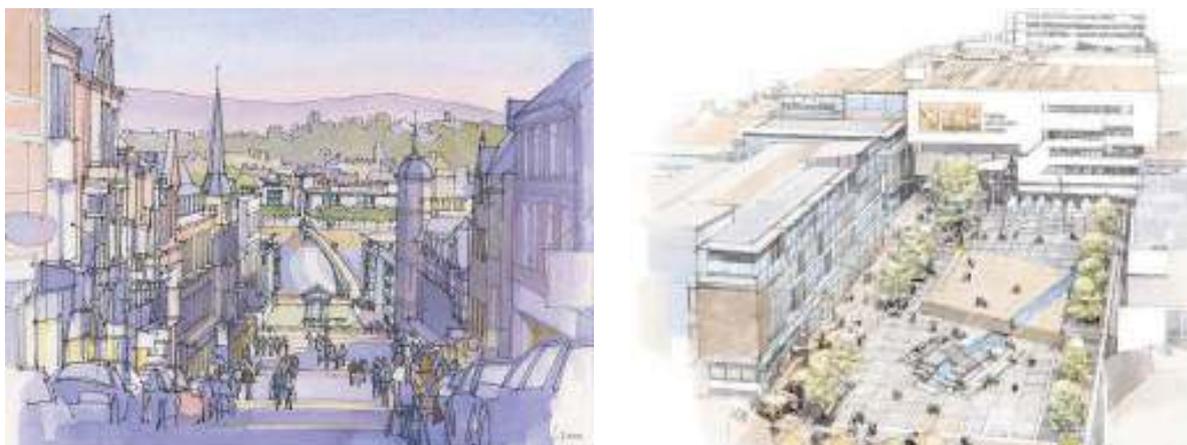
Local Policy

Newport Unitary Development Plan – May 2006

- 3.6 The Adopted Unitary Development Plan (UDP) 1996 – 2011 (May 2006) contains a number of specific and general policies that are relevant to the mixed-use regeneration of Crindau. Most notable include:
- Policy H1 (14 & 45) allocates 340 residential units on approximately 11 hectares of land.
 - Policy ED2 (iv) identifies approximately 16 hectares for a range of B1, commercial, leisure, and residential uses.
 - Policy ED16 (Monmouthshire and Brecon Canal) stipulates that a route to provide a navigable link to the River Usk from the canal via Crindau Pill will be protected.
 - CE30 – Regeneration – encourages urban regeneration schemes which will result in the protection and enhancement of the built environment, townscape qualities and the condition and appearance of buildings, especially in the older inner areas and on major route corridors.
 - Policies CE38 – 40 seek to achieve high standards of design in all development whilst respecting and enhancing the existing character of development in the area.
 - H2 – Housing Sites within Settlement Boundaries – sets out criteria for assessing residential proposals.
 - Policy CF9 - Water Based Recreation – sets out that proposals for water based recreation will be encouraged provided that there are no pollution problems, decline in water quality, unacceptable impact on residential amenity, and traffic can be accommodated on the highway network.
 - SP7 – Conservation of the Natural Environment – In areas designated as being of international or national importance for biodiversity and landscape, development will only be permitted where it conserves and, where appropriate, enhances those areas.
 - SPI 1 – Planning Obligations – identifies that contributions may be sought towards infrastructure provision, highway improvements, education, leisure, affordable housing, and community facilities.

Newport 2020: Unlimited Vision, Central Area Master Plan, Newport Unlimited 2004

- 3.7 The master plan was produced by Newport Unlimited and endorsed by Newport City Council to establish a vision for the regeneration of the central area of Newport. The vision recognises the importance of making the River Usk a focal point for the city promoting the opportunity to create a pedestrian friendly riverfront environment. This will be achieved through a combination of measures to improve access, encourage development, preserve the ecological and historical importance and to celebrate the tidal nature of the river.



Images of City Centre regeneration

- 3.8 The plan identifies Crindau as one of nine priority areas offering the opportunity to form a key northern gateway into the city and the potential to transform the area through mixed use infill development focused around a new marina basin. The plan stresses the importance of reconnecting the area to the city centre and recognises the potential to create a tourist hub through the connection to the Monmouthshire and Brecon Canal system and the international importance of the River Usk. The proximity of the M4 and the opportunities afforded by its waterside setting should ensure that proposed development is of the highest quality.
- 3.9 The development of a marina basin at Crindau is seen as a key to unlock the regeneration of the area and as such this study has been guided by the importance of integrating new development with old, improving connections to the river, creating new public spaces, enhancing the natural landscape and celebrating the regional importance of the Monmouthshire and Brecon Canal. On a wider scale, the importance and role of the project is recognised as providing a link to spread the benefits of increased investment in the city centre along the river corridor to Caerleon and beyond.

Newport City Centre Master Plan – Draft Supplementary Planning Guidance, July 2004

3.10 Section 9 of Newport’s City Centre Masterplan Draft Supplementary Planning Guidance (July 2004) identifies Crindau Gateway as providing opportunities for infill residential and commercial development, focussed around a new canal basin (marina). This Draft SPG identifies that the canal basin/river marina will be the key catalyst for regeneration, and any planning applications that are contrary to the vision for the area will be resisted. In terms of public open space the SPG identifies that new greenway connections across Crindau and the Pill will be integrated into the new development, and should focus upon the marina basin, riverfront walkway, and Shaftesbury Park.



Vision of Crindau marina in Newport 2020.

A Local Biodiversity Action Plan for Newport – Draft 2003

- 3.11 The Local Biodiversity Action Plan (LBAP) sets out the aims for preserving and enhancing the habitats and species which are of importance within Newport. The Council will have regard to the draft LBAP in making an assessment on any application which could have potential impacts on ecology, either within or adjacent to, a proposed development area.
- 3.12 Of relevance to the proposed development at Crindau is the presence of the following species and habitats within Newport's LBAP: otter, allis and twaite shad; bats (all species); water vole; rivers and streams, mudflat, reedbed and the Monmouthshire and Brecon Canal. Other locally notable species may also be present. The Council will expect developers to be proactive in bringing forward measures which help achieve the aims of the LBAP for species and habitats which may occur within and immediately adjacent to the Crindau development area.

4 DEVELOPMENT VISION

4.1 The Council is keen for the importance of the Crindau site as a key 'gateway' to Newport to be realised through the comprehensive redevelopment of the land. The Crindau Pill inlet from the River Usk provides a rare opportunity to create a high quality waterside development hosting a mixture of uses, together with the ability to accommodate both marine and inland vessels, and the creation of a link between the Monmouthshire Brecon Canal and the River Usk via Crindau Pill.

4.2 The Council's vision for the scheme is to create a vibrant environment which can be used for a variety of functions, including a major tourist attraction, a place to live and work, and as a leisure destination. Fundamental to this vision will be development that:

- Incorporates a marina that acts as a functional mooring facility as well as an attractive water feature and tourist attraction.
- Includes a canal basin thereby providing a southern terminus and leisure destination for the Monmouthshire and Brecon canal.
- Creates a link to the Monmouthshire and Brecon canal and the wider canal network via the River Usk.
- Creates a pleasant environment that residents want to live and work in, and employers want to invest in.
- Creates good linkages within the site and to the wider area, especially the city centre.
- Respects, incorporates and enhances the ecological and wildlife needs associated with Crindau Pill and the River Usk.
- Enhances and integrates with the living environment of existing residents.
- Incorporates a mixed-use development including residential, retail, leisure and commercial land uses.

5 THE DEVELOPMENT PROPOSAL

- 5.1 The Crindau development proposals are made up of a number of elements, which combined provide the basis for the comprehensive redevelopment of the area. Plans attached to the guidance illustrate the proposed uses and an indicative layout. These should be used as a guide as to how the development could be incorporated on the site rather than a proposed layout. The main components of the proposed redevelopment include the following:

Marina and Canal Basin Proposal

- 5.2 The key driver behind the regeneration of the Crindau redevelopment proposal is the creation of a marina and canal basin, with links to both the Monmouthshire & Brecon Canal and the River Usk. To facilitate this objective Hyder Consulting was commissioned by Newport City Council and Newport Unlimited to undertake a feasibility study into the creation of a proposed marina on the Crindau area. The Crindau Marina Feasibility Study – Final Report (24th March 2007) has helped inform and shape this document and forms a background paper to the SPG.

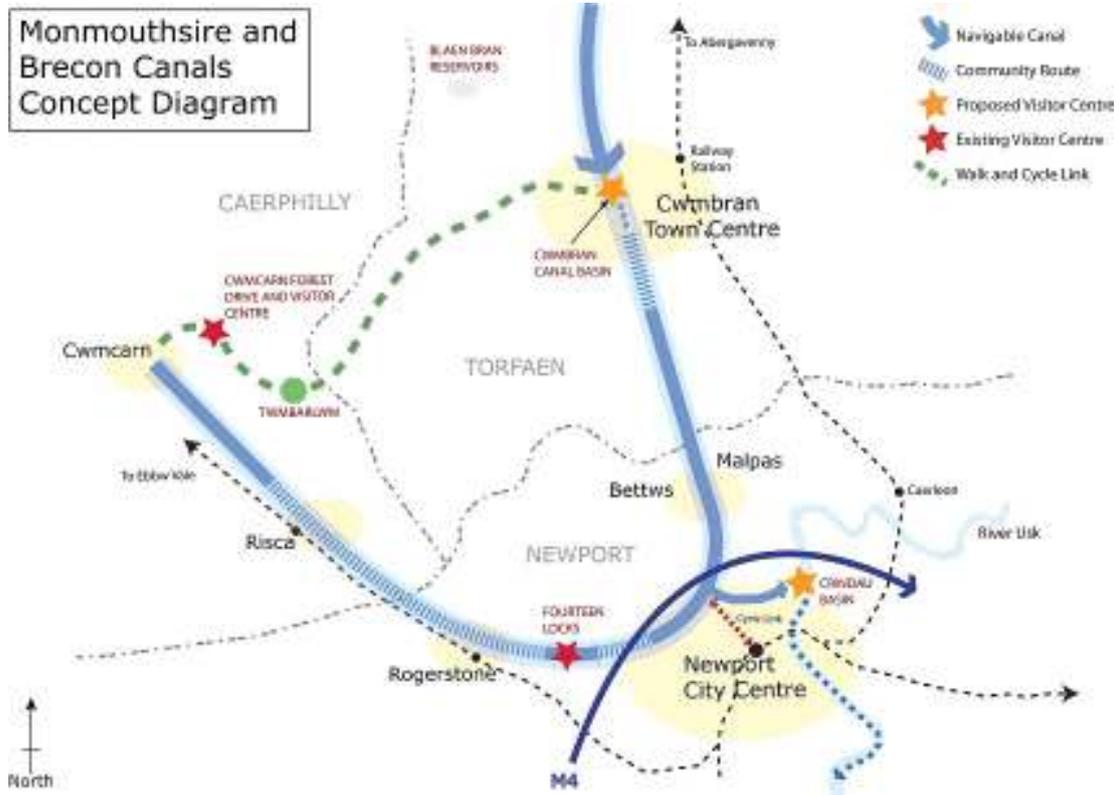


- 5.3 The development of a marina at Crindau offers a unique opportunity to connect canal, river and coast. The proposals would create a southern terminus and visitor destination for the Monmouthshire and Brecon Canal, whilst also providing boat access to the River Usk and, in addition, marina facilities for coastal powerboats in the Bristol Channel. Located in a central position within the city of Newport, it would create a visitor destination with a wide range of visitor facilities, attractions and services positioned alongside a high quality waterside development.



Potential Destinations from Crindau – Brecon (T & M) and Cwmbran

- 5.4 In addition to visitors arriving by boat either from the Monmouthshire & Brecon Canal or the Bristol Channel, the creation of a marina at Crindau will also draw other land-based visitors to the waterfront attracted by boating activity in the marina and the provision of other leisure and commercial uses in and around the marina.



Current restoration projects will soon provide a days cruising to Cwmbran or Cwmbran from Crindau

- 5.5 The Crindau redevelopment proposals, especially the creation of a canal basin, are essential to the long term sustainability of the Monmouthshire and Brecon Canal and form part of a wider regeneration programme linked to its restoration. The Council has a long standing commitment to the restoration and regeneration of its canal network, and works closely with its partners in The Monmouthshire and Brecon Canals Partnership. Together with Newport CC, the Regeneration Partnership is made up of Torfaen CBC, Caerphilly CBC, British Waterways and Monmouthshire, Brecon and Abergavenny Canals Trust.

- 5.6 Over the last 10 years, the partnership has successfully restored stretches of the canal network and is seeking further funding to undertake further restoration projects. For example, a grant of approximately £700,000 from the Heritage Lottery Fund (HLF) has recently been announced, securing the funds necessary to restore the first four flights of the historic Cefn flight of Fourteen Locks. Once complete this work will enable navigation of a 7-8 kilometre stretch of canal along Crumlin Arm within Newport and on towards Cwmcarn in Caerphilly.



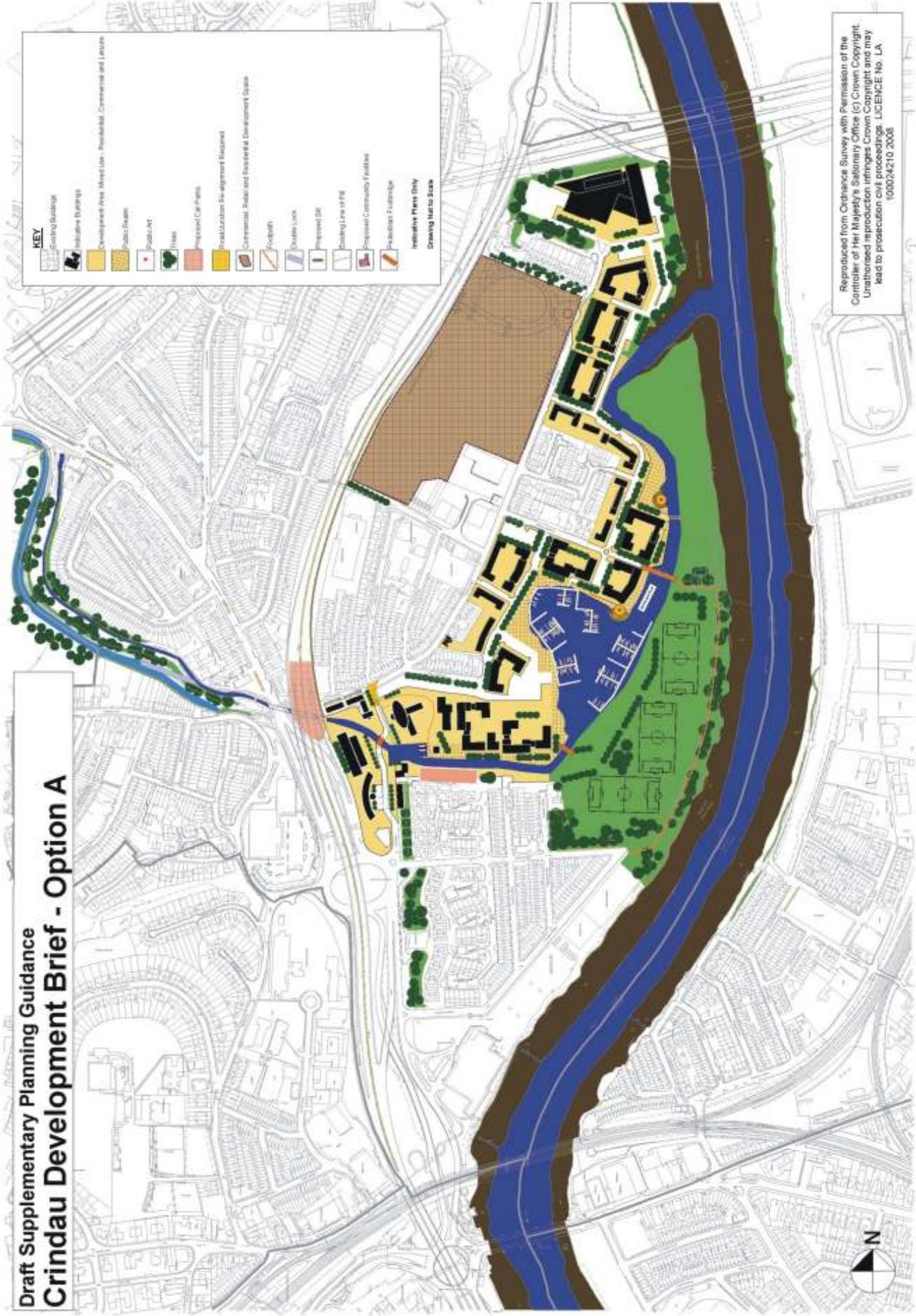
Boat Trip and restoration works at Fourteen Locks

- 5.7 Key infrastructure components considered necessary to achieve these navigational and mooring capabilities include:

- An excavated marina basin within the Crindau Pill.
- A passing place (option A) or secondary basin (Option B) east of Lyne Road and South of Adelaide Street utilising the existing flood storage area.
- A lock or interim cill arrangement to provide passage from the River Usk to the Basin, and to maintain water levels.
- Creation of a navigation channel, either new or an expansion of the existing Crindau Pill course to permit passage to the Monmouthshire Brecon Canal with modifications to upstream bridges and culverts and a suitable lock arrangement.
- Lyne Road Bridge demolition and reconstruction.
- An approach channel to the marina from the River Usk.

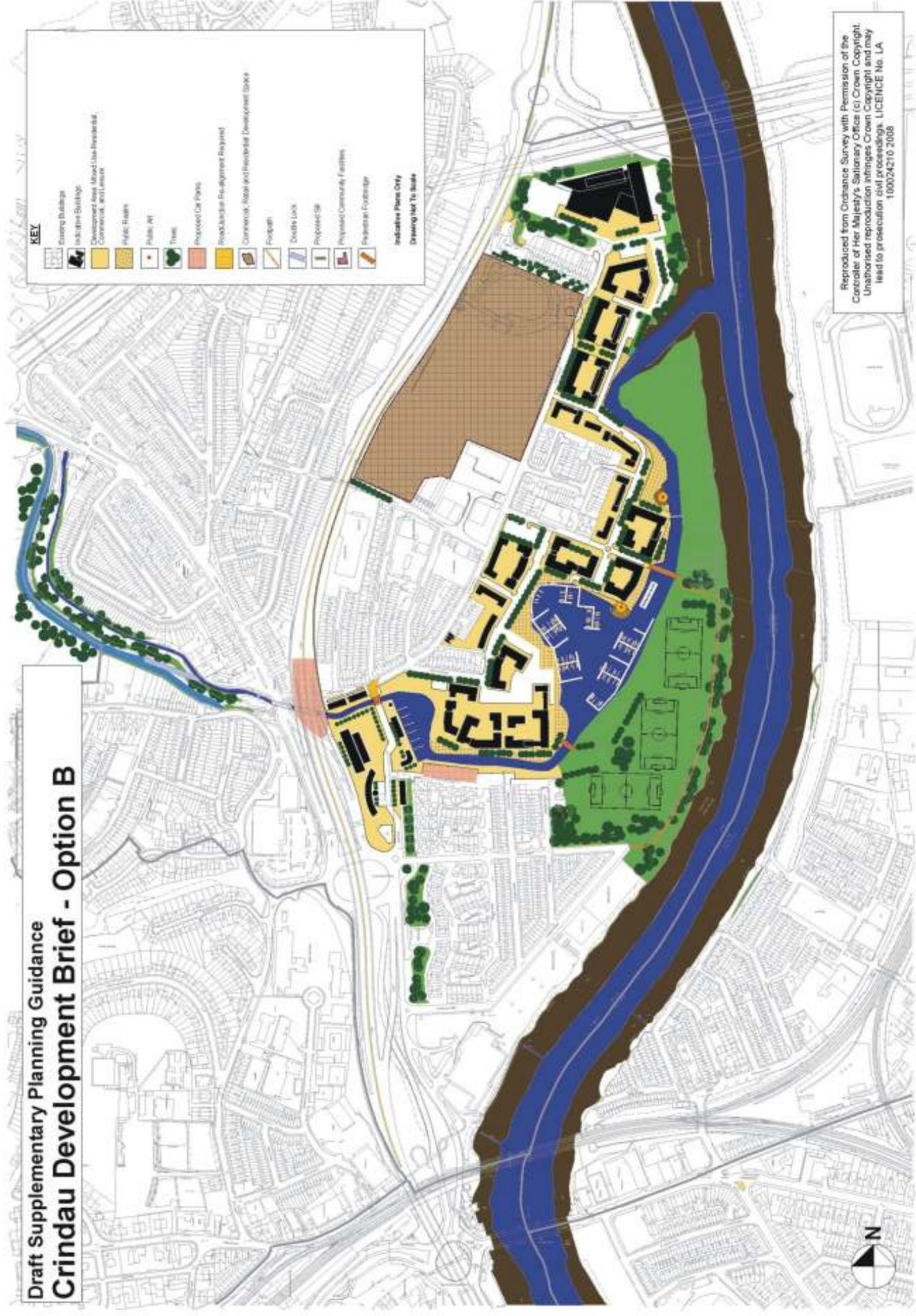
- 5.8 The development of a marina and complimentary uses are considered to form the catalyst for extensive regeneration of the Crindau area. The introduction of a water feature will form the focal point of a wider mixed use development scheme. Potential land uses envisaged include the following:

**Draft Supplementary Planning Guidance
Crindau Development Brief - Option A**



Reproduced from Ordnance Survey with Permission of the
Controller of Her Majesty's Stationary Office (c) Crown Copyright
Unauthorized reproduction infringes Crown Copyright and may
lead to prosecution civil proceedings. LICENCE No. LA
100024210 2008

**Draft Supplementary Planning Guidance
Crindau Development Brief - Option B**



KEY

	Existing Buildings
	Public Buildings
	Development Area Moved Use Horizontal/Commercial and Leisure
	Public Facility
	Public Art
	Trees
	Proposed Car Parks
	Road/Urban Realignment Proposed
	Commercial, Retail and Residential Development Space
	Footpath
	Drainage
	Proposed Cycle
	Proposed Community Facilities
	Proposed Footpaths
	Indicative Place City Drawing Not To Scale

Reproduced from Ordnance Survey with Permission of the Controller of Her Majesty's Stationary Office (c) Crown Copyright. Unauthorised reproduction infringes Crown Copyright and may lead to prosecution civil proceedings. LICENCE No. LA 100024210 2008



Residential

- 5.9 The predominant land use proposed for the Crindau redevelopment area is residential. Policies HI(14) and HI(45) of the Newport UDP allow for 420 units on a combined total gross area of 11 ha. Appropriately designed, responding to local character/context and sound sustainability principles, a higher density could be considered acceptable and achievable given the site's proximity to the river's edge and the city centre. The exact number of units to be accommodated on site is an issue that is open to discussion subject to a high quality design and layout being agreed.
- 5.10 To achieve a mixed community, the proposed development should incorporate a range of densities and house types, and an element of affordable housing will normally be negotiated in line with Policy H5 of the Newport Unitary Development Plan and Affordable Housing Supplementary Planning Guidance.
- 5.11 Development situated adjacent to existing residential areas should be respectful of existing densities and be built at an appropriate scale. Higher densities in the form of town houses and apartments would be more appropriately located along the water's edge.



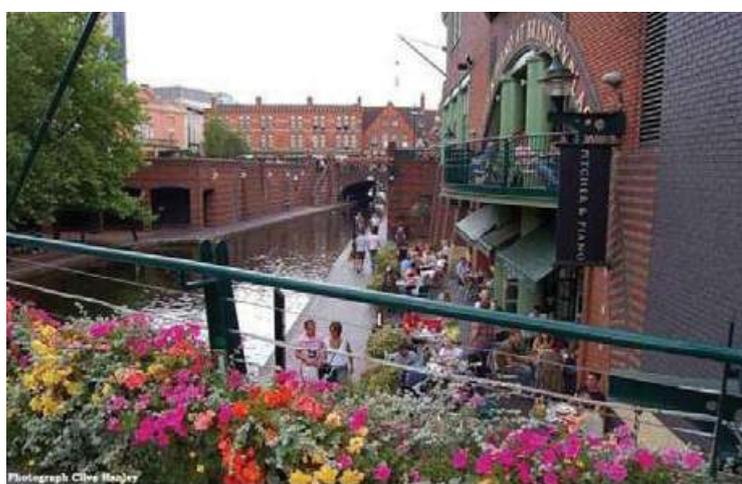
Examples of residential development in a waterside setting – Swansea and

Commercial

- 5.12 In order to retain local employment opportunities in the Crindau area, an element of BI use would be encouraged on the site. It is envisaged this will be in the form of a small office development. The exact location of office accommodation is open to negotiation. The proposed redevelopment should also enhance the environment and attractiveness of existing office accommodation situated at the northern end of the site.
- 5.13 Office accommodation in this location would benefit from good accessibility links given the site's proximity to the M4 and is within 15 minutes walking distance of the railway station, offering services to London, Cardiff and the wider rail network.
- 5.14 The incorporation of live work units into the scheme would also be encouraged as part of mixed use development.

Leisure

- 5.15 The canal basin and marina provide an ideal setting for a range of leisure facilities to cater for residents and visitor's leisure needs. Land fronting onto the water should be utilised to accommodate leisure facilities such as cafes, bars and restaurants. These could be situated on the ground floor of waterside blocks with residential accommodation above.



Examples of pubs and cafes adjacent to waterside setting at Bristol and Brindley Place

- 5.16 It is important that a number of key public spaces are provided within the development and connected into the existing public realm infrastructure. These could take the form of public squares, promenades and paved areas for restaurants and cafes to trade outdoors during dry weather. There should also be provision for the National Sustrans Cycle Route 47 and the riverside walkway / cycleway to be embedded in the public realm infrastructure design. This walkway will ultimately connect Caerleon, through Crindau to the Old Town Dock. Consideration should be given to the adaptability of public spaces to hold formal occasions and events such as festivals and fetes.
- 5.17 A suitable location for a hotel development would be considered for the northern end of the site, to the rear of the Glasswork Cottages. A hotel development in this location would be highly visible from the M4 and would benefit from links off the A4042 and the city centre.

Community Centre

- 5.18 The community centre that serves the Shaftesbury area is currently situated off Evans Street, with separate changing rooms for Shaftesbury Park located to the east of Wheeler Street, at the southern end of the park. The wider Crindau proposals provide an opportunity to consolidate and expand the existing facilities to cater for the increase in population attracted to the area as a result of development. The long term aspirations of the Council are to build combined community centre and changing rooms in the vicinity of the existing changing rooms, however, alternative options may come to light through the regeneration process that will need to be explored.
- 5.19 The proposals could also include the relocation of the multi-use games area from Pugsley Street to sit alongside the new community facility. This arrangement would centralise the community facilities in one area and provide potential to expand the existing allotments on Pugsley Street, southwards on to the existing multi-use games area site.

Crindau Southern Gateway

- 5.20 The southern gateway into the Crindau Regeneration site is considered to form an important element in creating a high quality entrance into the wider Crindau regeneration site. At present, land running along the west of Lyne Road accommodates the Rising Sun pub and associated car parking, McDonald's, industrial units, Coronation Working Mens Club and St John's Ambulance centre. Mixed use redevelopment of the area is proposed to complement the wider regeneration proposals for Crindau. Uses including A3 eating/pub premises, residential units, live/work units, a restaurant, car parks, hotel and public squares/spaces, could be considered acceptable on the site.

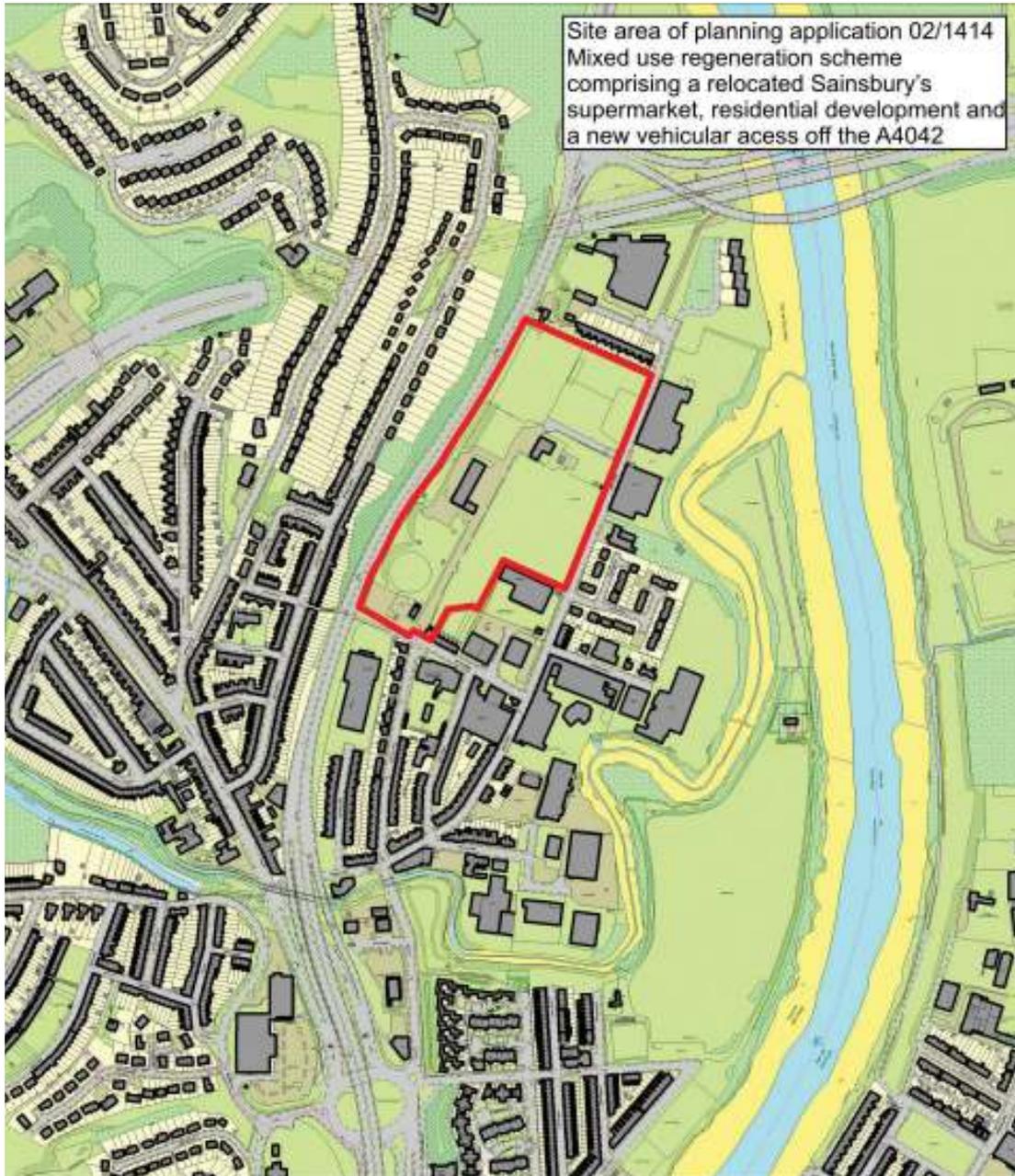
- 5.21 The canal basin and pill line form part of the southern gateway area. There are a number of options open to the Council with regards to the realignment and position of the basin and pill; these are discussed in Section 12.
- 5.22 Given the mixed use designation, there is a degree of flexibility in the uses that would be considered acceptable on the site. However, as the southern gateway into Crindau, it is important that potential developers set out how high quality urban design will be achieved.

Lyne Road Bridge Realignment

- 5.23 The inclusion of a replacement bridge at Lyne Road to improve vehicular access, including bus traffic, and allow navigable use of the Crindau Pill is considered to be an essential piece of infrastructure in the successful redevelopment of Crindau. Developers will be expected to incorporate a redesigned access into the site as part of any proposed scheme. Access considerations are discussed further in section 11 of the guidance.

Former Gas Works Site

- 5.24 The former gas works site forms an integral part of the Crindau regeneration proposals, but currently has a stand alone planning approval. Outline planning application 02/1414 seeks the approval of a mixed use regeneration scheme comprising of a re-located Sainsbury's Supermarket (Class A1) with ancillary restaurant / coffee shop and petrol filling station; class A3 restaurant, class C3 residential development and public open space together with associated car parking and servicing, and a new vehicular access off the A4042 connecting into the wider area. All matters other than access have been reserved for subsequent approval. The planning application has been subject to a S106 agreement.
- 5.25 An indicative plan submitted as part of the planning application shows approximately two thirds of the site being utilised by the relocated supermarket and associated car park and buildings. Residential development occupies the south western corner of the former gas works site.
- 5.26 A Site Specific Design Brief has been prepared to cover the former gas works site to ensure its development is fully integrated into the wider Crindau scheme. The brief's sentiments and principles are followed through into this document for consistency. The brief requires a low energy food store with design quality and sustainability issues to be addressed as an exemplar within the city.



Car Parking

- 5.27 The redevelopment of Crindau provides an opportunity to explore options available to increase car parking provision in the area. Two car parks have been identified on the indicative layout plans, one to the south of Crindau Pill and the other under Heidenheim Way. These would provide parking for the immediate vicinity as well as the potential for a park and ride service into the city centre. Further work is, however, required to assess the feasibility of the suggested locations.

6 DEVELOPMENT CONSTRAINTS

- 6.1 The Crindau Regeneration area is subject to a number of physical and environmental constraints, which will require appropriate consideration by developers in respect of the siting, layout, landscape framework, and design of their schemes. The major constraints relate to flooding, ecological protection, access, and potential ground contamination.

7 ECOLOGY AND WILDLIFE

- 7.1 The Crindau Regeneration area is not subject to any statutory nature conservation designations. The Monmouthshire-Brecon Canal is designated as a candidate Site of Importance for Nature Conservation (cSINC), a non-statutory designation, and is given protection under Policy CE7 of the UDP.
- 7.2 The River Usk is a designated Special Area of Conservation (SAC) and as a Site of Special Scientific Interest (SSSI). SACs are strictly protected sites designated under the IEC Habitats Directive. SSSIs are a national designation and protect the best examples of the UK's natural heritage of wildlife habitats, geological features and landforms. Crindau Pill feeds directly into the River Usk and maintenance of this link will be important for the conservation of ecology in the areas. The River Usk subsequently discharges into the Severn Estuary. The Usk Estuary is designated as a SAC and the Severn Estuary. The Estuary is designated as a SAC and the Severn Estuary as a SSSI, a proposed SAC, a SPA and a Ramsar site.
- 7.3 An otter survey of Crindau Pill/Malpas Brook and the Newport section of the Monmouthshire and Brecon Canal was undertaken in June and July 2007 by the Just Mammals Consultancy (Newport Urban Otter Habitat Survey – Phase 2, May 2007). These watercourses are known to be used by Otters, a European protected species. Otters are a qualifying feature of the River Usk SAC. Otters may use the Pill to Bettws Brook and possible breeding sites at Gwasted Mawr. With respect to the Bettws Brook/Crindau Pill/Malpas Brook watercourse, the survey found that despite passing through a busy part of the City and the community of Bettws in particular, there were some good habitat features which otters could exploit. Crindau Pill has some medium quality reedbed habitat for otter, but its main function is to act as a link for otters between the River Usk and the good quality habitat along the canal and Bettws Brook.

- 7.4 The Crindau Marina Feasibility Study (Hyder 2007) was supported by an ecological appraisal carried out by Cresswell Associates (March 2007). Preliminary ecology surveys were undertaken of the area potentially affected by the proposed marina, including a phase I habitat survey, survey for signs of water vole and otter and an assessment of the value of the Crindau Pill and Monmouthshire and Brecon canal for white-clawed crayfish and amphibians undertaken. Assessments were also made of the potential for bats and dormice, both European protected species.
- 7.5 The Ecological Appraisal indicates that the Crindau Pill may be used by eels as well as other migratory fish (possibly lamprey) and by flounder as a nursery. The reedbeds along the pill may provide habitat for breeding reed warblers, whilst Cetti's warbler may use areas of dense scrub. The mudflats will provide suitable habitat for passage and wintering birds, including redshank, lapwing and teal which are present along the River Usk. Vegetation on the muddy banks of the pill is limited and no plant species of note were recorded. Aquatic invertebrate assemblages will be associated with the mudflats and other tidal habitats and could include species of local or possibly wider interest. Habitats along the pill are suitable for a range of damselfly and dragonfly species, but the silty nature of the bottom makes it unsuitable for white-clawed crayfish.



The reedbeds along Crindau Pill may provide a breeding habitat.



The mudflats provide suitable habitat for passage and wintering birds, including redshank, lapwing and teal which are present along the River Usk.

- 7.6 Some of the mature trees along the boundary between Shaftesbury Park and the Pill had cavities and dead wood which made them potentially suitable as bat roosts. Lyne Road Bridge may also provide opportunities for roosting bats. The pill, canal and River Usk and associated habitats are suitable as foraging and commuting routes for bats. No signs of water vole or dormice were noted, although there are recent reports of water voles at Llantarnam.
- 7.7 The Monmouthshire-Brecon canal supports a range of habitats and species including otter and common amphibians. White-clawed crayfish are known from the northern sections of the canal, and could potentially be present along the Newport arm. Three-spined stickleback, a UK priority species, are likely to be present, as are other fish species including eels. The diversity of habitats along the canal will provide valuable habitat for birds, and species recorded in the past include kingfisher, water rail and common water fowl.



Monmouthshire-Brecon Canal supports a range of habitats and species including otter.

- 7.8 The extent of biodiversity interest within development areas will need to be assessed by appropriate surveys to inform detailed development plans for the area and to identify appropriate measures to avoid or minimise impacts on species and habitats of value.
- 7.9 To comply with the Conservation (Natural Habitats &c.) Regulations 1994, any development around Crindau Pill must ensure that it does not have detrimental impacts upon the River Usk SAC or the special features for which it was designated. Therefore, an Appropriate Assessment of this Development Brief SPG is being carried out by the Council. It will assess whether any likely significant effects on the River Usk SAC and its qualifying features, can be avoided through implementing appropriate conditions and legal obligations on individual planning applications in respect of working practices, timescales, watching briefs, and through appropriate design and edge treatment. Such measures will seek to ensure that either individually or cumulatively no significant impact will occur as a result of the regeneration of Crindau Pill.
- 7.10 Developers must also be aware of the need to incorporate measures into their designs to ensure that take account of the proximity and linkage with the River Usk SAC/SSSI and to a lesser extent the Severn Estuary cSAC/SPA/SSSI/Ramsar.
- 7.11 In seeking to remediate ground contamination, or excavating the marina basin, developers must ensure that no pathway is created which might cause any contaminated material to enter the Crindau Pill and ultimately the River Usk SAC.
- 7.12 An Appropriate Assessment will also be required for each stage of the regeneration proposals. It is important, therefore, that any significant impacts upon the SAC are avoided through sensitive design. Where possible a soft edge approach to the Pill should be adopted, which encourages good scrub and ground cover necessary to provide undisturbed resting sites for Otters.
- 7.13 Developers will be required to provide sufficient baseline information to allow the appropriate authority to undertake an Appropriate Assessment of each regeneration proposal.

- 7.14 Potential issues which may need to be addressed include, but are not limited, to the following:
- Collation and assessment of existing relevant ecological information within the identified development areas, and areas within any zone of influence (1km buffer from the edge of the area boundary), including target notes for key species (otters, birds, bats etc);
 - Phase I habitat surveys to include mapping of vegetation within the development areas, identification of plant species present and habitat plans.
 - Fauna surveys which will need to identify presence and potential for notable and protected species, as well as an assessment of how the change in tidal regime of the pill will affect these species. It is envisaged that some aquatic surveys will be required. Surveys should include:
 - Bats – roosting and foraging surveys;
 - Birds (possibly breeding bird and winter bird surveys required);
 - Fish – particularly to assess the value and use of Crindau Pill for migratory species;
 - Invertebrates – both terrestrial and aquatic surveys may be required, including particular reference to the assemblages within the mudflats along Crindau Pill;
 - Water voles – update surveys required along the pill and Newport section of the Monmouthshire-Brecon Canal.
 - Update of otter survey of Crindau Pill and westwards towards Gwastad Mawr, and possibly beyond, to confirm level and type of use by otters and identify information necessary for provision of disturbance licence applications;
 - Reptile surveys along the banks of the pill, canal and within the areas identified for commercial and residential development.
 - Flora and fauna surveys of the area where the lock with the Monmouthshire-Brecon canal is proposed;
 - Hydrological surveys;
 - Contamination surveys to inform development of pollution prevention measures and remediation strategies, if required.
 - Assessment methodology to be agreed with the relevant statutory organisations, including Newport City Council.

- 7.15 The full extent of surveys required and measures which may need to be taken to avoid significant impacts on the River Usk SAC and on the valued ecological receptors within and adjacent to development areas will need to be agreed with the relevant nature conservation organisations. The Council will expect the developer to set up an Ecological Working Group during the project, to include the Countryside Council for Wales, Environment Agency Wales and Newport City Council's Biodiversity Officer. The Group should meet regularly and their advice and recommendations fed into the overall project design.
- 7.16 The assessment of impacts will need to look at the construction and operational phases and identify short, medium and long-term negative and beneficial effects. Potentially, one of the most significant long-term impacts on the pill will be the alteration of the tidal pattern, with parts of the pill permanently impounded and other sections still open to tidal influence. An assessment will also need to be made of in combination effects and address potential impacts of opening the canal and pill to boat traffic.
- 7.17 Development will be required to comply with protected species legislation and with the Habitats Directive and will:
- Have full regard to international, national and local nature conservations policies;
 - Respect the intrinsic ecological value of Crindau Pill;
 - Have no significant adverse impacts on the River Usk SAC and its special qualifying features, either on its own or in combination with other plans or proposals;
 - Protection of otter passage, along Crindau Pill to Gwastad Mawr and beyond by providing a soft-edge approach along continuous, but necessarily contiguous, sections of the pill;
 - Provide for enhancement and improvement of existing habitats;
 - Include the preparation of site specific management plans to cover new and enhanced habitats.
- 7.18 Appendix I includes a table of the main anticipated phases of development and the principal impacts on ecology. In general terms, any proposed development should look to include, as far as possible, the principles of ecological protection outlined in Appendix I.

DESIGN PRINCIPLES

- 8.1 The key design principles that the City Council wishes to see integrated in the regeneration of Crindau include:
- Development proposals that respond to the existing townscape and which complement surrounding land uses and integrate with adjoining communities;
 - A contemporary high quality mixed-use design;
 - Design led through strong sustainability principles;
 - Landmark buildings and public open space in key locations;
 - A cohesive layout to the urban edge of the marina basin and Crindau Pill, with a strong permeable urban façade;
 - Integration with Shaftesbury Park and the Riverside Walk through incorporating appropriate pedestrian / cycle crossing points over Crindau Pill;
 - Sensitive design which respects the ecological setting of Crindau Pill and its environs, particularly the River Usk SAC/SSSI;
 - Appropriate detailed design for hard and soft edge treatment to waterbodies where there may be considerable level changes; and
 - A layout that facilitates good pedestrian permeability.
- 8.2 The objective for any development proposal must be to create an inclusive community within Crindau that has its own sense of place and structure, whilst also connecting and strengthening connections to the wider city infrastructure. A bland development proposal, or schemes that are detrimental to existing residential amenity, will therefore not be acceptable.
- 8.3 Public open space should be meaningful and play a strategic role within the development and for the city as a whole. It should be integral to the design and not simply be ‘leftover areas’ or undevelopable land. Odd spaces and pieces of land must be incorporated within the nearest curtilage and not used as a contribution towards public open space target.
- 8.4 Public spaces and routes should be attractive, safe, uncluttered, and be able to be utilised by all members of society. In order to facilitate permeability and movement, development proposals should promote the legibility of the development through a hierarchy of public spaces and pedestrian / cycle routes through the area. Particular focus should be on the marina basin and the River Usk riverside walkway/cycleway connecting Caerleon to the city centre and the national Sustrans cycle route.

- 8.5 The successful regeneration of Crindau must provide a responsive solution, and create opportunities for innovative design, whilst fully embracing the principles of good urban design and built form in accordance with Technical Advice Note (TAN) 12: Design, The Planning Officers Society Wales Residential Design Guide and the Manual for Streets.
- 8.6 Development must promote an efficient use of land at a density suited to its location on the edge of the City Centre. However densities, building heights, and layouts must respect the scale and massing of existing residential buildings within Crindau. Draft City Centre Supplementary Planning Guidance identifies that buildings should be between 3 and 6 storeys, with 6 storeys being appropriate adjacent to Heidenhiem Way. There are opportunities at limited locations for landmark buildings to be considered within the masterplanning process.
- 8.7 Buildings visible from Heidenhiem Way should carefully consider the treatment of roofscape given the area's visual prominence from the elevated road. The views from Heidenhiem Way and the M4 have been considered as part of the Draft Newport City Gateway Strategy which was commissioned by Welsh Assembly Government, Newport City Council and Newport Unlimited. The strategy analyses the landscape needs and opportunities for the Gateways into Newport, with M4 junction 25a and Heidenheim Way being identified as a key gateway area.
- 8.8 New urban blocks should be planned to help maximise connections through to adjacent communities and to the River.
- 8.9 Mixed use development based around the proposed canal basin should be encouraged with active uses at ground floor.
- 8.10 Streets and spaces should be overlooked with continuous street frontage and a consistent design between the carriageway and building line. Any layout must ensure that there is an appropriate ratio between building height and street widths, and should make provision for street trees/ avenues, etc.

8.11 The developer is expected to make provision for a marina basin. This should be regarded as the primary focal point of the regeneration area. Non-residential uses around this strategic location should be situated at ground level in order to create street activity. Edge treatment and design of this area should look to the Council's Public Realm Strategy for guidance. As a major development site, Crindau is a key delivery mechanism for new public realm, and it is important that the design of public spaces meets the requirements and principles of the Public Realm Strategy and has reference to the palette of materials and street furniture products selected.



8.12 Initial development must deliver a variety of well-designed buildings based upon a common design philosophy that will be reflected through all phases of development that follow. There is an opportunity to develop two landmark buildings within the Crindau area. One could be at the northern extent of the regeneration area in order to highlight Crindau as the gateway to Newport from the M4, and the other could be situated at the southern end of the site, in the vicinity of the Harlequin roundabout to mark the entrance into the city centre. The height of these should be developed in conjunction with the context of tall buildings proposed within the city centre, it is envisaged that that would be no taller than 12 storeys.

8.13 The treatment of public areas to be adopted will have to be considered in accordance with the Council's Public Realm Strategy. External building materials should have regard to the existing vernacular, notwithstanding the need for innovation and creativity, and elevations considered in terms of proportions, roof style, and fenestration.

- 8.14 The main axis of the regeneration area has a north/south aspect and this provides an opportunity for passive solar gain to be incorporated into the design and layout of the development. The development must achieve an “Excellent” BREEAM EcoHomes rating and take into account the aspirations of the Welsh Assembly Government to achieve Carbon Neutrality in new buildings throughout Wales by 2011.
- 8.15 Development proposals for Crindau must be designed to give low environmental impact. This will be achievable through proper site planning, which takes advantage of orientation, appropriate insulation, use of natural ventilation and light. Therefore the following aspects should be fully considered by a developer:
- Most environmentally beneficial and viable energy source for heating and hot water.
 - Use of energy efficient luminaries and appliances both internally and externally.
 - Incorporation of grey water recycling and sustainable drainage systems where appropriate.
 - ‘Secure by Design’ principles have been incorporated within any scheme.
 - Protecting and enhancing nature conservation through appropriate design and sensitive landscaping schemes.
- 8.16 It will be a requirement of the council that any proposals developed should have the relevant input from the Design Commission for Wales through their Design Review process pre-application.

9 PUBLIC SPACE DESIGN

Landscape Infrastructure

- 9.1 The Masterplan must provide a strong landscape framework for the site. Paved and planted public space is not acceptable as space left over after planning built form. An integrated strategy to incorporate the new development with the existing urban grain, Shaftesbury Park, the rivers edge and the proposed marina / water bodies is a high priority for the Crindau area.
- 9.2 Appropriate planting and landscape reflecting the site's riverside location and city gateway status should be achieved through species choice, density and location. Developers should look to increase tree cover to contribute to carbon offset of development. Landscape design should aim for improvements in city air quality and visual quality, and strive to contribute to the Council's Community Strategy objectives for a 'Greener City' and 'Attractive City'.
- 9.3 The proposed canal basin / marina should be treated as the focal point of the development in the area with high quality hard landscape materials and a strong edge treatment.
- 9.4 It is envisaged that the landward side of the proposals adjacent to the new waters edge will be formal hard edge with extensive tree planting within paving. The Shaftesbury Park and River Usk Edges should be maintained as a softer landscape corridor with native planting to enhance the wildlife corridor and habitats revealed in the ecological survey.
- 9.5 An area of public open space must be incorporated between Alderney Street and Adelaide Street. This area will need to respect and relate to the marina basin and Crindau Pill where active mixed-use ground level frontage around this area will be encouraged.
- 9.6 The incorporation in the layout of a hierarchy of spaces is essential, ranging from private garden areas to small scale sitting out areas and local play areas for young children. General principles of the design, layout and planted public realm of the site should seek to create a safer, more secure environment. Secure private areas and open, well viewed public areas are desirable, creating hidden areas is not desirable.

- 9.7 All landscape framework proposals will need to be carried out in accordance with plans to be approved by the local planning authority which should show location, species and height of all trees and shrubs. In order to an adequate level of tree coverage, developers will need a tree survey to BS5837 standard to justify and support developments and removals.

Open Play Space

- 9.8 The creation of a marina will involve some loss of open space at the northern end of Shaftesbury Park. This will be offset, however, by an overall improvement in environment, and through the creation of more general recreation opportunities associated with water. The Crindau regeneration proposals also open up opportunities to improve the quality of the remaining element of Shaftesbury Park, making it a more useable and attractive play space.
- 9.9 Shaftesbury Park should be maximised as an open space resource incorporating playing fields and a Neighbourhood Equipped Area for Play (NEAP), and also designed to maximise ecological potential. In addition, the Riverside Walk should extend north across Crindau Pill and beyond. The area should be treated according to the criteria set out for restoring the natural landscape of the River Usk.



Shaftesbury Park should be improved and enhanced as an open space resource.

- 9.10 It is important that residential development is implemented alongside an adequate amount of open space to meet the needs of the additional population attracted to the area. Developers will be expected to provide outdoor play space in accordance with Policy CF4 of the Unitary Development Plan and Outdoor Play Space Provision Supplementary Planning Guidance (February 2007). These seek to secure an element of outdoor play space on residential developments, with the level and type of space required being set out in the National Playing Fields Association's standard of 2.4 hectares per 1000 population. Developers should ensure that consideration is given to all types of outdoor play space included in the NPFA standards, namely, equipped play areas, informal space and formal recreation facilities. Provision should be provided on site, unless it can be demonstrated this is not desirable or practicable. In this instance, a financial contribution in lieu of on site provision will be negotiated.

Allotments

- 9.11 The Statutory Allotments at Shaftesbury Park are being eroded by the River Usk. Policy CF14 – Allotments of the Newport Unitary Development Plan, requires that any loss of allotment pitches are replaced with equivalent alternative provision within the vicinity, unless it can be demonstrated that the allotments are surplus to long term local requirements. Potential relocation options will need to be considered by the Council in the medium to long term.

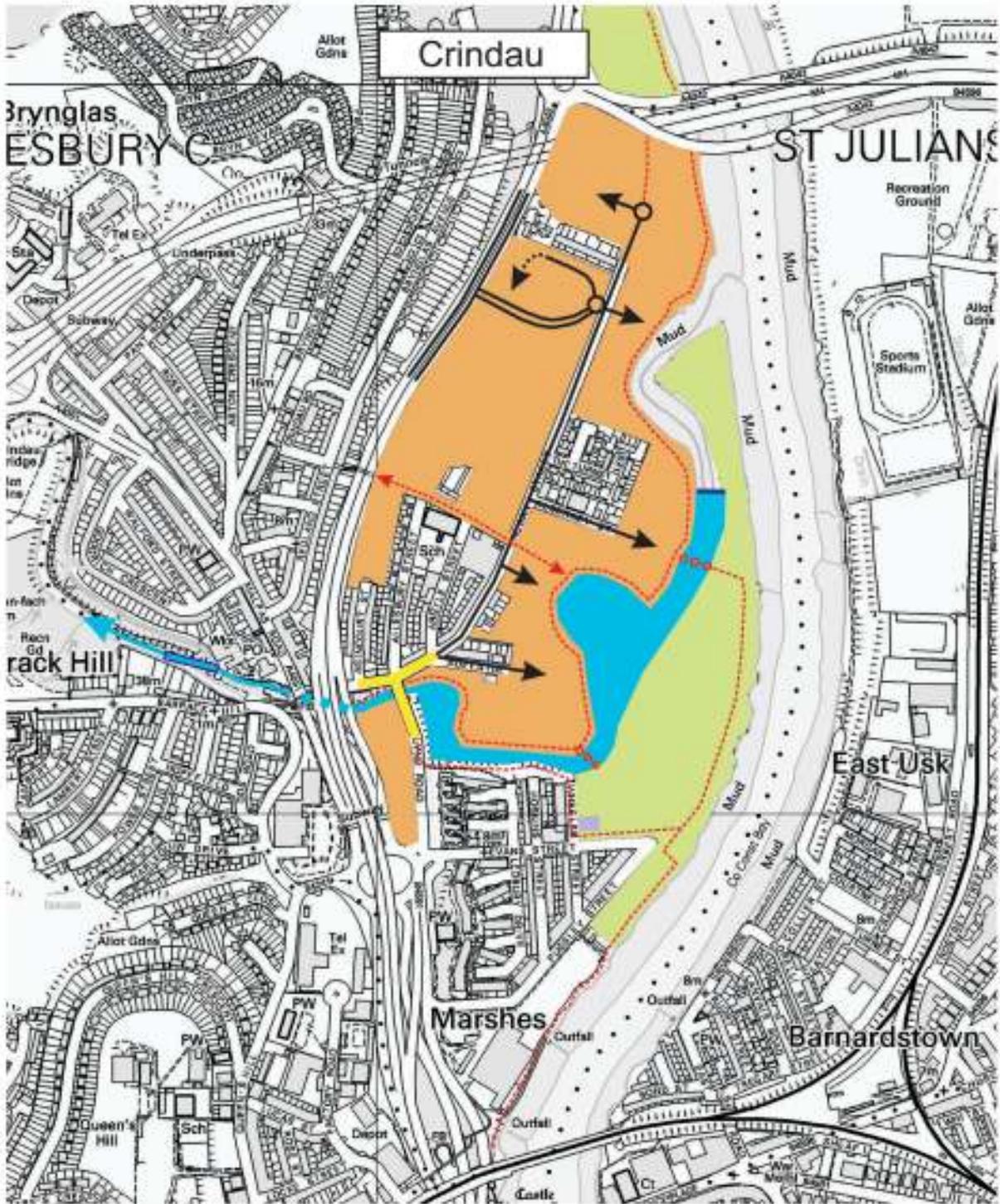
10 PEDESTRIAN / CYCLE ACCESS

- 10.1 The redevelopment of the Crindau Regeneration site provides an opportunity to improve the National Cycle Route and provide new pedestrian and cycle links to the site. A key principle of the regeneration proposal is to create a well-integrated site linked up to a wider area than the site itself, in particular towards the City Centre.
- 10.2 Development should contribute towards or provide a permeable network of secure, direct and convenient pedestrian and cycle routes between the internal land-uses proposed and the wider area. Key routes to be incorporated into the redevelopment of the site are considered to include:
- An east / west pedestrian link through the site, linking the wider Shaftesbury area to Crindau and Shaftesbury Park.
 - Principal north / south link through the site along Albany Road.
 - A continuation of the Riverfront Walkway from the City Centre along Crindau Pill, connecting to the riverfront access north of the site.



Development should link in to the wider cycle network in and around Newport

- A pedestrian footbridge across the proposed pill channel linking the development site to Shaftesbury Park.
- Pedestrian swing or lift bridge situated adjacent to the proposed cill.
- Dedicated pedestrian walkways at the marina waters edge.
- Connection to the National Cycle Network which currently has links running along the southern and northern ends of the site. This will form a strategic link in the National Cycle Network, connecting the city centre to Caerleon and the Malpas Districts.
- Improvements to the existing pedestrian / cycle access across the Crindau culvert, linking the new stretch of the canal to the existing Monmouthshire & Brecon Canal.
- Strong linkages to the existing residential areas.
- Connection between the Sainsbury's relocation scheme on the former gas works site and the remainder of the developable area.
- Consideration of the aims and objectives of the Council's Rights of Way Improvement Plan (ROWIP) should be considered. Links to the city centre and down to the coastal area are being developed by Newport City Council, Countryside Council for Wales and Welsh Assembly Government. Crindau should link up with these routes where possible.



- | | | | |
|---|--|--|--|
|  Impounded water |  Proposed community facility relocation |  Oil |  Footbridge |
|  Llyn Road to be realigned |  Proposed mixed use development |  Footpath and Cycle Route | |
|  Parkland |  Lock |  Potential Vehicular Access | |

II TRANSPORTATION

Vehicular Access

- 11.1 Access to the site is currently via the A4042 Harlequin Interchange and Lyne Road. Heavy goods vehicles associated with various industrial, warehouse and haulage uses currently use this route and create conflict with the residential uses off Albany Street. A new access from Heidenheim Way down onto Albany Street has been included within the planning application for the relocated Sainsbury's supermarket. The access details agreed as part of planning application 02/1414 provide a new ramped access into the site off the A4042 Heidenheim Way which connects onto Albany Street by means of a new roundabout. This will provide direct access to the site and in view of highway issues at Harlequin roundabout and Lyne Road, this route will provide the main access into the Crindau regeneration area.
- 11.2 While the link off Heidenheim Way will improve access to the site, a secondary access will be necessary to serve the development off Lyne Road. The current junction alignment at Lyne Road Bridge is unacceptable from a road traffic safety point, and will need to be replaced and realigned as part of any development proposals for the area. When redesigning the access arrangements at Lyne Road, developers should seek to achieve a high standard of design that creates an impressive southern entrance into the site and facilitates the movement of buses.
- 11.3 The replacement of Lyne Road Bridge is also necessary to enable the passage of vessels upstream to the Monmouthshire & Brecon Canal. Vessel design criteria for canal navigation should therefore be considered in the design of a replacement bridge.



Lyne Road Bridge will need to be replaced and realigned as part of the Crindau redevelopment.

Transport Assessment

- 11.4 Developers will be required to produce a traffic impact assessment, which should include a traffic management, parking, and servicing strategy. Requirements for any off site works and the necessary contributions will need to be assessed.

Car Parking

- 11.5 An adequate amount of car parking should be provided to accommodate for the mix of uses proposed, bearing in mind the South Wales Parking Guidelines, 1993 Revision. It is important that parking locations are identified that are not on prime developable land but are convenient with quality desire line movements to the public waterfront areas. Consideration should be given to the shared use of the supermarket car park for visitors and users of the marina and canal.
- 11.6 The impact of car parking should be minimised through utilisation of undercroft, semi basement, or basement parking provision within the development as appropriate. To maximise the use of land, during the winter months a proportion of the marina car park areas should be used for boat storage.

Buses

- 11.7 The nearest bus route to the site is presently situated on Malpas Road, with no services going directly in the Crindau area. The scale and uses proposed justify the incorporation of a bus route to serve scheme. This should be designed in as a public transport loop, entering and exiting the site via Lyne Road. Bus stops and lay-bys should be provided to the local highway authority's standards.



Development should incorporate bus routes

- 11.8 The site is within close proximity to the central train station, being approximately a 15 minutes walk away. Development layout should promote a co-ordinated approach to transportation options, designed to link transport facilities and encourage use of public transport.



Proximity of Crindau Development Site to Central Train and Bus Stations

12 CANAL AND MARINA PROPOSALS

- 12.1 To achieve the satisfactory implementation of the canal link and basin, together with the marina, a number of navigational and water level factors will need to be incorporated into the scheme. This section aims to briefly discuss these issues, with more detailed guidance available in the Crindau Feasibility Study and Technical Appendices (Hyder, March 2007).

Canal Access

- 12.2 There is currently a drop in levels of 5m from the Monmouthshire and Brecon Canal to Malpas Brook. A double lock structure will therefore be required to accommodate the level difference. The space and topography available between Malpas Brook and the existing canal presents ample opportunity for construction of a two-rise lock with each chamber having a lift of 2.65m.
- 12.3 To provide the required draft for navigation will require the edges of the channel to be lowered by 1 – 1.5m. This will require stabilising works over a 100m length of channel to avoid undermining the flood defences.

The Lyne Road Gateway

- 12.4 The southern gateway into the Crindau site along Lyne Road should form a key focal point of the proposals, creating a high quality entrance.
- 12.5 A location for a canal basin or passing point to accommodate canal boat moorings and/or a turning basin has been identified on an existing low lying area next to Lyne Road. The area currently appears to be an attenuation facility with a discharge down to Crindau Pill in the south east corner. As part of the masterplanning process a number of different options have been explored with regards to the positioning of the basin and pill. These have been narrowed down to 2 options and are as follows:
- Option A (see Plan on Page 17) - Passing place and cut through of the pill. This option involves the realignment of the pill, cutting across land to the west of Lyne Road to a designated passing place situated to the east of Lyne Road.
 - Option B (see Plan on page 18) - Canal basin using the existing line of the pill – this would involve the introduction of a canal basin to the east of Lyne Road and the widening of the existing pill to allow boats to pass.



Location for a canal basin/passing place

Canal Basin

- 12.6 A location for a canal basin to accommodate canal boat moorings and a turning basin has been identified on an existing low lying area next to Lyne Road. The area currently appears to be an attenuation facility with a discharge down to Crindau Pill in the south east corner.
- 12.7 To accommodate for the possible variation in water levels in the Crindau Pill, the basin would need to be fitted out with floating pontoons for mooring canal craft in this location.

Passing Place

- 12.8 An alternative to the canal basin is a smaller excavated area to allow boats to pass and moor up for a short period of time.

Navigation Channel

- 12.9 To achieve a navigational channel between the canal basin and the proposed marina basin, the existing alignment of Crindau Pill would need to be upgraded to ease bends. The existing channel bed lies between 2 – 4m ODN. To allow two boats to pass a navigable channel width of at least 8m is suggested with minimum water depth of 1.5m i.e. 3.6 ODN.

Marina Basin

- 12.10 To create the formation of a marina basin, land will need to be excavated at the location of a bend in the tidal channel of Crindau Pill. Edge treatments should take account of the need to accommodate floating pontoons to deal with the variance in water levels that flood flows may cause. Sheet piling would normally be used where hard edges are necessary to provide clean edges and deal with construction tolerances. Where a softer edge is required, revetment slopes with an edge treatment could be used. The detailed design of all edge treatments will have a significant impact on the overall character of the development proposals, they should be sensitively and innovatively designed.



Marina's at Tewkesbury and Upton – similar in scale to what could be achieved at Crindau

Approach Channel

- 12.11 An approach channel to the marina from the River Usk would need to be constructed. In order to give sufficient room for two vessels to pass on this bend and to allow space for marshalling of boats on the approach to the lock, it is recommended that a 20m minimum navigable width is provided in the approach channel.

Marine Lock

- 12.12 The long term aspirations of the Council are to introduce a lock structure to control access from the River Usk and to control water levels in the marina. Marina locks are typically required to provide a rapid throughput to accommodate leisure use on limited access windows. For this reason marinas tend to use sector gates which can accommodate reverse heads and can also be operated in a way that reduces locking time.

Interim Cills

- 12.13 A lock arrangement is the most appropriate technical solution to maintaining water levels in the canal and marina basins. However, given the significant capital outlay and timescale associated with the introduction of a lock structure, together with other elements of the proposed works, implementation of the canal and marina scheme is likely to be phased. Such an approach would necessitate an interim cill being constructed to deliver the required minimum retained water level and also create an attractive water side setting.
- 12.14 The exact positioning and size/level of the cill would need to be carefully considered during the development of the programming of the overall scheme. However, it is likely that an interim cill would be required, at the northern end of Crindau Pill.

Edge Treatment

- 12.15 Along the eastern edge of Crindau Pill a soft edged river front treatment is favoured. This would be compatible with nature conservation aims in seeking to protect habitats along the river margin and provide a softer outlook from the proposed development site.
- 12.16 To facilitate development and provide the necessary construction tolerances, a hard edge is proposed for the length of the western edge of the Pill. Such treatment works will be expected to be implemented by the developer(s) of the land to the north of the Pill.

Phasing

- 12.17 Given the scale of the project outlined it may be necessary to adopt a phased approach to achieve the successful implementation of the canal and marina proposals. It is therefore suggested that the proposals be phased in the manner suggested below:

Phase I

- A cill structure is implemented to maintain a minimum water level and create an attractive water side setting for development.
- Realignment of Lyne Road Bridge.
- Excavate the marina basin.
- A footbridge to be implemented at the southern end of the marina to provide pedestrian access to Shaftesbury Park.

Phase 2

- Excavation of either canal basin or passing place.
- The creation of a navigable channel, either along the existing course or cut through the southern gateway site.
- Implementation of swing or lift bridge in the vicinity of the cill.
- Link to the canal is created through the implementation of a double lock structure, and associated works relating to the existing culverts under the highway network.

Phase 3

- Fit basin out as a fully functioning marina facility.

Phase 4

- Replace cill with lock structure.

13 FLOOD RISK

- 13.1 Almost the entire regeneration area is currently identified as being at flood risk, and is designated as a CI Zone under Technical Advice Note (TAN) 15 (Development and Flood Risk). Consequently any planning application for development must be accompanied by a Flood Consequence Assessment, which conforms to the requirements of TAN15 and Council’s Flood Risk and Sustainable Drainage Supplementary Planning Guidance (copies can be downloaded from the Council’s website www.newport.gov.uk).
- 13.2 The Council will expect the Flood Consequence Assessment to identify that the proposed development is justified in terms of its use and location, and demonstrate that the proposed development can remain flood free up to the return period identified below:

Proposed Land Use	Threshold Frequency (Return Period)		Flood Level (mAOD) up to 2054 – minimum threshold
	Tidal	Fluvial	
Residential	0.5% (1:200 yr)	1% (1:100 yr)	8.87
Commercial/Retail	0.5% (1:200 yr)	1% (1:100 yr)	8.87
General	0.5% (1:200 yr)	1% (1:100 yr)	8.87
Infrastructure	0.5% (1:200 yr)	1% (1:100 yr)	8.87

- 13.3 It will be necessary to demonstrate that suitable mitigation measures can be provided to ensure that the development is protected to the required threshold, any residual flood risk is acceptable, and escape and evacuation routes would remain operational at all times.
- 13.4 In seeking to protect new development to the required thresholds developers may wish to consider undertaking general land raising and grading of their sites through importing clean inert material as this will ensure maximum development area, lower future maintenance costs, and could also provide clean cover in terms of addressing any contaminated land issues.
- 13.5 Specific consideration will need to be given to how suitable access and egress from the site (in accordance with the tolerable conditions identified in TAN15) will be achieved. A broad level Flood Consequence Assessment commissioned by the Council identifies that the existing Lynne Road Bridge access would be inundated in a 1 in 200 year flood in 50 years time to a depth of almost 1 metre. Therefore due to flood risk issues a suitable access to serve the whole regeneration area is required up onto Heidenhiem Way, or alternatively Lynne Road and Lyne Road Bridge will need rebuilding to a height that will provide the requisite level of protection, and ensure dry access in a 1 in 200 year flood event.

14 REMEDIATION AND RECLAMATION

- 14.1 Developers will be required to demonstrate that adequate investigations have been undertaken with regard to ground conditions and contamination, and that any significant risks are addressed.
- 14.2 A considerable amount of investigative and remedial work has already been carried out in relation to the Former Gas Works site. Appropriate conditions have been attached to the Sainsbury's relocation planning application (ref 02/1414) to ensure that no development shall commence until a full ground investigation has been undertaken and a suitable remediation strategy has been formulated.
- 14.3 Other parts of the Crindau area have over a number of years been subject to potentially polluting activities such as metal and chemical processing. Detailed ground investigations for the whole of the Crindau area will be necessary in order to establish any hazards posed by contaminants and their likely mobility, rate and direction of migration in the groundwater. The ground investigations should include a full quantitative risk assessment having regard to the proposed end use of the site.
- 14.4 A suitable remediation strategy based on the results of the ground investigation should be prepared setting out the extent of remediation works which should be undertaken and preferred methods.

15 PLANNING OBLIGATIONS

- 15.1 In line with the policies and triggers contained in Supplementary Planning Guidance and UDP Policy SPI I (Planning Obligations) planning obligations will be sought towards on site affordable housing provision, education, highways, and leisure where it is necessary and relevant.
- 15.2 UDP Policy SPI I (Planning Obligations) refers to securing benefits for the community which could include highway investment and other infrastructure provision. Paragraph 3.27 of the Adopted UDP clearly identifies that contributions will be sought, particularly for infrastructure provision, to ensure an orderly and comprehensive development. The key infrastructure opportunities in Crindau are identified in paragraph 3.26 as being the realignment of the Lyne Road Bridge and the realisation of the water basin and canal proposals.
- 15.3 In order to ensure that this necessary infrastructure is provided as part of the comprehensive regeneration of Crindau developers will be required where appropriate to carry out works in kind (for example waterside edge treatment and the realignment of Lyne Road Bridge) and agree to make a financial contribution (based upon a roof tax of £2,000 per dwelling unit and/or £100 for M2 of commercial and retail uses*) towards the infrastructure costs of providing the marina basin and retained water levels within the Pill. It is expected that any legal agreement will identify the mechanism for how these infrastructure elements will be provided and a date for which either the developer will have carried out any in kind works or the Council will have spent any financial contribution. (*Commercial and retail include use classes B1, B8, C1 & A3)
- 15.4 Any legal agreement will be required to contain clauses which will give the Council rights of access over the land in order to carry out any future works on the Crindau Pill in order to achieve the canal and water basin objectives. Where infrastructure works are proposed to be delivered 'in kind' then the Council may request that a bond or other form of surety is provided to ensure that the said works can be implemented by the Council if necessary by a clearly identified and agreed date.

16 APPENDIX I – ECOLOGICAL CONSIDERATIONS

16.1 The table below shows the main anticipated phases of development and the principal impacts on ecology, although the duration and frequency of impact cannot be fully defined at the SPG stage. Potential mitigatory and compensatory measures are highlighted for the principal impacts. However, these measures should not be taken to be exhaustive, and should be informed by survey and consultation as each application comes forward. The measures are generally similar for both Option A (Passing place and marina) and Option B (Canal basin and Marina) of the canal proposals.

16.2 In general terms, any proposed development should look to include, as far as possible, the following principles for ecological protection.

Project Phase	Valued Ecological Receptor	Potential Impacts	Potential Mitigation and Compensatory Measure
Excavation of marina Similar impacts and measures are anticipated for the proposed widening of pill as shown in Option A	Otter	Disturbance Loss of habitat and resting areas Barrier to movement Potential for contaminants and sediments to be released	Provide new temporary water channel for continued access to the pill during excavation works Temporary fencing to exclude otters from construction areas and access roads Detailed engineering to take account of need for access and mobilisation of plant and machinery, particularly haul road(s) for removal of excavated material. Otters to be excluded from the access routes by temporary fencing. Toolkit talks to construction staff Pollution prevention measures to be put in place Working hours to be restricted to daylight hours to minimise disturbance to otters Where possible, southern boundary of the pill, along the allotment gardens and Shaftesbury Park, to retain soft edging and new reedbed and shrub planting to provide safe lying up/passage areas Provide chamber holts at appropriate locations along the soft-edged boundary

Project Phase	Valued Ecological Receptor	Potential Impacts	Potential Mitigation and Compensatory Measure
	Fish	As above Potential adverse impacts on migration Potential for contaminants and sediments to be released	Provide new temporary water channel for continued access to the pill during excavation works Excavation works to be undertaken outside of the migration season (April to June inclusive) Pollution prevention measures to be put in place
	Birds	Disturbance Loss of habitat	Removal of vegetation outside of the bird breeding season Replacement tree, shrub and reedbed planting using native species appropriate to the location
	Invertebrates	Disturbance Loss of habitat (mudflat mainly)	Retention of habitat where possible and provision of replacement habitat as appropriate Consideration should be given to the temporary storage of at least some excavated material on the bank of the pill for a one-two day period to allow invertebrates present to recolonise remaining habitats thus avoiding loss of species
	Bats	Loss of roosts Loss of feeding habitat Disturbance	Replacement tree planting and erection of bat boxes Construction confined to daylight hours, temporary lighting directed away from potential foraging routes
	River Usk SAC	Potential impacts on otters and migratory fish Potential for contaminants and sediments to be released	Maintain suitable access for otters and fish from Crindau Pill through to the River Usk at all times Pollution prevention measures to be put in place Excavation works to be undertaken outside of the fish migration season (April to June inclusive)
Excavation of secondary basin (option B)	As above	As above	The majority of issues as are those for the excavation of the marina.

NEWPORT CITY COUNCIL

Project Phase	Valued Ecological Receptor	Potential Impacts	Potential Mitigation and Compensatory Measure
Construction of footbridges	Otter	Disturbance to otters during installation Small, permanent loss of habitat	Construction confined to daylight hours Replanting of suitable shrub habitat around the bridges to provide shelter for otters
Lock/cill	Otter	Barrier to movement Disturbance	Keep southern boundary of the pill in this area as a soft edge, allowing access for otters during construction Detailed engineering to take account of need for access and mobilisation of plant and machinery. Otters to be excluded from the access routes by temporary fencing. Temporary fencing is likely to be required to prevent otter access to construction areas The design of the cill will need to include a ladder on the downstream side which can be used for otter access In the long-term an appropriate landscape scheme will need to include dense, thorny planting along the southern boundary of the cill to maintain suitability of area for passage of otters.
	Fish	Barrier to movement	Fish pass (possibly pool and weir type or dedicated fish belly gate channel with hydraulic actuation) may be required which would need to be incorporated at an early stage into the design process – the pass can potentially double as an otter ladder on the downstream side Any piling and drilling works to be undertaken outside of the fish migratory season
	Invertebrates	Loss of tidal influence upstream of cill/lock	It is difficult to identify measures to compensate for this impact at present without information on invertebrate assemblages available.

Project Phase	Valued Ecological Receptor	Potential Impacts	Potential Mitigation and Compensatory Measure
Double lock link to Mon-Brecon Canal	Otter	Barrier to movement Disturbance	Otter ladder will probably be required on both sides of the lock to facilitate access Restrict working hours to daylight hours Temporary fencing to exclude otters from working area
	Fish	3-spined stickleback (UK priority species) and other fish species could be adversely affected through disturbance of sediments and loss of aquatic plants	Possible need to exclude fish from the working area for the duration of construction activities Piling and drilling to be undertaken outside of the fish migratory season A long-term management plan to be put in place to retain appropriate aquatic vegetation in the area of the lock
	Bats	Any works to bridges or culverts upstream have potential to disturb bat roosts	Works to be informed by appropriately detailed bat surveys. Measures can include restricting potentially disturbing works to season of least impact and design of new roosting features into bridges/culverts
	Other species/habitats	Flora and fauna in the canal that depend on slow moving water conditions may be adversely affected by future boat traffic and change in water flow	It is difficult to identify specific measures at this stage, but they may include restriction on numbers of boat traffic using the lock at any one time, restricting boat speeds, restoration and management of bankside vegetation such as reedbed, and relocation of rare or locally notable plants and possibly fauna to more suitable areas of the canal

Project Phase	Valued Ecological Receptor	Potential Impacts	Potential Mitigation and Compensatory Measure
	Otter	Potential to have a positive impact by providing safe passage for otters under new bridge	<p>Design of the bridge should include for a ledge in the bridge itself or tunnel alongside the bridge. If a ledge is proposed, this could be formed of the same material as the bridge and the surface lined with stones, as this seems to appeal more to otters</p> <p>Alternatively, provision of a tunnel along Lyne Road could be considered, but it would need careful siting and appropriate dense planting to deter public access</p> <p>Consideration should be given to providing a ledge along the A4042 Malpas Road Culvert and the Malpas Road Bridge to enhance otter passage from Crindau Pill through to the Monmouthshire-Brecon canal and upwards to possible breeding sites</p>
	Bats	Potential to disturb bat roosts if any present	<p>Design of bridge to incorporate features of value for roosting bats</p> <p>Works to be undertaken at an appropriate time of year to minimise disturbance</p>
Navigation channel to River Usk	Otter	Disturbance during construction	<p>Restrict working hours to daylight hours</p> <p>Maintain soft edge along southern boundary of pill for access by otters at all times during construction</p>
	Fish	Disturbance during construction	Excavation works to be undertaken outside of the fish migration season (April to June inclusive)
	Birds	Disturbance during construction Loss of mud habitat for feeding	<p>Restrict working hours to daylight hours</p> <p>Bird surveys should assess the most significant times for bird feeding and construction period should avoid these times</p> <p>Additional measures to be identified once extent of navigation channel known</p>
	Invertebrates	Loss of mudflat habitat Disturbance	Detailed invertebrate surveys to inform measures, including timing of works, possible relocation of rare or locally notable species, use of appropriate construction methods, storage of material to allow invertebrates to recolonise undisturbed mudflats, and creation of new mudflat habitat

Project Phase	Valued Ecological Receptor	Potential Impacts	Potential Mitigation and Compensatory Measure
	Plants and reedbed habitat	Loss of mud habitat for plant species	<p>Restrict construction of the navigation channel to outside of main flowering period</p> <p>If required, rare and scarce species to be relocated to other areas of the pill</p> <p>Replanting of reedbed and other appropriate habitat along the edge of the navigation channel</p>
	Other species/habitats	May have direct impact on the River Usk SAC	Appropriate measures to be identified once extent of navigation channel known
Residential/commercial development and ongoing operation of the marina	Otters	<p>Disturbance (dog walking, lights and boat traffic)</p> <p>Loss of habitat and disturbance from the proposed riverside walkway</p> <p>Potential lowering of water quality from operation of the marina</p>	<p>Lighting proposals to be sensitive to the requirement of otters, bats, bats and other fauna. Any lighting along the edge of the pill and marina should be angled to minimise light spillage onto the water and not be placed in areas specifically set aside for otter passage. Consideration could be given to using low level directional lighting with a low lux value</p> <p>Consider restriction on boat speeds and number of boats</p> <p>Landscaping proposals should use dense, thorny planting in areas of value to otters to deter access by the public and by dogs, and limited areas of fencing may be required to deter access. Look into the possibility of banning dogs on boats using the marina as this could be a major disturbance to otters.</p> <p>Options A & B - The riverside walkway should be set back from the top of bank from the edge of the marina westwards to where the proposed development meets Malpas Road underpass. This will allow for dense planting which will create a safe passage for otters.</p> <p>A chamber holt could be provided at the base of the car park located along the edge of the pill. Permanent otter fencing may be required in this area to block otter access to the car park, or this could be achieved by designing a sheer wall drop from the car park to the pill if fencing is not deemed appropriate</p> <p>Put long-term measures in place to maintain good water quality</p>

Project Phase	Valued Ecological Receptor	Potential Impacts	Potential Mitigation and Compensatory Measure
	Fish	Disturbance to migration by bright lighting and boat traffic Potential lowering of water quality from operation of the marina	Provide sensitive lighting proposals as described for otters Restrictions on numbers and speed of boat traffic should help mitigate this potential impact. Monitoring of the success of migratory fish to navigate the marina and new lock/cill will be necessary to inform any future additional measures which might be required Put long-term measures in place to maintain good water quality
	Birds	Loss of habitat for breeding birds Disturbance	New shrub/tree planting using native species along the waterfront and riverside walkway. Ornamental species can be used elsewhere Provide sensitive lighting proposals as described for otters Passage and wintering birds should still have access to the mudflats along the navigation channel as this will remain tidal. Restriction on boat numbers and speeds will also be of benefit
	Invertebrates	Disturbance Small loss of habitat for terrestrial invertebrates	Invertebrates will benefit from new marginal planting along the pill and within the residential/commercial areas Along the navigation channel, mudflats will remain tidal, and long-term management plans need to be put in place to ensure maintenance and other works are undertaken in a sensitive manner Include species diverse perennial mix in landscaping proposals
	Bats	Loss of possible roosting habitat (if buildings to be demolished) Disturbance from lighting	Replacement roosts incorporated into new buildings Provide sensitive lighting proposals as described for otters

16.3 The following assumptions have been made in drawing up the above table:

Options A and B

- Removal of some mature trees along the western boundary of Shaftesbury Park will be necessary, which has the potential to impact on bats and breeding birds;
- A haul road will be required to allow access for plant and machinery and for transport of excavated material during excavation of the marina;
- Depending on exact engineering details, it is envisaged that a new channel will be created along Shaftesbury Park to which the existing pill will be diverted, allowing excavation of the marina. This new channel should allow for the unhindered movement of fish and otters during the construction works.
- The installation of the lock/cill is likely to require a coffer dam.
- An assumption has been made that some migratory fish use the Crindau Pill, which will need to be confirmed or otherwise (based on information contained within the Ecological Appraisal report, Cresswell Associates. If migratory fish are present in the pill, a fish pass is potentially required to allow continued migration. It is possible that the pass is only needed on the northern side of the lock/cill, as water on the southern side will be impounded and at a constant level.
- The full details of the type, duration and frequency of the construction works is not available. These will influence the mitigation/compensation measures required, and should be subject to careful discussions once known.
- Appropriate protected species disturbance licences to be obtained.

Option A

- The realigned channel will be excavated in advance of closure and infill of the existing small basin.
- The riverside walkway will be situated along the eastern boundary of the realigned pill.

Option B

- The riverside walkway will be located primarily along the eastern boundary of the pill.
- There will be a need for some excavation of the secondary basin to create the depth necessary for boat traffic.

NEWPORT CITY COUNCIL