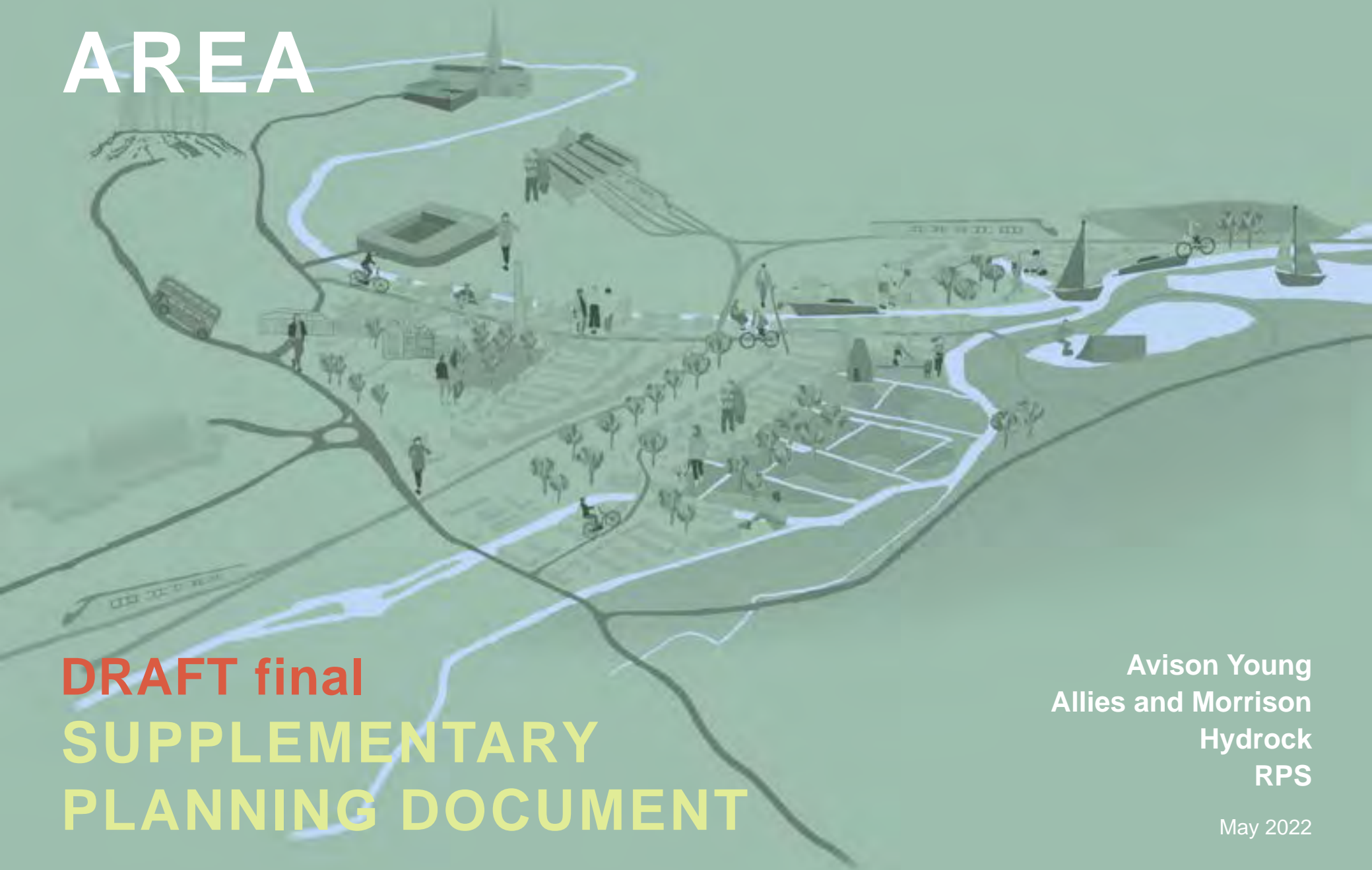


EAST NORWICH

STRATEGIC REGENERATION AREA



DRAFT final
SUPPLEMENTARY
PLANNING DOCUMENT

Avison Young
Allies and Morrison
Hydrock
RPS

May 2022



EAST NORWICH

STRATEGIC REGENERATION AREA

SUPPLEMENTARY PLANNING DOCUMENT

“East Norwich will become a highly sustainable new quarter for the City, accommodating substantial housing growth and optimising strategic economic benefits. It will be an inclusive, resilient and safe community in which people of all ages have good access to high quality homes that meet housing needs, and to strategic and local employment opportunities; can interact socially in green spaces and in new community facilities; and have the opportunity for independent, healthy and active lifestyles.

Supported by new infrastructure, the new quarter will link the city centre with the Broads and deliver high quality exemplar design, low carbon energy solutions and provide climate change resilience where this can be designed-in. The area’s riverside regeneration potential will be maximised to achieve a distinct sense of place with enhanced opportunities for river-based activity. The site has the ability to facilitate improved public transport, including rail services, which will benefit East Norwich and the city generally.”

Vision statement for East Norwich

Copyright © 2022 Allies and Morrison

No part of this document may be reproduced without the prior consent of the client. This document is prepared in support of the Project Title. Allies and Morrison and its collaborators are not responsible for nor shall be liable for the consequences of any use made of this Report other than that for which it was prepared by Allies and Morrison for the Client unless Allies and Morrison provide prior written authorisation for such other use and confirms in writing that the Report is suitable for it.

It is acknowledged by the parties that this Report has been produced solely in accordance with the Client’s brief and instructions and without any knowledge of or reference to any other parties’ potential interests in or proposals for the Project. All diagrams and views are based on the indicative scheme outlined in the masterplan and for illustrative purposes only.

Every effort has been made to acknowledge the source of photographs and illustrations; we apologise for any errors or omissions.



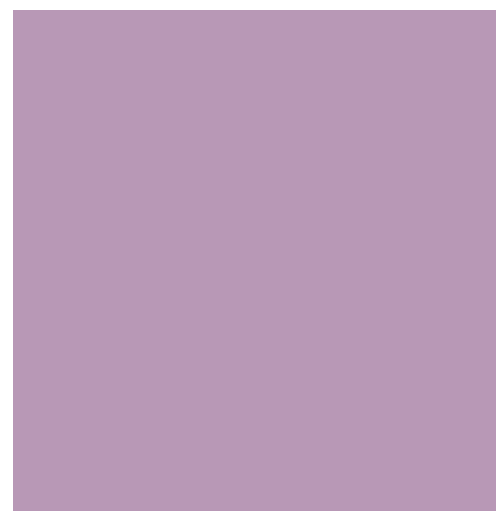
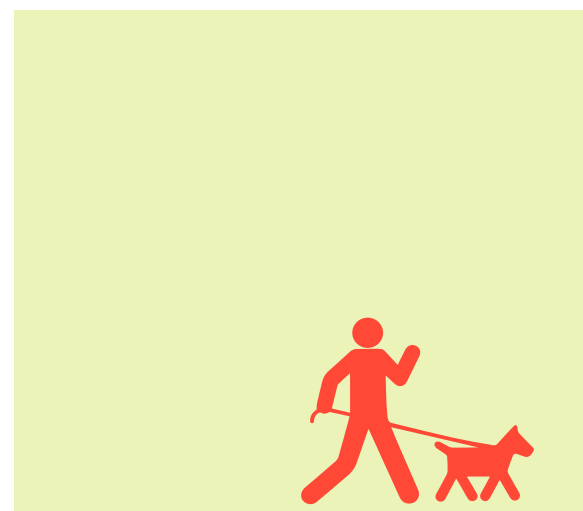
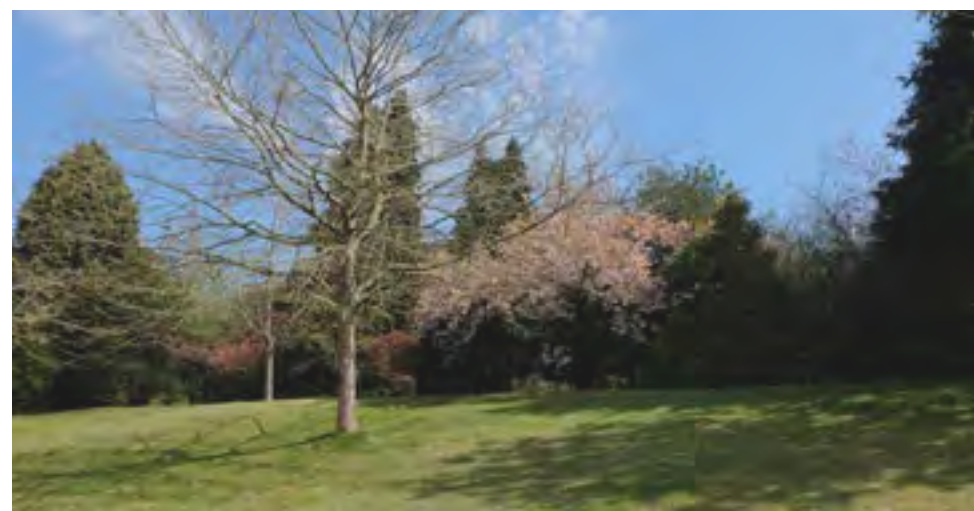
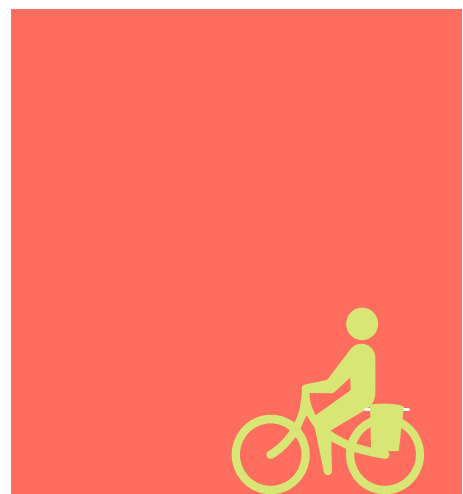
CONTENTS

A INTRODUCTION	3	7 Key concepts	46	15.2 Primary objectives	111	G APPENDIX	205
1 Purpose	6	7.1 Introduction.....	46	15.3 Principles for energy generation and heat networks.....	112	1 Draft GNLP Policy 7.1, East Norwich (Reg 19 version)	207
1.1 The SPD in context	6	7.2 20 minute neighbourhoods	46	15.4 Heat networks	112	2 Contextual analysis	208
2 Introduction of the sites and strategic considerations	10	7.3 Building for a Healthy Life.....	48	16 Infrastructure delivery plan	116	2.1 Introduction.....	208
2.1 Introduction.....	10	D SITE-WIDE MASTERPLAN — DEVELOPMENT PRINCIPLES	51	16.1 Introduction.....	116	2.2 Administrative boundaries	208
2.2 Location context and history	10	8 Masterplan concept	52	16.2 Infrastructure needs	116	2.3 Urban grain and land use context	210
3 Policy context	16	9 Illustrative Masterplan	54	16.3 Approach to river crossings.....	119	2.4 Building height context.....	212
3.1 Introduction.....	16	10 Built Heritage and archaeological principles	56	16.4 Requirements and benefits	120	2.5 Walking and cycling.....	214
3.2 City-wide strategies.....	16	10.1 Context.....	56	17 Water, Flood Risk and Mitigation Strategy ...	122	2.6 Public transport context	216
3.3 Existing Policy.....	18	10.2 Principles	60	17.1 Summary of the ENSRA's flood risk.....	122	2.7 Road network context	218
3.4 Emerging Policy	19	11 Movement principles	66	17.2 Water management strategy	122	2.8 Land ownership.....	220
B UNDERSTANDING THE CONTEXT	21	11.1 Context.....	66	E CHARACTER AREAS — DESIGN PRINCIPLES	127	2.9 Flooding	222
4 History	22	11.2 Movement principles	66	18 Character areas	128	2.10 Environmental analysis.....	224
4.1 Historic development of the East Norwich Masterplan area.....	22	12 Open space, public realm and ecology principles	80	19 Waterside East	130	2.11 Heritage and landscape.....	226
5 Contextual and site analysis	26	12.1 Context.....	80	20 Carrow Abbey	148	2.12 Utilities context.....	228
5.1 Overview	26	12.2 Principles	80	21 Waterside North	162	3 Infrastructure Requirements	230
C VISION AND OBJECTIVES	31	13 Land use principles	90	22 The Villages	176	3.1 Required infrastructure across the East Norwich area	230
6 Vision and objectives	36	13.1 Introduction.....	90	F IMPLEMENTATION	193	4 Site photographs	234
6.1 Vision for East Norwich Strategic Regeneration Area.....	36	13.2 Principles	92	23 DELIVERY AND IMPLEMENTATION	194	4.1 Carrow Works Site.....	234
6.2 Three primary opportunities	38	14 Building height principles	104	23.1 Introduction.....	194	4.2 Deal Ground Site	236
6.3 The Opportunity	42	14.1 Context.....	104	23.2 The Sequencing of Delivery	194	4.3 May Gurney Site and surrounding area.....	238
6.4 Masterplan objectives	44	14.2 Building height principles.....	104	23.3 Viability Assessment	196	4.4 Utilities Site.....	240
		15 Heat and Energy Strategy	110	23.4 Moving Towards Delivery.....	199		
		15.1 Introduction.....	110	23.5 Conclusion and next steps	202		



INTRODUCTION







1 PURPOSE

1.1 The SPD in context

1.1.1 The purpose of this Supplementary Planning Document (SPD)

East Norwich presents a once in a lifetime opportunity to deliver comprehensive regeneration of this part of the city through high quality placemaking, creating a new destination for Norwich. It offers a unique opportunity to provide new homes and places to work in Norwich whilst also improving the quality of life, health and well-being for existing residents and future generations. In addition to the growth and investment opportunities, perhaps most importantly of all is the opportunity to open up historical parts of the city which have historically been inaccessible. This enables the provision of radically improved connections between the city and the Broads.

This SPD and its illustrative masterplan is seen by Norwich City Council and its partners as a critical piece of work to advance the regeneration of this important part of the city. The investment being made in bringing the SPD forward reflects its important role in supporting the adoption of the Greater Norwich Local Plan (GNLP), which includes the area as a site-specific allocation in the submission plan.

Beyond the GNLP, the East Norwich Strategic Regeneration Area (ENSRA) is of strategic importance to the future growth and success of the city and wider area. The central role it will play in providing homes and jobs in the future is underlined by its recognition as a central pillar of the Town Deal agreed for Norwich, whereby funding has been secured for both the masterplan and

SPD production and the acquisition of Carrow House by Norwich City Council.

There are many issues, opportunities and constraints which are directly relevant to the ENSRA and the preparation of a masterplan and SPD for it. Establishing an understanding of and appreciation for the ENSRA's complex historical and environmental context has been an important part of the process of its production. Aspects of this context are summarised in the following section although it is recognised that more detailed analytical work will be required to support more detail proposals that might come forward.

Informed by a comprehensive programme of stakeholder and wider community engagement, a concept masterplan was prepared on behalf of the Partnership as a precursor to this SPD. The SPD provides planning and design guidance to landowners to help guide the preparation and assessment of future planning applications. Once formally adopted, this SPD will supplement relevant policies in the GNLP. Up to that point, in view of the work and engagement undertaken, the Draft SPD will be a material consideration to relevant planning applications that might come forward.

In addition, all new proposals will have to comply with the policies in the adopted GNLP and other Local Plans covering the area unless material considerations indicate otherwise - as the sites in East Norwich straddle administrative (and Local Plan) boundaries (see Fig 2). Note also that a Neighbourhood Plan for Trowse is in preparation by Trowse Parish Council.



- 1 Carrow Works
- 2 Deal Ground
- 3 May Gurney
- 4 Utilities site
- 5 ATB Laurence Scott site (for future access to Utilities site)

Fig 1 East Norwich Masterplan area and its principal sites

1.1.2 **Flexibility**

It should be noted at the outset that whilst this SPD and the masterplan embedded within have involved significant amounts of design and technical work and have been informed by extensive stakeholder and community engagement, it should not be considered a blueprint.

Guidance has generally been expressed as a series of principles presented firstly under a number of site-wide themes followed by more detailed design considerations relating to different identified character areas as the ENSRA. Judgements will need to be made – by applicants and the Planning Authorities – on how these principles can be interpreted and applied. Whilst the masterplan and guidance outlined in the SPD seeks to take a balanced view across a wide range of sometimes conflicting objectives, further balanced judgements will no doubt need to be made and justified as detailed proposals come forward.

1.1.3 **The East Norwich Partnership**

The East Norwich Partnership is a public-private body established specifically to bring forward the comprehensive and coordinated regeneration of the East Norwich area, ensuring that critical infrastructure is delivered to unlock the sites, to the benefit of the city. The Partnership was established by, and is led by, Norwich City Council. The membership of the Partnership is as follows:

- Norwich City Council
- Norfolk County Council
- South Norfolk Council
- Broadland District Council
- Broads Authority
- Homes England
- New Anglia LEP
- Network Rail
- Carrow Works Owner / Contracted Private Sector Developer (Unilever Britvic /Fuel Properties)
- Deal Ground / May Gurney Owner (Serruys Property Company)
- Utilities Site Owners (RWE and National Grid)

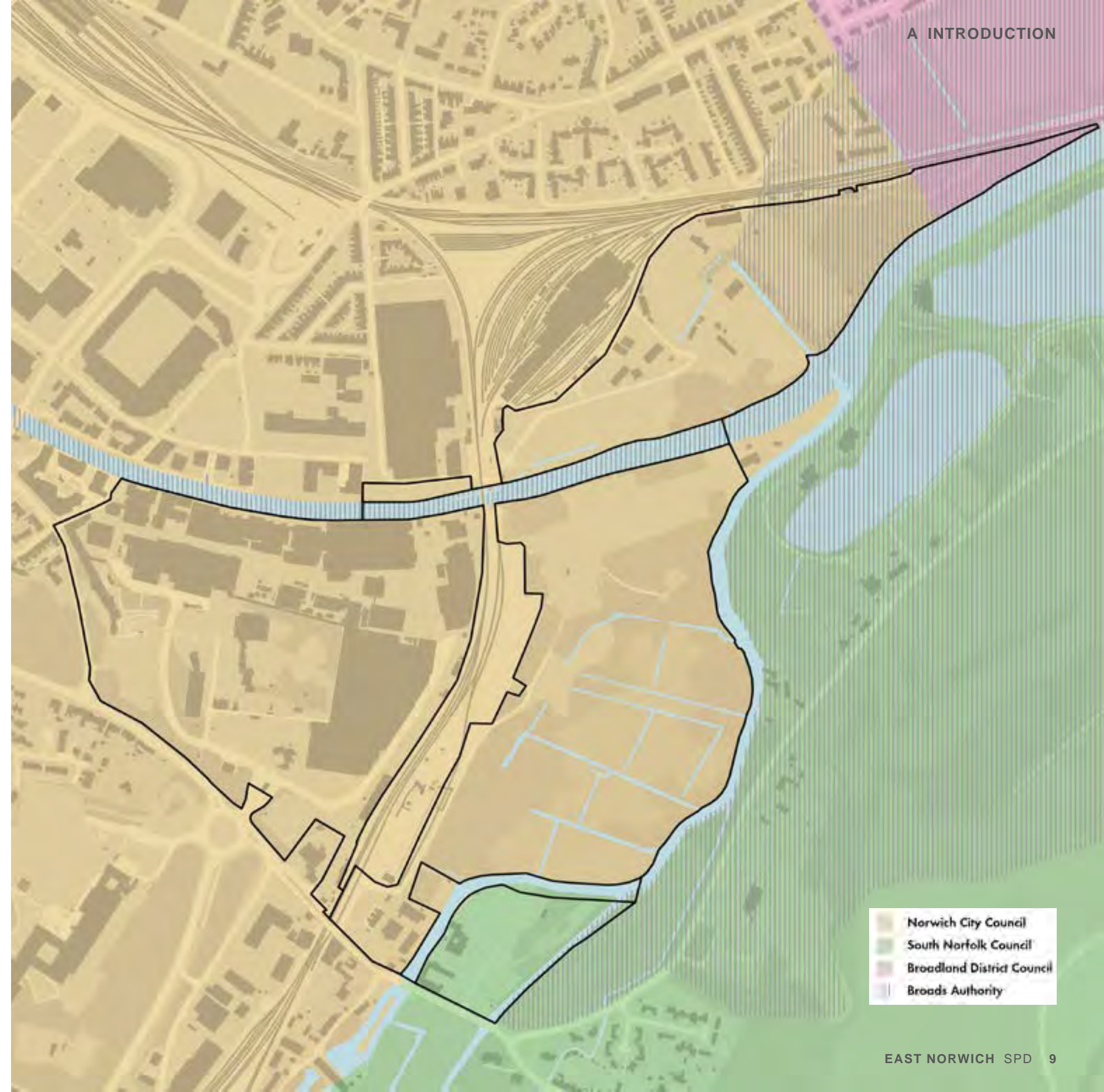


Fig 2 The East Norwich area and relevant Administrative boundaries

2 INTRODUCTION OF THE SITES AND STRATEGIC CONSIDERATIONS

2.1 Introduction

East Norwich presents the city of Norwich with a transformative regeneration opportunity. It was once the industrial heartland of the city, lying outside the city walls and connected to the city by both the railway and the River Wensum and the River Yare - whilst also being adjacent to and part within, The Broads National Park.

The SPD area is formed of the following development sites:

- **Carrow Works** – the former Colman and Britvic/Unilever Site on the southern bank of the River Wensum and to the west of the railway line (includes the site of Carrow House);
- **Deal Ground** – large site east of the railway on the southern bank of the River Wensum;
- **May Gurney** – former head offices for local civil engineering contractors, located to the north of Bracondale; and
- **Utilities Site** – former power station site on the north bank of the River Wensum.

It also includes a small site known as Land in front of ATB Laurence Scott which is principally included as an opportunity to improve the river front routes required to access the Utilities site from the west.

2.2 Location context and history

The East Norwich regeneration area is comprised of four main strategic sites. Three of the sites, Carrow Works, Deal Ground and May Gurney, are located to the south of the River Wensum. The Utilities site is located to the north of the river.

The regeneration area is located approximately 1.3km south east of Norwich City Centre with the Broads located to the east of the site with a direct connection along the River Yare. Whitlingham Country Park is also located directly adjacent to the east of the site.

The Carrow Works site is accessed off the A147 with a dedicated access point off the Martineau Lane / Bracondale roundabout with the other sites to the south of the river located off Bracondale. With the exception of the Carrow Works site, whilst the sites have access issues which need to be overcome, their location provides them with good access to the strategic road network, including the A47 Norwich Southern By-pass which is a key route out of the south of the city. The Utilities site does not have public access, however the site can be privately accessed via Hardy Road and a bridge over the railway to the north of the site which is accessed via the Thorpe Road and a number of residential streets.



Fig 3 The East Norwich Strategic Regeneration Area in a scaled comparison with Norwich city centre. The graphic demonstrates the extraordinary scale of the opportunity presented by the area - comparable in size with the historic core of the city



The regeneration area is located approximately 1km south-east of Norwich Train Station with East Midlands Railway and Greater Anglia Railway servicing the station. The sites are also serviced by network Norwich bus services with bus stops located on Bracondale and the A147 for the southern sites and the A1242 for the northern sites.

2.2.1 Carrow Works

Carrow Works is the site of the former Colman's factory which manufactured Colman's mustard and other sauces. It had been manufacturing the products since 1856 when Jeremiah Colman moved the production to a factory on the land, and by 1874 the site employed 1,500 people. The Colman family also lived on the site, in both Carrow Abbey and Carrow House.

Colman's merged with Keen Robinson & Company in 1903 and by 1909 the company employed 3,000 people. In 1995, Colman's became part of Unilever UK Ltd and in January 2018 it was announced that Carrow Works was to close, and production moved to Burton-on-Trent in the UK and to Germany.

As part of Jeremiah Colman's support for his employees, Trowse Village, which is located to the south east of the Carrow Works site, was built during the late 1800s to provide homes for the workers at the factory. Today, the village is one of the most desirable locations to live in the city and has a population of 1,000 people.

This rich history is reflected in the area's concentration of heritage assets. Several contiguous conservation areas cover much of the area and specific built assets include the site of the Carrow Priory which is a Scheduled Monument, the Grade 1 listed Carrow Abbey and numerous other listed buildings, locally listed buildings and other assets (see Appendix section 2.11 for map of heritage assets).

2.2.2 The Broads

The Norfolk and Suffolk Broads is a network of navigable rivers and lakes in Norfolk and Suffolk. The area is 120 sq. miles with over 120 miles of navigable waterways and is comprised of seven rivers and 63 broads. The Broads is accessed from Norwich via the River Wensum which runs through the entire city to the confluence with the River Yare at East Norwich which then flows to the Broads.

The Broads were created by the flooding of peat workings and are Britain's largest protected wetland. They are a popular tourist attraction and have been a boating holiday destination since the late 19th century. It is estimated that The Broads attract in the region of 8 million visitors a year.

The Broads are managed by the Broads Authority which was established in 1989, with responsibility for conservation, planning, recreation and waterways. The Broads area recognised as having the equivalent of National Park status. The Broads Authority has three statutory purposes – protection of the special qualities of the area, to promote and improve access, and to protect navigation. These have equal status.



Carrow Abbey

2.2.3 **The Port of Norwich and river crossings**

Rivers and waterways are an essential part of the character and history of Norwich, and the Port of Norwich remains an asset protected by an Act of Parliament. This provides an important context for East Norwich as the Act protects access to the Port and centre of the city by vessels via a series of opening bridges along the River Wensum. Any loss of such access – through provision of a fixed bridge – will need to be appropriately compensated. This is not a new issue for the area with the long term replacement of the currently openable Trowse Rail Bridge the subject of consideration and discussion between relevant parties. A marina/alternative boating facilities for river users has been discussed as one way of providing this compensation should bridges be fixed rather than opening.

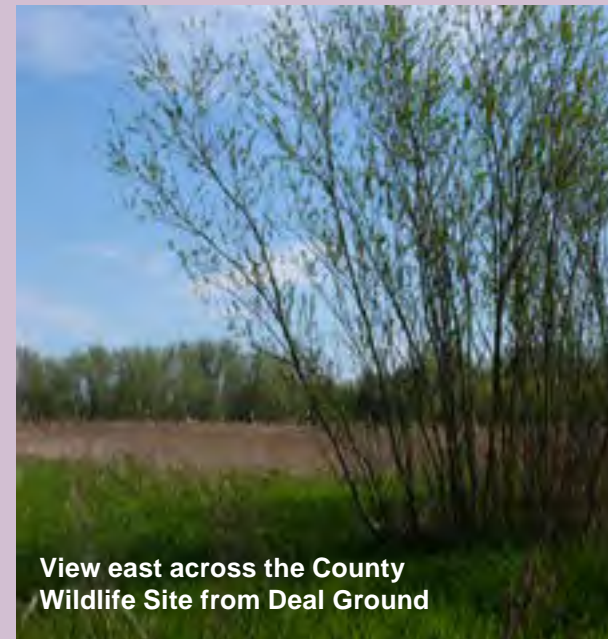
For the purposes of this SPD, it is critical that both eventualities are enabled, showing how aspirations could be delivered with or without lifting bridges to allow vessels into the city and how marina facilities can be accommodated in the area.

At present all bridges do open, including the Trowse Rail Bridge which is, reportedly, the only electrified opening (swing) bridge on the UK network. For a range of service pattern and engineering reasons, the ability to open the bridge ‘on demand’ is limited and usually requires significant advanced notice (7 days) and a limited time window outside of train operating hours .

The Trowse Rail Bridge crossing is a critical piece of infrastructure for the city, carrying the mainline rail connections between Norwich and London and Norwich and Cambridge (and beyond). As such it supports significant economic, business and visitor activity and is central to the future economic success of Norwich.

The current Trowse Rail Bridge is a single-track bridge which, whilst functionally suitable at present, is a future constraint on the rail capacity. As such partners have an aspiration to see the crossing improved to provide dual-track capacity through the provision of a new bridge.

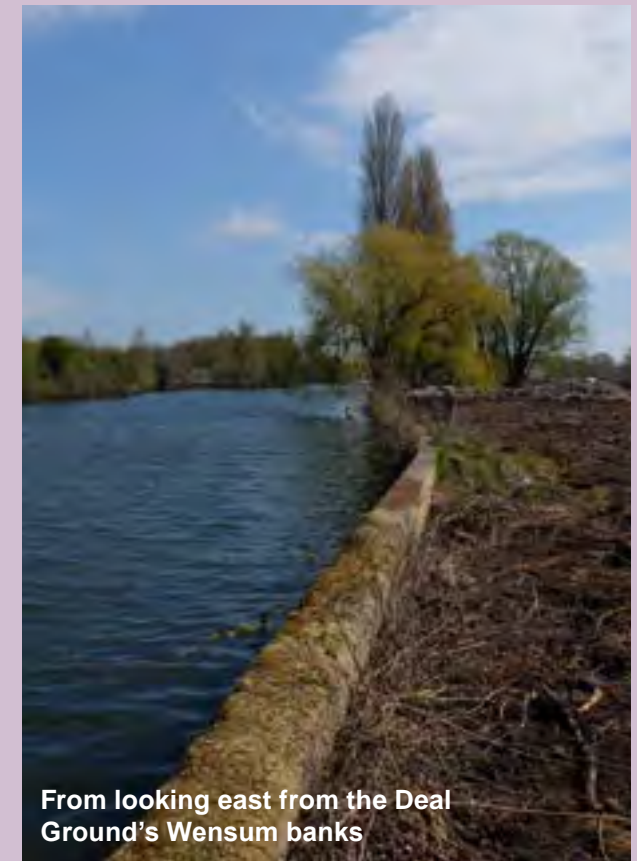
The improvements to the Trowse rail crossing is subject to a separate feasibility and delivery process, however some elements of the Partnership are involved and therefore the two processes are being prepared with full sight of each other. The SPD has been prepared to create a framework that enables the Trowse Rail Bridge to be upgraded or replaced whilst also unlocking development across the ENSRA in the intervening period.



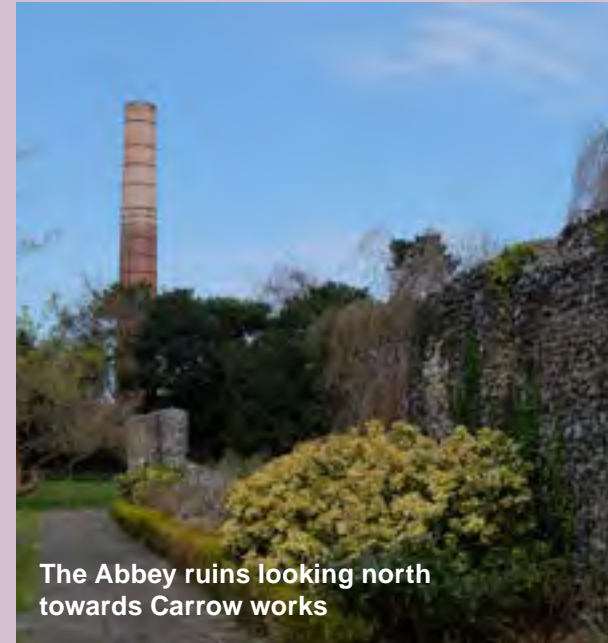
View east across the County Wildlife Site from Deal Ground



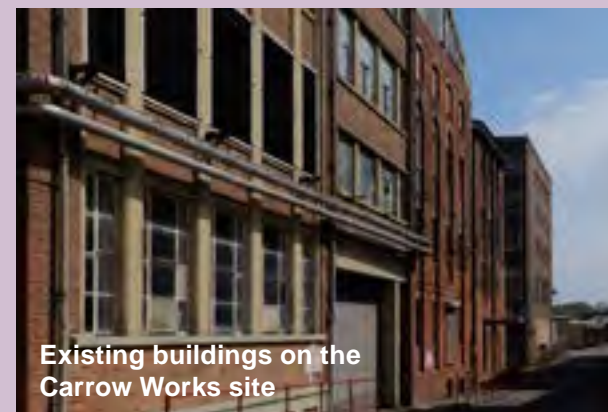
View towards Paper Mill Yard from the River Wensum



From looking east from the Deal Ground's Wensum banks



The Abbey ruins looking north towards Carrow works



Existing buildings on the Carrow Works site



Carrow House, Grade II listed and its Grade II* conservatory



3 POLICY CONTEXT



3.1 Introduction

The SPD benefits from a range of existing and emerging policy and strategy direction that have shaped the establishment of the vision and objectives for the ENSRA.

The strategic sites included within the SPD area overlap four separate Local Planning Authorities (LPA) administrative jurisdictions.

- Norwich City Council;
- South Norfolk Council;
- Broadland District Council; and
- Broads Authority Executive Area.

Whilst the site is being allocated collaboratively by all these authorities through the Greater Norwich Local Plan process, and the Local Plan for the Broads, planning decisions may need to be made on individual applications by the relevant Authority.

The SPD supplements relevant GNLP policies. Primary amongst these are Policy 7.1 East Norwich set out in the GNLP Strategy document together with the guidance and controls outlined in the GNLP Sites document where the ENSRA is formally allocated. There are however many other relevant policies in the GNLP which are relevant and which this SPD supports. This SPD should therefore be read in conjunction with the GNLP as a whole, but as a guide, each section of the SPD which is intended to directly support or supplement GNLP planning policy, relevant cross-reference information is included. The most directly relevant policy in the Local Plan for the Broads is Policy NOR1.

3.2 City-wide strategies

The starting point for understanding the key priorities for the ENSRA is the City Council's **Norwich 2040 Vision** and the subsequent Corporate Plan, which sets the direction for any investment and interventions the authority makes and identifies the outcomes they need to achieve in order to improve the lives of Norwich's residents and businesses.

The 2040 City Vision establishes five themes that will guide the redevelopment of the ENSRA area:

- **A Creative City** - Norwich is a place where culture and creativity play an important part in how the city feels about itself and others perceive it. In 2040, Norwich will be world renowned for its creativity – a leader in innovation, culture, education and invention.
- **A Liveable City** - The city takes pride in being a place with a great local environment that people value. We are committed to shifting to clean energy by 2040 (carbon-neutral by 2050). We will support and promote sustainable living – where today's citizens meet the needs of the present without compromising future generations.
- **A Fair City** - Norwich is a place where many already enjoy a great quality of life. By 2040, the health, well-being and life chances of all our citizens will be improved. We will remove barriers to achievement and a high standard of living will be enjoyed by everyone.
- **A Connected City** - At the heart of any good city is how well it connects with both its citizens and the world at large. In 2040, Norwich will have a modern transport system, be at the forefront of digital connectivity and create opportunities for all residents to link with each other.

- **A Dynamic City** - Today Norwich has two successful universities and thriving life sciences, creative, tech, leisure and retail sectors. In 2040, Norwich will be a place where entrepreneurs, social enterprises, national and global companies choose to provide good jobs, prosperity and success.

The **Corporate Plan 2022-26** takes its lead from the Norwich 2040 City Vision. There are five 'aims' in this corporate plan which collectively add up to building a more sustainable city: environmentally, socially and economically. The objectives complement the five themes of the Norwich 2040 City Vision partnership, which is the vehicle for finding citywide solutions and opportunities to the challenges we face as a city. The five corporate plan aims are:

1. **Aim 1** - people live independently and well in a diverse and safe city
2. **Aim 2** - Norwich is a sustainable and healthy city
3. **Aim 3** - Norwich has the infrastructure and housing it needs to be a successful city
4. **Aim 4** - the city has an inclusive economy in which residents have equal opportunity to flourish
5. **Aim 5** - Norwich City Council is in good shape to serve the city

Ultimately, the 2040 Vision and Corporate Plan articulate clear themes and priorities that the SPD has to embrace and demonstrate how East Norwich will facilitate the delivery of beyond the lifetime of the plan. Alongside the economic, social and environmental sustainability of the ENSRA a key specific consideration will be understanding the significance of the heritage assets and the character of the conservation area not only to

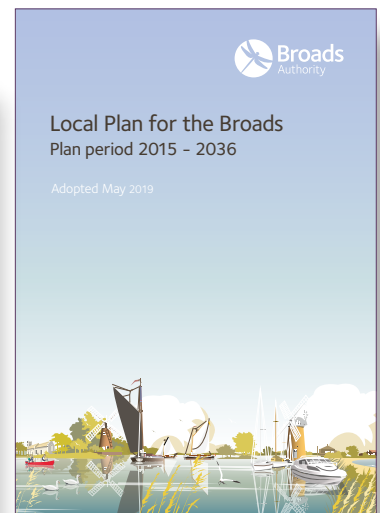
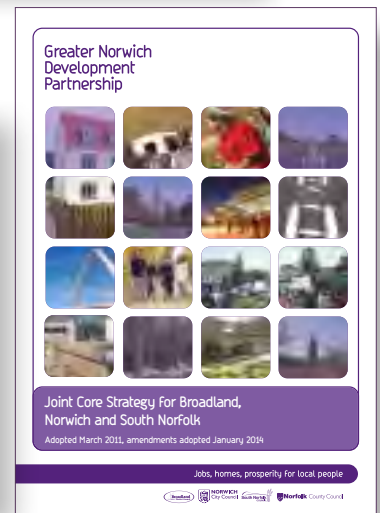


Fig 4 Policy and strategy context



preserve the structures themselves but also properly reflect the importance of the site to the economic and cultural history of the city.

In October 2020 Norwich was awarded £25mn via the government’s Town’s Fund as part of a new **Town Deal**, one of the first centres in the UK to be awarded funding under the programme. The funding has been secured to begin delivery of the Norwich 2040 Vision, and is focussed on the delivery of investment to accelerate the development of a new high quality urban quarter in east Norwich including support for masterplanning exercise of the ENSRA and the purchase of Carrow House.

Clearly the SPD (and its masterplan) is a critical component of Norwich City Council’s Town’s Deal commitments as key pillar for delivering the long term health and sustainability of the city.

The **River Wensum Strategy** is a joint strategy between Norwich City Council the Broads Authority, Norfolk County Council, the Environment Agency and the Wensum River Parkway Partnership, as the River Wensum Strategy Partnership (RWSP). It was launched in June 2018 and its objectives include enhancing connectivity, activity, green infrastructure and heritage in river corridor.

3.3 **Existing Policy**

Consideration will need to be given to the National Planning Policy Framework (NPPF) and relevant national planning practice guidance. The recently published National Model Design Code is also relevant. Other national level guidance is also relevant including Historic

England’s ‘Setting of Heritage Assets’ guidance and also their ‘Tall Buildings guidance’.

The Greater Norwich Development Partnership (GNDP) is a joint partnership between Norfolk County Council, Norwich City Council, Broadland District Council and South Norfolk Council.

The partnership oversaw the production of the Joint Core Strategy (JCS) for the Broadland District Council, Norwich City Council and South Norfolk Council (adopted March 2011, as amended January 2014). This is currently the overarching strategic spatial planning document for the three main Local Planning Authorities (LPAs) with land within the regeneration area.

Additionally, the LPAs all have their own Development Management and Site Allocation Local Plans that cover each jurisdiction, and The Broads Authority has its own standalone Local Plan for the Broads (adopted May 2019) which includes strategic, development management and site allocation policies.

At a strategic level, Norfolk County Council is the County Authority and has a number of adopted Local Plans and adopted non-statutory strategic strategies that are applicable to the ENSRA site. These include:

- Core Strategy and Minerals and Waste Development Management Policies DPD 2010-2026 (adopted Sept 2011);
- Minerals Site Specific Allocations DPD (adopted Oct 2013, as amended Dec 2017);
- Waste Site Specific Allocations DPD (adopted Oct 2013);

- Norfolk Strategic Infrastructure Delivery Plan 2021 (adopted December 2021);
- Connecting Norfolk - Norfolk’s Local Transport Plan 2011-2026 (adopted Apr 2011); and
- New Anglia Local Enterprise Partnership’s (NALEP) Economic Strategy for Norfolk and Suffolk, The draft NALEP Local Industrial Strategy, The NALEP Norfolk, Suffolk Economic Recovery Re-start Plan and the River Wensum Strategy (2018).

A range of relevant Supplementary Planning Documents are in place across the relevant Local Planning Authorities. These include Norwich City Council’s Heritage Interpretation SPD.

3.4 **Emerging Policy**

3.4.1 **Emerging Greater Norwich Local Plan**

The emerging Greater Norwich Local Plan (GNLP) has been co-produced and will be jointly adopted by Norwich City Council, South Norfolk Council and Broadland Council. Once adopted the GNLP will provide the strategy for future development of the Greater Norwich area, and identify specific areas for development, for the period up to 2038.

The GNLP was submitted to Secretary of State for Examination in July 2021, with the Examination in Public (EiP) taking place in February and March 2022, and adoption expected in the first part of 2023.

Following the adoption of the GNLP the following Local Plans are proposed to be superseded:

- The Joint Core Strategy for Broadland, Norwich and South Norfolk (2011 and subsequently readopted 2014);

- Broadland Site Allocations Development Plan Document (2016);
- Norwich Site Allocations and Site-Specific Policies Local Plan Document (2014); and
- South Norfolk Local Plan Site Specific Allocations and Policies Document (2015).

Policy 7.1 in the emerging GNLP is the strategic policy covering the regeneration of East Norwich. This is supported by a detailed specific site allocation policy in the Site Allocation Plan.

3.4.2 **Minerals and Waste Local Plan**

The emerging Norfolk Minerals and Waste Local Plan is expected to be submitted in 2022. Policy MP10 is directly relevant due to the location of the safeguarded Trowse railhead and asphalt plant adjacent to the boundaries of the SPD and site allocation area. Draft Policy MP10 states “the County Council will safeguard rail heads and associated storage, handling and processing facilities for the bulk transport by rail of minerals and will safeguard sites for the manufacture of coated materials”. The draft policy also states that, “development proposals within 250 metres of the above minerals related facilities should demonstrate they would not prevent or prejudice the use of those facilities”. Furthermore, it states that, “the County Council will oppose development proposals which would prevent or prejudice the use of safeguarded sites for those purposes unless suitable alternative provision is made, or the applicant demonstrates that those sites no longer meet the needs of the aggregates industry”.

B

UNDERSTANDING THE CONTEXT



4 HISTORY

4.1 Historic development of the East Norwich Masterplan area

4.1.1 East Norwich's evolution – the emergence of Colman's

Routes connecting the historic city of Norwich with the towns and villages east of the city have historically converged at Trowse Newton to form Bracondale. This key city axis bridges the River Yare and continues towards the historic centre, terminating at The Castle.

City expansion beyond the historic city walls gathered pace in the eighteenth century, during which time the importance of the Bracondale axis only increased. Industries in Norwich were thriving, and it was a time of significant growth – with many new residential neighbourhoods emerging to supporting the city's major industries. The production of foodstuffs was a key sector for east Norwich, including flour at the City Flour Mills on King Street, mustard at the Colman's factory on Carrow Road and beer at the malthouse on Kerrison Road.

The Colman's mustard brand was established in 1815 four miles south of Norwich in the village of Stoke Holy Cross. The company founder, Jeremiah James Colman, purchased the land at Carrow Works in 1850 and production transferred to the Carrow Road site in 1865. Production continued on the site up to its closure in 2019. During that time, the brand established a world-wide reputation, helped by its distinctive yellow branding.

The history of the Carrow Works site however goes much further back. The first buildings in the area were St Nicholas' Chapel and Carrow Abbey. The Chapel, mentioned in the Domesday Book, was demolished during the dissolution of the monasteries in the 16th century. The Abbey is built on the site of a Benedictine Priory built in 1146, itself built on the site of an earlier religious hospital. Parts of the Priory, including remains of the Norman church survive although it too was largely demolished in the 16th century.

These oldest and most significant of the site historic assets benefit from the highest levels of protection. The Abbey is a Grade I listed building, and the Priory grounds fall within an area identified as a Scheduled Monument.

4.1.2 The significance of the river

The River Wensum has played a fundamental role in shaping the city and the patterns of activity within it - particularly as a means of transportation for Norwich industry. The river's critical role in this regard long-pre-dates the railway and is why the settlement and industry developed here. Carrow Works and the sites opposite Waterside East have relied on river trading since before mediaeval times.



View towards Carrow House from Carrow Abbey, 1868 (image: Unilever Archive)



The Colman family - above, Jeremiah and Caroline Colman in 1868; and, below - their children in 1871 (image: Unilever Archive)



Carrow Abbey showing the ruins of the old church (image: Unilever Archive)



Carrow Works played an important role in the social history of the city (image: Unilever Archive)



The original alignment of Carrow Bridge on the axis of Carrow Road - this opening bridge built in 1833 itself replaced an earlier fixed bridge - Image courtesy of www.picture.norfolk.gov.uk



Thorpe Power Station on the Utilities site - image credit, John Chesney by courtesy of The Broadland Memories Archive

4.1.3 **The arrival of the railway**

It was the arrival of railway services to the city in 1845 that facilitated significant industrial, and with-it population, growth across the city. The northern part of the Carrow Works site was served by railway sidings to support the supply and distribution of goods to and from the factory.

Originally linked to Carrow Works via a single-track rail connection beneath the mainline approach to Trowse Bridge, the Deal Ground site has long had operational links with the Carrow Works site. The name of the site is derived from the part of Colman’s works where crates and barrels were built from ‘deal’ (softwood) imported from the Baltic to Yarmouth and brought up the River Yare by wherry to a wharf opposite Whitlingham. The Grade II listed bottle kiln which remains on the site was used to dry timber.

4.1.4 **Norwich’s powerhouse**

The utilities site’s principal association is with power generation with the first power station commencing service on the site in 1926. The commanding Trowse Power Station occupied a prominent riverside location. Various additions and expansions were made to the power station complex with the site remaining operational until 1975. The whole of the site was demolished in 1981-82.



Fig 5 1885-1903



Fig 7 1937-1961



Fig 9 1947-1970



Fig 6 1888-1913

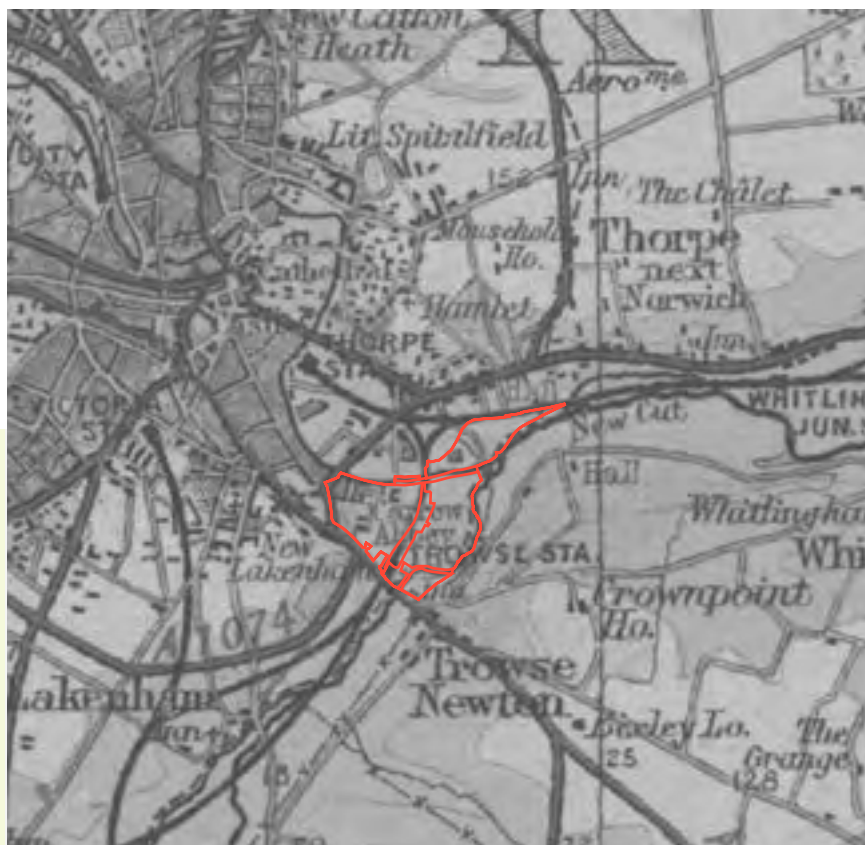


Fig 8 1940-1947



Fig 10 Present day aerial

5 CONTEXTUAL AND SITE ANALYSIS

5.1 Overview

5.1.1 Contextual analysis

The contextual and site analysis can be found in Appendix 2, with thumbnail images of the topics covered presented on the facing page. The contextual analysis provides an overview of aspects of city area-wide analysis that has been undertaken as part of the baseline phase of work during the production of the masterplan for East Norwich. The following issues are included:

- Administrative boundaries
- Urban grain and land use context;
- Building heights;
- Walking and cycling;
- Public transport; and
- Road access.

5.1.2 Site analysis

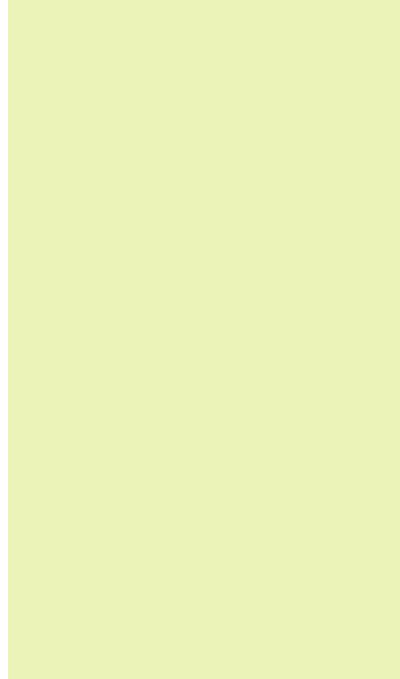
Following this, analysis was undertaken that includes a closer look at the attributes of the sites themselves. They have all had an important role in providing parameters and context within which the masterplan framework has emerged:

- Land ownership;
- Flood risk;
- Environmental designations;
- Heritage and landscape; and
- Utilities.

The analysis reveals that there is a complex range of issues to be considered as a masterplan is conceptualised for the east Norwich area. With so many heritage, flooding and ecological constraints, the masterplan will need to carefully balance a wide range of issues and opportunities.

Fig 11 Thumbnail images outlining analysis undertaken







VISION AND OBJECTIVES

VISION STATEMENT

“East Norwich will become a highly sustainable new quarter for the City, accommodating substantial housing growth and optimising strategic economic benefits. It will be an inclusive, resilient and safe community in which people of all ages have good access to high quality homes that meet housing needs, and to strategic and local employment opportunities; can interact socially in green spaces and in new community facilities; and have the opportunity for independent, healthy and active lifestyles. Supported by new infrastructure, the new quarter will link the city centre with the Broads and deliver high quality exemplar design, low carbon energy solutions and provide climate change resilience where this can be designed-in. The area’s riverside regeneration potential will be maximised to achieve a distinct sense of place with enhanced opportunities for river-based activity. The site has the ability to facilitate improved public transport, including rail services, which will benefit East Norwich and the city generally.”

6 VISION AND OBJECTIVES



6.1 Vision for East Norwich Strategic Regeneration Area

6.1.1 Overview

East Norwich provides a transformational opportunity to realise the significant ambitions for economic and housing growth set out in the Greater Norwich Local Plan and wider ecological improvements to the area. Redevelopment of the site presents East of England's biggest brownfield redevelopment opportunity.

The excellent location of the sites, where the city meets the Broads and close to Norwich Railway Station, will deliver a well-connected and sustainable neighbourhood accessible to all. The River Wensum will be enlivened with much improved facilities, activities and ecology along its length, benefiting residents, workers and visitors alike. Drawing on its industrial heritage, it will be a place full of life and vitality, delivering a vibrant new part of the city, providing homes and jobs for the people of Norwich. The buildings and spaces at East Norwich will be high quality and complement the historic setting and fantastic connections to the city centre, local villages and Whitlingham Country Park.

The full spectrum of homes will be provided, suitable for all stages of life. Businesses will benefit from a range of innovative and flexible workspaces for growing local companies and start-ups, as well as providing the capacity and quality of space to make Norwich a

landmark business destination and attract national and international businesses around Norwich's established industry strengths, including finance, insurance, creative digital, food health and environmental sciences. East Norwich will enable business growth and attract inward investment to create good quality jobs for local people. It will be a hub and catalyst for creativity and innovation.

Carrow Works, the former home of Colman's and an integral part of local history, will become the cultural heart of the area. Carrow Abbey is the jewel in the crown and, with a reinvigorated river frontage, the area as a whole has the potential to contribute much more directly to Norwich's growing visitor economy.

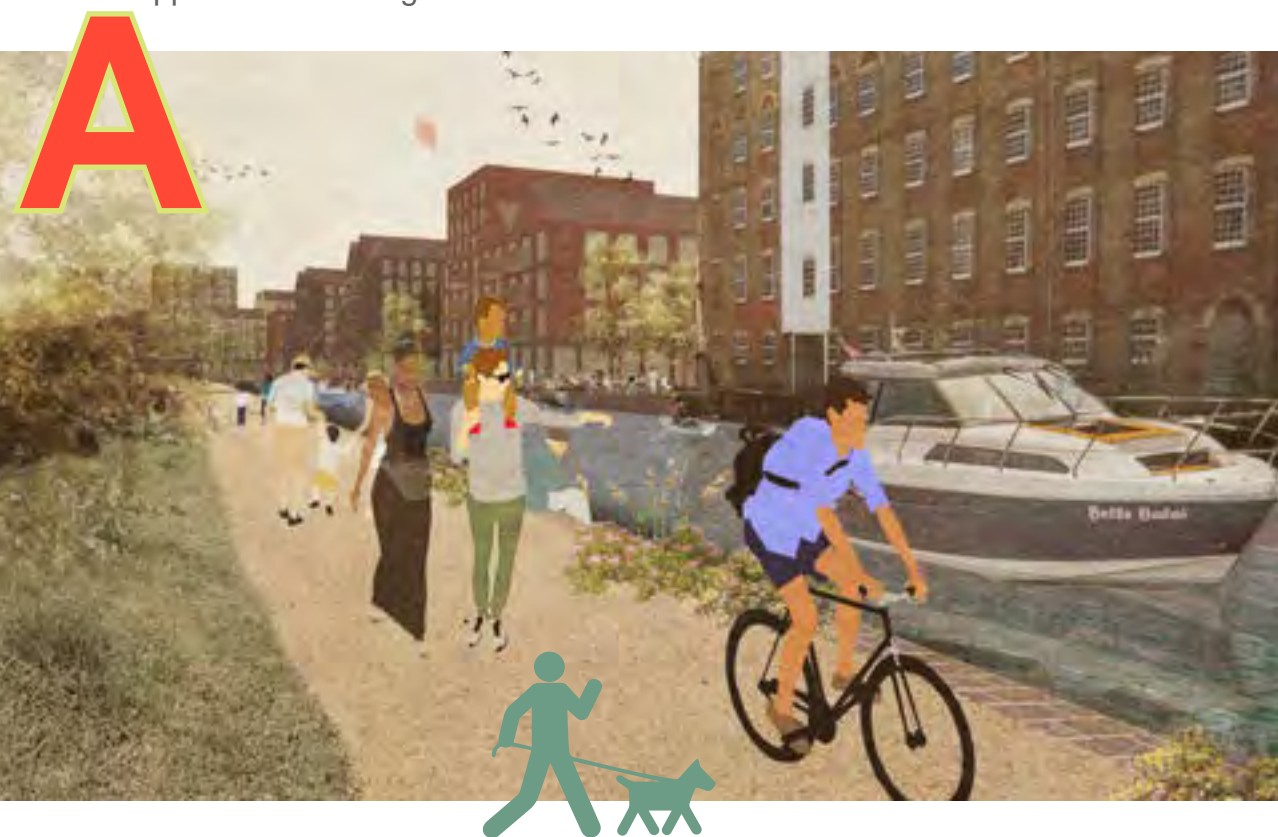
Lively public streets and squares will thread through the area and be at the heart of these new communities and will create a bold sense of place and community for residents, visitors and workers alike. Extensive public spaces, improved access to Whitlingham Country Park and new landscaped park spaces for formal and informal cultural events will be available for community interaction, play and recreation. High-quality digital and physical infrastructure will be provided from the outset, encouraging low carbon living, biodiversity net gain and providing the flexibility needed for sustainable energy solutions fit for the 21st century, building in low running costs through high efficiency standards.

East Norwich will prioritise pedestrians and cyclists with excellent public transport, creating convenient and safe pedestrian and cycle access through the site to the city centre, railway station and surrounding communities and linking into city-wide footpaths and cycle ways, to enjoy the wider city and Broads environments.



6.2 Three primary opportunities

Community and stakeholder engagement revealed broad support for the vision for the ENSRA (see Appendix X for engagement summary). In so doing, three primary opportunities emerged:



An extension of Norwich's magnificent waterfront

Historically, the industrial east of the city relied on the River Wensum for the movement of materials and products, supporting manufacturing processes, and cooling at the great Thorpe Power Station. The masterplan presents an opportunity to recast this relationship with the river, creating vibrant and attractive riverside environments; protecting existing and supporting new wetland habitats; and supporting boating and water-based activities for leisure and enterprise.



Opening new connections between the city and the Broads

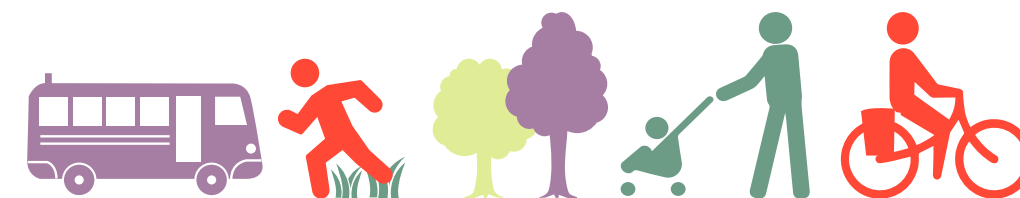
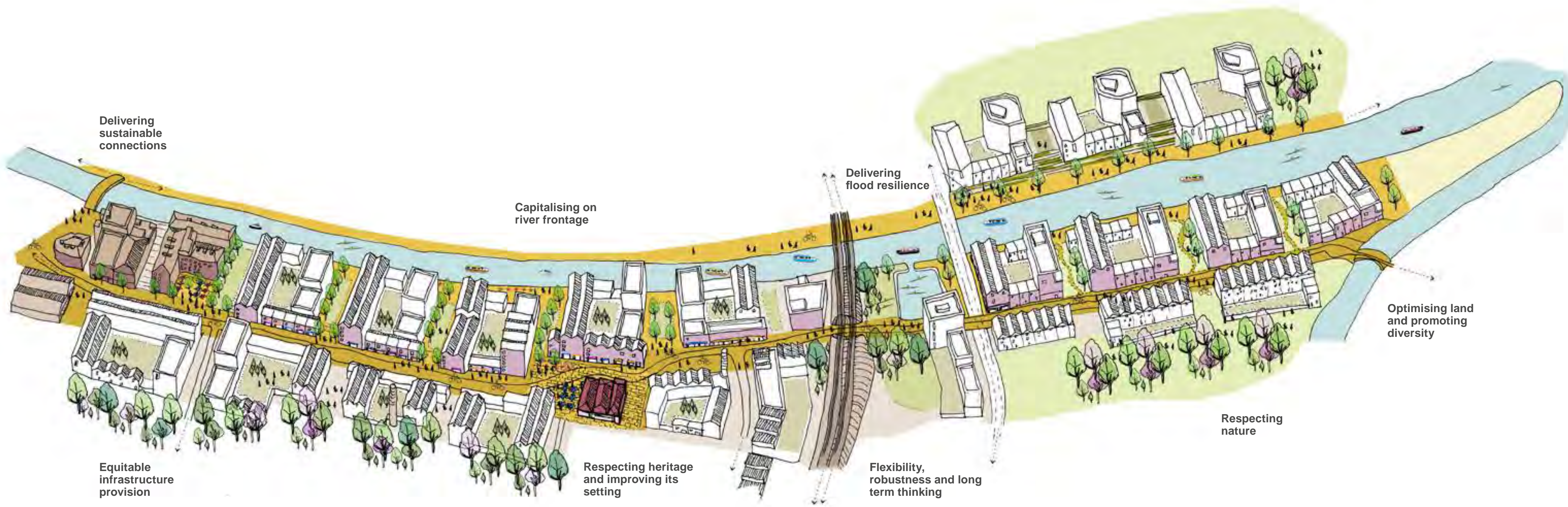
The sites have long played a significant role in the city's industrial history, but this has meant that they have been inaccessible to the public for many decades. One of the biggest opportunities presented by their redevelopment is opening up this strategic site, between the historic city centre and the Broads, and providing a network of walking, wheeling, and cycling routes between the two.



A glorious past, framing an exciting future

East Norwich, and the Carrow Works site in particular, has huge historical significance for the city. Reimagined landscapes and re-purposed buildings will combine to support the regeneration of East Norwich. New will complement old to form a series of connected but contrasting neighbourhoods which support a vibrant mix of uses, activities, tenures and environments, with Carrow Abbey at its heart.

Fig 13 Illustrative axonometric view of the ENSRA River Wensum waterfront, and key east-west link as it passes through the Carrow Works and Deal Ground site



6.3 The Opportunity

6.3.1 A vision unpacked

The underlying vision for the masterplan emerged following shared discussions between Norwich City Council, landowners and local stakeholders. It has been informed and shaped through public and stakeholder engagement and sets out bold aspirations for East Norwich.

Central to the vision is the creation of a highly connected network of routes and spaces which improve access to and use of an ecologically improved River Wensum corridor. This will be established by a 'green grid' of characterful landscape spaces, integrating existing pockets of significant green space and introducing new areas, to create a sequence of spaces that lead from city to The Broads. Along this sequence, opportunities to improve the area's biodiversity must be taken.

Unpacking the vision for the ENSRA, the masterplan for the area outlined in this SPD promotes the following:

- A diverse new quarter making the most of existing building stock on the Carrow Works site (including a number of fine listed buildings). This ready-made diversity, together with high-quality urban design and new architecture, could accommodate a rich cultural mix of living with a range of tenures, retail, leisure spaces, extending Norwich's independent spirit while supporting opportunities for skilled jobs and economic development;

- Deliver essential infrastructure to ensure all development sites are accessible and connected to their immediate surroundings.
- Ensuring that the masterplan addresses the implications of a potential replacement of the Trowse rail bridge that improves the rail infrastructure, enabling 'Norwich in 90' rail connections to London and enhancing linkages with Cambridge and Oxford;
- Promotion of a low car use environment, supported by an excellent walking and cycling network that connects the city to the Broads. The development will promote healthy streets and healthy living principles;
- Provision of site-wide infrastructure to allow the introduction of a low-carbon shared heating, cooling and power network, as well as excellent digital connectivity;
- Protection and enhancement of the sites' and wider city's rich heritage assets (both designated and undesignated) and their settings, and the conservation areas included within the site, in accordance with policy in the Greater Norwich Local Plan. Development proposals will need to outline arrangements for the long term stewardship, management and maintenance of the site's built, archaeological and landscape assets;
- Ensuring that the potential of the sites' riverside location is fully realised and contributes significantly to regeneration of the river corridor; and

- Integrated sustainable drainage systems (SuDS) and use flood plain remodelling to create 'room for the river' - including storm water storage and wetlands around the River Yare.

The masterplan is therefore focussed on testing how these objectives can be delivered within the context of the site constraints in order to make the vision of a new accessible and sustainable piece of city a reality.

Building on the primary opportunities (see 6.2), eight site-wide masterplan objectives (see 6.4) provide an important context for more detailed aspects of the masterplan framework. Not every individual proposal will meet all of these masterplan objectives, but they are a useful high-level guide and reference against which new development proposals should be assessed.

6.3.2 Design codes

The importance of design codes and guides is now acknowledged by the Government in both the National Planning Policy Framework and the National Model Design Code. Design codes and guidance which respond positively to the principles and guidance outlined in this SPD will be required for all major planning applications across the East Norwich area. Such design codes and guidance must be agreed by the relevant Local Planning Authority.



6.4 Masterplan objectives

1 Delivering sustainable connections



Ensuring the sites become a fully integrated part of East Norwich, connecting with surrounding routes and prioritising sustainable forms of transport, including public transport services. New forms of infrastructure supporting sustainable travel modes should be fully integrated with the delivery of new development.

2 Respecting heritage and improving its setting



The site benefits from built heritage assets of national significance as well as a rich social history. Opening the site up to public use presents incredible opportunities to reuse and re-purpose these assets and, crucially, improve their setting. The long term stewardship of the historic gardens and assets is a priority.

3 Capitalising on the river frontage



The opportunity to create expansive new and varied riverside environments is one of the most exciting opportunities for East Norwich. The opportunity to establish a new fully accessible riverside walk on both sides of the Wensum should be carefully explored for the benefit of all.

4 Optimising land and promoting diversity



High density development with a vibrant mix of uses delivering a range of new jobs and mixed tenure homes should be promoted, supported by appropriate education, health and other community facilities. In creating new connections with the Broads, improving the visitor experience should be a high priority.

5 Respecting nature



Embracing the highest levels of environmental sustainability in building design and construction and delivering biodiversity net gain across the development as a whole. New development should take full account of the special ecological characteristics and designations of the area.

6 Delivering flood resilience



New development must manage issues associated with flood risk and its mitigation across the sites. Creative approaches - including SuDS - to achieve this objective may provide wider benefits. As global temperatures rise flood events are becoming more regular and it is critical that development proposals take account of these risks.

7 Flexibility, robustness and long-term thinking



The masterplan is a flexible and long-term framework for investment and growth. Its implementation and realisation will take a number of years, so the masterplan and its guidance need to be flexible enough to enable development proposals to take account of changes in circumstances.

8 Equitable infrastructure provision



New and improved connections, flood mitigation, and community facilities are just some of the essential infrastructure components required to support the regeneration of East Norwich. Ongoing collaborative working between key stakeholders will be needed to create an equitable framework to support long term infrastructure delivery.

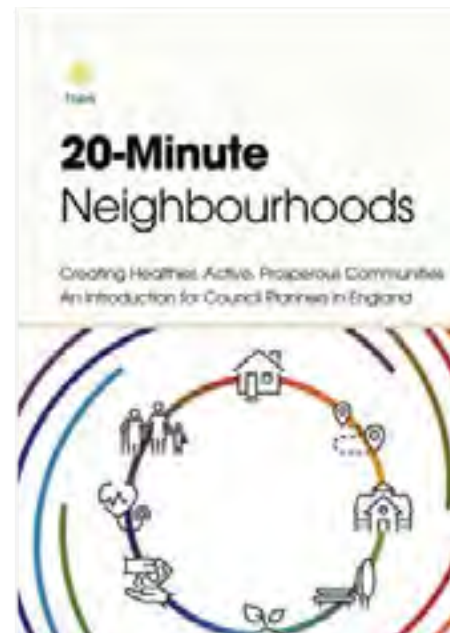


7 KEY CONCEPTS

7.1 Introduction

Two key concepts which have underpinned the design development of the masterplan are taken from two important documents which provide guidance on delivering sustainable and healthy communities.

- 1 The Town and Country Planning Association’s 20-minute neighbourhood study; and
- 2 Building for a Healthy Life, prepared in partnership with Homes England, NHS England and NHS Improvement.



7.2 20 minute neighbourhoods

The idea of a 20-minute neighbourhood is derived from research which showed that 20 minutes is the maximum time people are willing to walk to meet their daily needs. This idea now forms the basis of the more holistic 20-minute neighbourhood concept, which is about creating attractive, interesting, safe, walkable environments in which people of all ages and levels of fitness are happy to use active travel for short distances from home to the destinations that they visit and the services they need to use day to day – shopping, school, community and healthcare facilities, places of work, green spaces, and more. These places need to be easily accessible on foot, by cycle or by public transport – and accessible to everyone, whatever their budget or physical ability, without having to use a car.

The 20-minute neighbourhood idea is also about strengthening local economies by keeping jobs and money local and facilitating local food production to create jobs and supply affordable healthy food for all; about empowering communities to have a direct say in how their neighbourhoods change; and about doing all this in ways that create places that meet the needs of the least healthy and the least well-off.

The key characteristics of a 20-minute neighbourhood are:

- Diverse and affordable homes;
- Well connected paths, streets and spaces;

- Schools at the heart of communities;
- Good green spaces in the right places;
- Local food production;
- Keeping jobs and money local;
- Community health and well-being facilities; and
- A place for all ages.

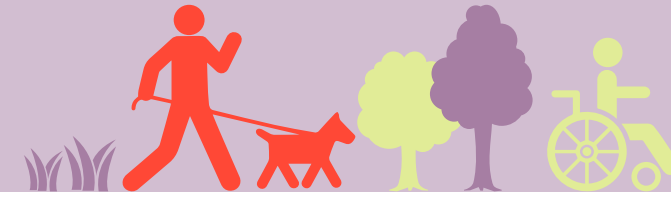
The concept of the 20 minute neighbourhoods recognises that the places where people live are major influences on their well-being. It also acknowledges that there has been a shift in the way we live, and that the cities which were planned with cars in mind, are no longer serving communities or supporting healthy, sustainable, lifestyles. The concept also serves as a positive response to the threat of climate change, by minimising dependence on cars and therefore reducing carbon emissions.

The East Norwich masterplan has been designed to ensure it is accessible and well connected for those walking, cycling or using another form of active travel. New routes, connections and facilities are proposed to enable inhabitants of East Norwich to move around safely and easily. The mix of uses proposed reflects the needs of a new community for Norwich, supporting new and existing residents of all ages, and enabling them to access what they need within a 20 minute journey by foot.

Building for a Healthy Life (BHL) is an important design tool for creating places that are better for people and



Fig 14 Features of a 20-minute neighbourhood (TCPA)



7.3 Building for a Healthy Life

nature, written in partnership with Homes England, NHS England and NHS Improvement. The guidance shares a number of the same objectives as the 20-minute neighbourhood, in supporting healthy, liveable, sustainable communities.

The guidance is organised across three headings: Integrated Neighbourhoods, Distinctive Places and Streets for All. Under these headings are 12 considerations for the delivery of successful places, with examples and guidance on how these can be best applied to the individual characteristics of a site and its wider context.

These considerations, as described below, have been reflected on early in the East Norwich masterplanning process, and throughout the design evolution.

7.1.1 Integrated Neighbourhoods

The considerations set out under this heading cover: **Natural connections** - creating places that are well integrated into the site and their wider natural and built surroundings; **Walking, cycling and public transport** - ensuring the right infrastructure is in place to enable short trips of up to three miles to be made easily on foot or bicycle, helping to improve public health and air quality whilst also reducing local congestion and carbon emissions; **Facilities and Services** - places that offer social, leisure and recreational opportunities for

all ages, within a short walk or cycle from their homes; **Homes for everyone** - providing a range of homes with a mix of housing types and tenures, in the heart of new developments, with access to outdoor space, that meet local community needs.

7.1.2 Distinctive Places

This heading is about creating well designed, distinctive places which respond to local character or create their own distinctive character. This section discusses the following considerations: **Making the most of what's there** - taking the time to understand the place, establishing a concept design to ensure that the street, block and open space structure is right from the start, and working with the context and existing features when appropriate; **A Memorable Character**: creating a place with a locally inspired or otherwise distinctive character, thinking about positive local character and sources of inspiration, local materials and creation of public spaces; **Well defined streets and spaces** - creating a network of streets and spaces that are well enclosed by buildings and/or structural landscaping, taking care to ensure that front doors and the principal façades of buildings face streets and public spaces; **Easy to find your way around** - using legible features to help people find their way around a place, including connected, direct, streets with different characters that reflect their role as a principal or secondary route.

7.1.3 Streets for all

This heading discusses the role of streets and the public realm in delivering important aspects of sustainable communities, including:

- **Healthy streets** - balancing the need to accommodate the movement of motor vehicles alongside the need for people to move along and cross streets with ease, including the need to redistribute street space to create safe and inclusive environments which support sustainable modes of transport, play and nature;
- **Cycle and car parking** - well-designed developments which make it more attractive for people to choose to walk or cycle for short trips helping to improve levels of physical activity, air quality, local congestion and the quality of the street scene, as well as providing sufficient and well-integrated car parking;
- **Green and blue infrastructure** - creating a strong landscape strategy from the start, incorporating different types of spaces which have overlooking and natural surveillance, opportunities for habitat creation and movement corridors to support biodiversity and creative sustainable drainage systems;
- **Back of pavement, front of home** - clearly defined private spaces through strong, attractive and high quality boundary treatments which consider opportunities for nature and outdoor amenities.



Fig 15 Case studies of good residential neighbourhoods from Building for a Healthy Life

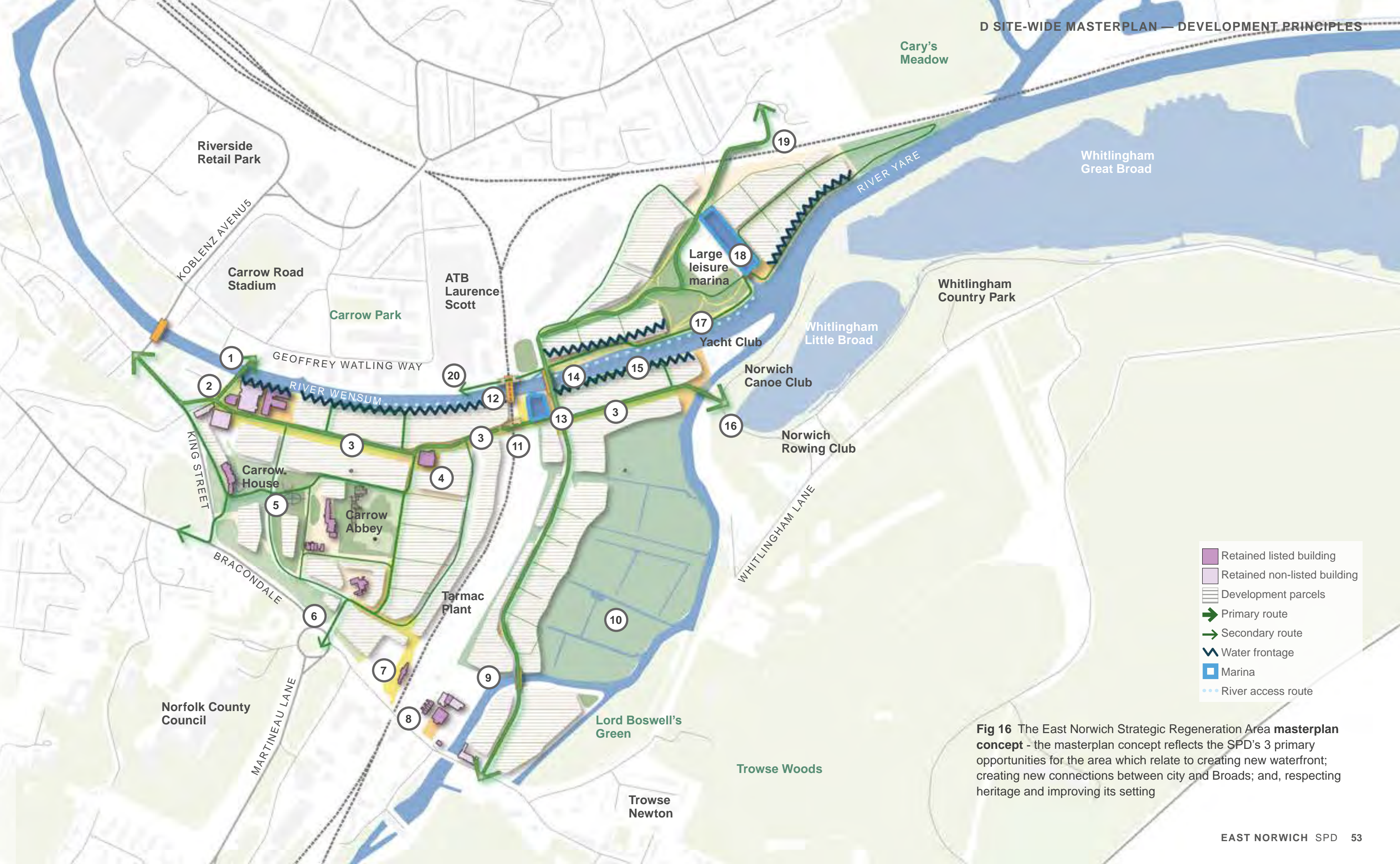


SITE-WIDE MASTERPLAN — DEVELOPMENT PRINCIPLES



8 MASTERPLAN CONCEPT

- 1 New ped/cycle bridge over River Wensum
- 2 Opening up of 'King Street' entrance
- 3 Key E-W link directly aligned with underpass
- 4 Retained Mustard Seed Drying building
- 5 Formal gardens, opened up to public and linked
- 6 Main Bracondale entrance
- 7 Refurbished Trowse Railway Station building
- 8 Mixed use cluster with heritage buildings
- 9 New all modes bridge over River Yare
- 10 County Wildlife Site
- 11 Improved ped/cycle underpass
- 12 Potential for improved Trowse rail bridge
- 13 Small leisure marina opportunity
- 14 New all modes road bridge over River Wensum
- 15 Low level riverside walk (both side of river)
- 16 New ped/cycle bridge to Whitlingham
- 17 Opportunity for addition river moorings
- 18 Opportunity for new large leisure marina
- 19 Re-use of existing bridge for peds/cycles
- 20 Upgrading of ped-cycle access to Utilities



- Retained listed building
- Retained non-listed building
- Development parcels
- Primary route
- Secondary route
- Water frontage
- Marina
- River access route

Fig 16 The East Norwich Strategic Regeneration Area **masterplan concept** - the masterplan concept reflects the SPD's 3 primary opportunities for the area which relate to creating new waterfront; creating new connections between city and Broads; and, respecting heritage and improving its setting

9 ILLUSTRATIVE MASTERPLAN

- (A)** Cluster of mixed / commercial uses
- (B)** Higher density riverside apartment
- (C)** Key activity node around Mustard Seed building
- (D)** Opportunities for mixed uses and housing types
- (E)** Housing-led development forming a new setting to Carrow Abbey
- (F)** Development respecting garden setting and creating new accesses to the site
- (G)** Opportunity for clustering of community uses
- (H)** Opportunity for clustering of arts/cultural uses
- (I)** Mixed housing
- (J)** Employment uses buffer rail-side depot uses
- (K)** Water-based commercial leisure opportunities



Fig 17 The East Norwich Strategic Regeneration Area **illustrative masterplan** - the illustrative masterplan presents a scheme which shows one possible interpretation of how the site's primary opportunities and SPD's masterplan principles could be applied. Respecting the setting of the sites many heritage assets, a wide range of building typologies should respond positively to the site's varied opportunities and a rich mix of uses ensure the establishment of a sustainable and healthy 20-minute neighbourhood

10 BUILT HERITAGE AND ARCHAEOLOGICAL PRINCIPLES

10.1 Context

The ENSRA's built heritage and archaeological assets are significant. Regeneration of the area should maximise opportunities to preserve, enhance, or better reveal their significance. It also raises the exciting prospect of these currently hidden assets being made more publicly accessible. With the majority of heritage assets falling within the city council's administrative area, Norwich Local Plan Policy DM9 relating to heritage assets is particularly important.

A listing and scheduling review was undertaken by Historic England in December 2021 which resulted in a number of revisions to the statutory designations of heritage assets across the ENSRA. The boundary of the Scheduled Monument has widened, new listed buildings have been designated and the grade of one listed building has been upgraded.

An overview of the heritage context relevant to new development within the ENSRA is summarised in Fig 18. Key features include:

10.1.1 Carrow Priory Scheduled Monument

Carrow Priory was a Benedictine convent founded in 1146 and suppressed in 1538. There is a close relationship between the priory and other listed buildings and structures around the former precinct, most notably the Grade I Carrow Abbey. The scheduled monument designation extends

Relevant City Council planning policies:
DM1, DM3, DM9, JCS 1, JCS 2, JCS 11, GNLP 2, GNLP 3, GNLP 7.1, GNLP0360/3053/R10

across an extensive area at the heart of the Carrow Abbey site incorporating the Priory ruins and their grounds, the Abbey and its grounds together with many associated adjacent smaller buildings.

10.1.2 Listed buildings

Following the recent Historic England review, there are now 14 listed buildings or structures across the site, as follows:

- 1 Grade I Carrow Abbey
- 2 Grade II* Conservatory at Carrow House
- 3 Grade II Carrow House and Gardens
- 4 Grade II Carrow Works Block 92
- 5 Grade II Carrow Works blocks 7, 7A, 8A and 8 including metal canopy attached to block 7
- 6 Grade II Eastern air raid shelter at Carrow Works
- 7 Grade II Walls steps and paved surfaces of sunken garden near Carrow Abbey
- 8 Grade II Flint wall and 19 attached pet tombs
- 9 Grade II Lodge, gardener's cottage and former cart shed to Carrow Abbey
- 10 Grade II Carrow Works Former Mustard Seed Drying Shed
- 11 Grade II K6 Telephone Kiosk outside the entrance of the former mustard seed drying shed
- 12 Grade II Trowse Railway Station
- 13 Grade II Late C19 engine house at Trowse Sewage Pumping Station
- 14 Grade II Timber-drying bottle kiln

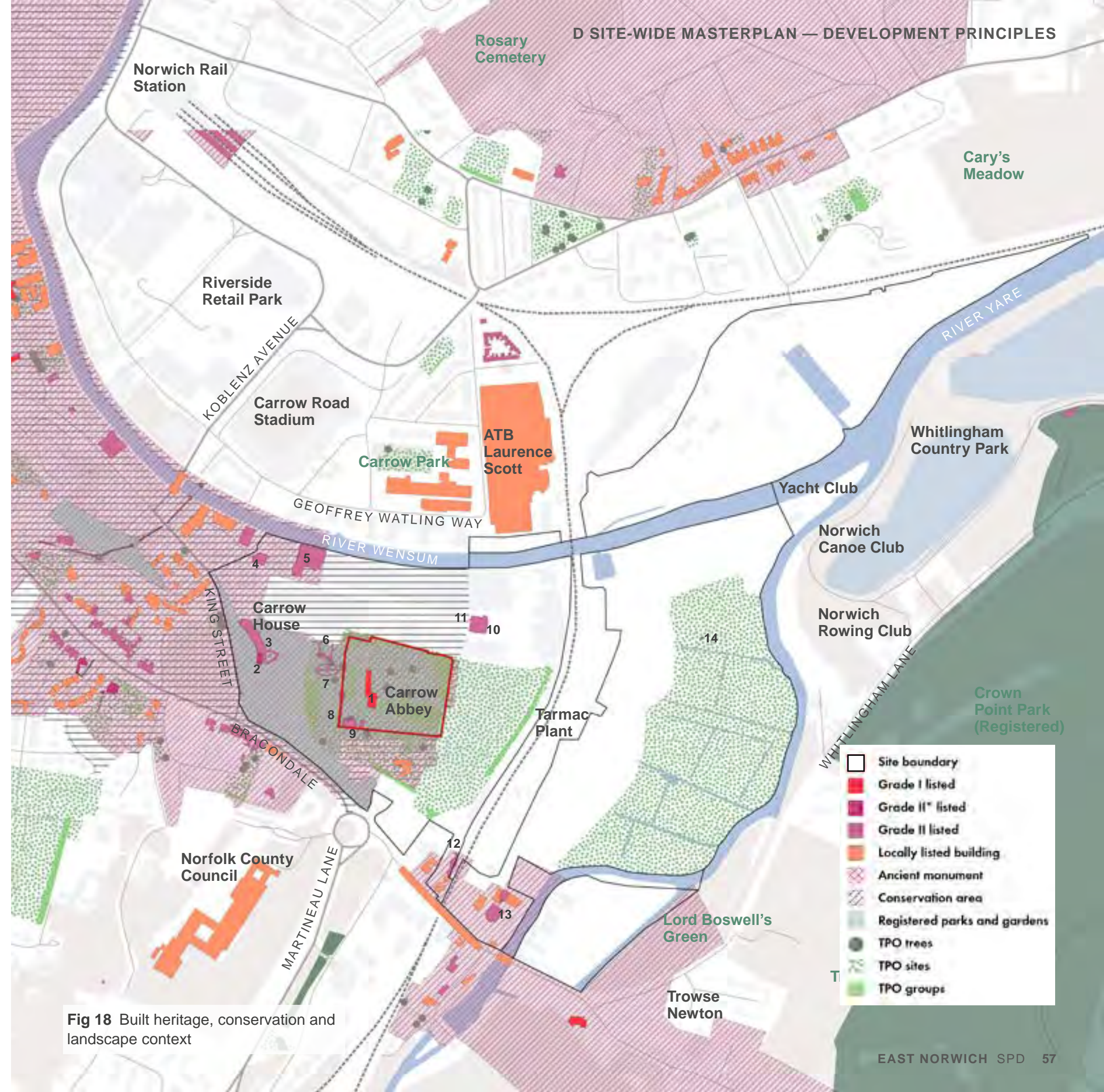


Fig 18 Built heritage, conservation and landscape context

10.1.3 **Bracondale Conservation Area**

https://www.norwich.gov.uk/downloads/file/2994/bracondale_conservation_area_appraisal

At its eastern extent, this Norwich City Council conservation area incorporates much of the Carrow Works site and extends west towards the city centre along either side of Bracondale and King Street where it eventually directly borders the City Centre Conservation Area.

10.1.4 **Trowse Millgate Conservation Area**

https://www.norwich.gov.uk/downloads/file/2872/trowse_millgate

The northern part of this Norwich City Council conservation area incorporates the Grade II listed former Trowse Station building and the area between the railway line and the River Yare including the (partially listed) old pumping station buildings and cottages. The area also extends south along Bracondale Mill Gate.

10.1.5 **Locally listed buildings**

Identified in the relevant conservation area appraisals, there are numerous locally listed buildings both within the ENSRA and immediately beyond it. These buildings and structures make an important contribution to

the character of the area and to the setting of other designated assets and new development should take account of, and respond positively to this.

New development will also impact on the setting of numerous other designated heritage assets beyond but in close proximity to the ENSRA's site boundary. These assets include but are not limited to:

10.1.6 **Trowse with Newton Conservation Area**

<https://www.southnorfolkandbroadland.gov.uk/downloads/file/1198/trowse-with-newton-character-appraisal-2012>

This South Norfolk conservation area is contiguous with the Trowse Millgate Conservation Area to the west and extends across the valley of the Yare to cover the majority of the village of Trowse Newton.

10.1.7 **Grade I St Andrew's Church**

Located on the western fringes of Trowse Newton in the valley of the River Yare and in close proximity to the May Gurney site.

10.1.8 **Grade II Registered Park and Garden - Crown Point**

An expansive area of gardens around Crown Point country mansion.



Fig 19 The illustrative masterplan and heritage assets (NB plan only shows assets within the ENSRA's boundary)

10.2 Principles

10.2.1 Heritage and historic environment principles

The following development principles relate to heritage issues and opportunities. These will be important considerations in the consideration of development proposals across the ENSRA:

H1 Accessible heritage – opening the Carrow Works and the rest of the ENSRA up so it becomes an integrated part of the historic city of Norwich.

H2 A celebration of Colman’s legacy – the Colman family’s significance on the city of Norwich and, most particularly, the ENSRA cannot be over-stated. The closure of the Colman’s plant at Carrow Works brought to an end 160 years of production. Redevelopment of this site, opening new connections between the city and the Broads, presents unique opportunities to deliver new public facilities, interpretation and visitor attractions for the city.

H3 Broads context – The site’s redevelopment and the setting of its built and archaeological assets must be seen in their Broads context, which has the same status as a National Park. The cultural heritage of the Broads is functionally linked with the industrial development of Norwich and these sites would all have had landing wharves and staithe to load and unload import and export goods.

H4 Contemporary and contextual approach – as outlined in the Character Areas section below, existing buildings and landscape features across the ENSRA already present distinct and contrasting environments reflecting the site’s historic uses and operations. These existing

and contrasting historic characters should underpin the redevelopment of the ENSRA as a whole, with the setting of re-purposed heritage assets being enhanced by contemporary and contextual design.

H5 Statements of heritage significance – comprehensive heritage statements will be required as part of development proposals which impact on the site’s heritage assets. The breadth and scope of this supporting information should be agreed with the Local Planning Authority. As outlined in Historic England guidance on such statements, these should include information on the following:

- a An understanding of the form, materials and history of the affected heritage asset(s), and/or the nature and extent of archaeological deposits
- b An understanding of the significance of the asset(s)
- c An understanding of the impact of the proposal on that significance - it may be that a stand alone Heritage Impact Statement is also required
- d Outline the design approach to avoid, minimise and mitigate any potential negative impact
- e Outline how opportunities to better reveal or enhance significance have been incorporated

H6 Heritage interpretation - as required under the City Council’s Policy DM9, heritage interpretation may be required where the City Council’s Heritage Interpretation SPD will be relevant.

H7 Fabric first – all designated heritage assets should be retained and reused for an appropriate use within development proposals coming forward. The LPA will also support the principle of retaining and appropriately



The Grade II Listed ‘F building’, Carrow Works



Grade II Listed Carrow House with adjacent conservatory and formal gardens



Ruins of Carrow Priory



Mature trees and formal sunken gardens between Carrow Abbey and Carrow House

reusing non-designated assets subject to the provisions of Norwich Local Plan Policy DM9.

H8 Stewardship and management – with assets of such historical importance at the heart of the ENSRA, and most particularly the Carrow Works site, detailed consideration must be given to the long-term heritage stewardship and management. This should include maintenance and management measures to ensure the removal from the ‘at risk’ register of assets such as the bottle kiln on the Deal Ground and blocks 7/7A and 8/8A on Carrow Works.

H9 Setting of heritage assets – new development across the ENSRA will be expected to make a positive contribution to local character and distinctiveness and enhance or better reveal the significance of the site’s unique heritage assets. Note that, as outlined in the heritage baseline studies, not all heritage assets across and around the site will be designated as such.

10.2.2 **Site-wide heritage-led design principles**

H10 Height and massing – in view of the historical significance of the area and the Broads context it benefits from, the whole of the ENSRA is sensitive to potentially adverse townscape impacts of new development. This includes the heights of new buildings and the impact this would have on the setting of heritage assets. The Building Heights section below provides more guidance on this important issue - but it should be noted that the design work undertaken during the production of this SPD and its masterplan was not supported by detailed analysis of the townscape and visual impact of new development. These studies and the modelling work underpinning them will however be required to support planning applications.

H11 Character of the formal gardens – the landscaped physical and visual connection between Carrow Abbey and Carrow House should be carefully retained, respected and, where possible, improved. Existing formal

landscaped gardens associated with Carrow Abbey and Carrow House are themselves listed structures and play a fundamental role in establishing the setting of the important buildings they connect.

H12 Retention of important trees – there are many important trees across the area which play a key role in enhancing the character of the area and the setting of key heritage assets. In particular, existing trees make a positive contribution to the setting of the listed Carrow Abbey and Carrow House and the character of the conservation areas along the site’s Bracondale and King Street frontages. Many of these trees are protected by Tree Preservation Orders and are within conservation areas - with individual TPOs and TPO group designations in place to protect important individual and groups of trees.

H13 Screening effect of trees – many of the site’s larger trees assisted in screening Carrow Abbey from the Carrow Works factory. This plays a key role in contributing positively to the setting of this unique asset. Existing trees will continue to play that role as new development replaces the Carrow Works factory buildings to the north and east of the Abbey.

H14 Flint boundary wall around the Abbey – these existing structures play a very important role in defining and containing the Carrow Priory site and the area around Carrow Abbey. These are curtilage listed and any works to these walls would require Listed Building Consent and Scheduled Monument Consent.

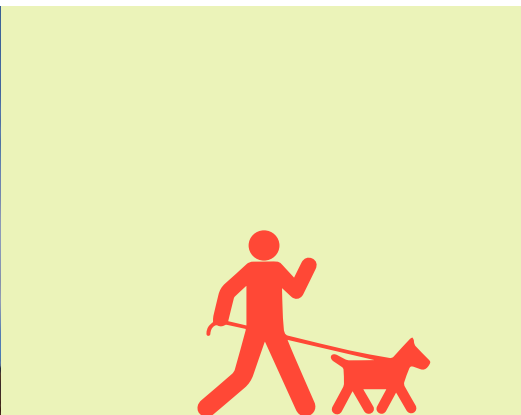
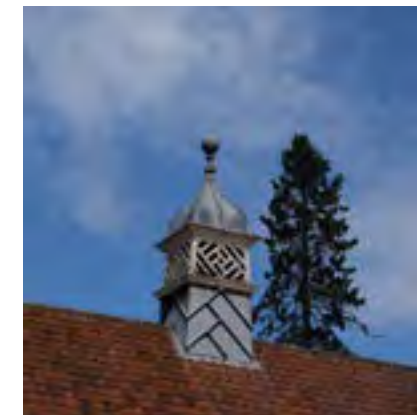
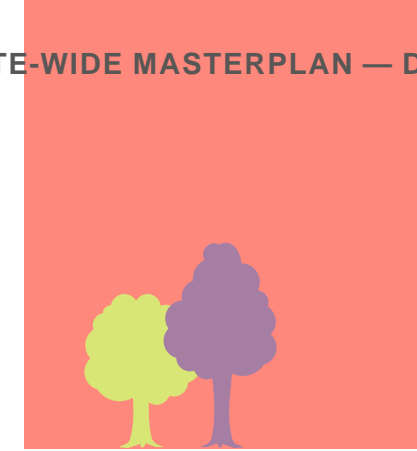
H15 Setting of Carrow Abbey and Priory – development within the curtilage of the gardens to the rear of the Abbey is not appropriate given the likely harm that would be caused to the setting of the listed building. Any new build within the formal gardens would need to include the retention of the sunken garden and pet cemetery and maintain/enhance their setting and the formal setting of the Abbey Building. Where new development is proposed, key factors include how new

buildings address and enclose existing buildings; how the arrival experience is determined by the placement and relationship between buildings; how the retention and reuse of existing ancillary buildings to the Abbey are used to create a positive and respectful arrival experience. The grounds, trees, existing flint walls and other landscape features all play a key role in defining and establishing a sense of quiet separation which is an important aspect of the Abbey’s and Priory’s special interest and setting.

H16 The future of Carrow Abbey – in finding and agreeing to a viable new use – be that public or private – for Carrow Abbey, great emphasis must be placed on protecting and securing the historic integrity of the building. Reusing this formerly residential Grade I listed building should be done in a way which protects and restores heritage features and maintains the principal spaces within the building. The interconnectedness of these principal spaces is an important aspect of the building’s significance and this should be protected. The Council would support the principle of the Abbey building and its curtilage being open to the public given its profile in and significance to the city of Norwich.

H17 Abbey approach – redevelopment of the Carrow Abbey site present an important opportunity to improve the quality of the approach to the Abbey from the site’s principal entrance off Bracondale. Adaptation and reuse of buildings around the Abbey and careful new development around them should deliver a dramatically improved approach experience which will improve the setting of the Abbey and its grounds.

H18 Setting of Carrow House – new development adjacent to Carrow House should remain outside of the curtilage of the Grade II* listed conservatory. Development in the watersdie part of the Carrow Works site will also impact on the setting of Carrow House. It should be noted that there are curtilage listed WW2 bomb shelters beneath the gardens. The repair and re-use of an existing



From the top: Historic river-front warehouse, Carrow Works; Building 7/8; Unlisted brick warehouse; Former Pumping Station extension, Deal Ground



gardens cottage/boiler house within the curtilage is encouraged.

10.2.3 **Site-wide archaeology principles**

A desktop archaeological assessment has been undertaken to inform the masterplan. This assessment has included a review of a comprehensive range of available sources, in accordance with key industry guidance, in order to identify known and potential buried archaeological remains located within the site. The known or potential significance of the buried remains has been determined, as far as possible, on the basis of available evidence. However, it should be noted that mitigation through preservation by record (archaeological excavation and other types of investigations) will almost certainly be required on parts of the site. Such a programme of archaeological mitigatory work may have considerable implications in terms of time and costs.

H19 Carrow Priory – is a Scheduled Monument located in the south-west of the site, represents the ruined remains of the Priory of St Mary of Carrow, a Benedictine nunnery founded in 1146. The Scheduled Monument comprises both below ground and upstanding remains and any archaeological remains associated with it are considered to be of national significance.

H20 Scheduled Monument Consent – Any development within the scheduled area, other than the sensitive redevelopment of the 1960s cafeteria building, is unlikely to be considered appropriate. Scheduled Monument Consent will be required for any form of ground disturbance or work.

H21 Abbey Dining Rooms – these are attached and immediately north of the Abbey building, is built directly above the site’s original church ruin. Whilst the dining room building is not considered to have a positive role in

establishing the setting of the Abbey, redevelopment of the site should use the same shallow slab foundation to avoid undue ground disturbance.

H22 Potential burials – due to the site’s previous use as a monastic complex, it is anticipated that there will be burials in the vicinity and it is likely that there were multiple areas of burial associated with the Priory, or other associated remains, outside of the Scheduled Area.

H23 Flint and faunal remains – Palaeolithic and Mesolithic flints and Palaeolithic faunal remains have been found both within the site and at other locations within the vicinity. It is likely that more flints will be present within the surviving gravel terraces and peat deposits located within the site. Faunal remains could also be recovered from the site. It is anticipated that such finds would be of local to regional significance.

H24 Roman remains – the north-east part of the site has potential for finds or features associated with Roman occupation. During the medieval and/or post-medieval periods, it is possible that parts of the site would have been used as a livestock meadow, and evidence of land division or drainage associated with such activity could conceivably be present in parts of the site. Any such evidence would be of no more than local significance.

H25 Modern industrial activity – evidence of modern industrial activity is expected and could comprise features associated with existing buildings or buildings that have since been demolished. Such evidence is anticipated to be concentrated in the north and east of the Carrow Works Site, the north and west of the Deal Ground site, the centre and west of the Utilities site, and the western part of the ATB Laurence Scott site. Any such evidence is considered to be of local significance only.

H26 Open space – Carrow Priory Scheduled Monument should be designed into any redevelopment proposals as an area of open space. This would ensure that there would be no direct impacts from development on this Scheduled Monument.



Above: The Deal Ground’s Grade II listed bottle kiln



The Mustard Seed Drier building, Carrow Works



The German Gymnasium restaurant at King’s Cross - which provides a useful and relevant example of how new life through sensitive conversion can be breathed into the Mustard Seed Drier building

11 MOVEMENT PRINCIPLES

Relevant City Council planning policies:
 JCS 1, JCS2, JCS6, JCS9, JCS11. GNLP4, GNLP 7.1
 GNLP2, DM28, DM30, DM31, DM32,
 GNLP0360/3053/R10

11.1 Context

Ensuring new development benefits from good walking and cycling links and will be well served by public transport is one of the fundamentals of the 20-minute neighbourhood concept. Sustainable development is reliant on sustainable transport connectivity.

Improving access to and between the sites within the ENSRA is fundamental to the successful regeneration of the area. Local connections will ensure the area comes forward to form a new fully integrated part of the city of Norwich. However, there are also significant opportunities to deliver strategic access improvements to help improve connections between the city and the Broads with far reaching benefits for all.

11.1.1 Transport Assessments

Transport Assessments should be submitted with future planning applications for the sites within East Norwich. In doing so, care will need to be taken that account is made of area-wide transport issues associated with the ENSRA site allocation as a whole sites.

11.2 Movement principles

11.2.1 Walking, wheeling and cycling principles

The following principles relate to walking, wheeling (i.e. scooting, wheelchairs and mobility scooters and pushchairs) and cycling issues and opportunities across the ENSRA - see Fig 20 for wheeling and walking connections and improvements, see Fig 22 for cycling connections and improvements.

M1 Active travel the first priority – in delivering connections and improving linkages, the highest priority will be given to supporting active travel – walking, wheeling and cycling.

M2 East-west route – the ENSRA will deliver a new east-west walking, wheeling and cycling route across the entire area. This connection will be formed of a number of connections and linkages as follows, all of which will need to be delivered for the route to become established:

- a A new pedestrian and cycle bridge across the River Wensum to Geoffrey Watling Way on the alignment of the old Carrow Bridge. The preferred alignment of the bridge would follow that of the old Carrow Bridge, on the axis of the old Carrow Road. Landing the bridge of the north side will require collaboration and agreement with private landowners. The potential impact on existing residents of apartments on the north side of the river



Fig 20 Pedestrian routes - based on the illustrative masterplan



Fig 21 Artist's impression of how an improved railway underpass could look - looking towards the Carrow Works from the Deal Ground Site. The image shown works within the broad parameters of the existing opening. It is envisaged that this works could be delivered ahead of works associated with the potential longer term replacement of the Trowse rail bridge. Replacement of the rail bridge might present opportunities to make further improvements to this key pedestrian and cycle connection which could include the widening of this route.

will be an important consideration given the changes in level that will need to be navigated to deliver this bridge. Alternative locations may need to be explored if this alignment proves to be too difficult to deliver.

- b Entrance to the Carrow Works site via the existing King Street gateway. Again, there are ownership issues here which will require collaboration and agreement with private landowners.
- c A length of 'active street' across the north of the Carrow Works site lined and addressed by a range of different activities and uses. This would ideally be a place for people, with pedestrian priority but also designed to accommodate a bus route if required.
- d An upgraded underpass connection between Carrow Works and Deal Ground. Collaboration with and the approval of Network Rail will be critical here, along with land owners either side of the underpass. This is a critical link for the ENSRA and further detailed feasibility work is needed, taking account of engineering works, cost and required approvals to enable a pragmatic solution. Lighting, high quality materials, a robust maintenance regime and potential public art will all play an important role in delivering improvements here.
- e Pedestrian and cycle provision on the new road bridge over the River Wensum between the Deal Ground and Utilities site.
- f A length of active 'shared' street across the northern part of the Deal Ground.
- g A new pedestrian and cycle connection across the River Yare to Whitlingham Country Park and The Broads beyond.

M3 Riverside walk – a new riverside walking and cycle path along the north and south banks of the River Wensum across the Deal Ground and Utilities sites which connects with existing riverside routes. Extending this route across the Carrow Works site is supported although it is recognised that opportunities here are more limited. The route should extend west of the Utilities Site beneath the rail bridge on the north bank of the River Wensum towards the city along land owned by ATB Laurence Scott. Current users of the Utilities site have a right of access across the ATB Laurence Scott site which is an important consideration.

M4 Potential realignment of National Cycle Route 1 – the opening up of the sites presents the opportunity to realign the National Cycle Route 1 across the sites to provide a safer route for cycle users which avoids major nearby junctions. The route shown would include passing beneath the railway line through an improved underpass connecting the Carrow Works and Deal Ground sites although alternatives may need to be considered given width restrictions.

M5 Junction and crossing improvements – pedestrian, wheeling and cycle connections will be made with existing routes in the area through the provision of improvements at key junctions and crossings. Facilities to cross King Street and connect to onward routes to the city centre will be of particular importance given the importance of knitting the east-west route into wider existing or potential connections with the city and the Broads. The King Street area west of the site is of particular concern given the constrained nature of the pedestrian facilities west of the Carrow Bridge junction.



- M6 Existing railway bridge** – the existing road bridge across the railway north of the Utilities site is to be retained principally as a pedestrian and cycle bridge. Ideally this bridge would be adopted as part of the highway network. See also principles relating to emergency access and commuted sums for maintenance below.
- M7 Informal routes across Carrow Works** – the southern part of the Carrow Works site – around the historic Carrow Abbey and Carrow House – will provide informal pedestrian, wheeling and cycle routes across the site as part of a permeable local routes network, including the re-opening and refurbishment of the existing bridge linking the gardens associated with Carrow House and Carrow Abbey. Routes should be aligned to only make use of existing openings in the existnig flint boundary walls rather than creating new openings.
- M8 Hire schemes** – a cycle and scooter hire scheme is already operational in the city - the Beryl scheme. New development across the ENSRA should support the strengthening of this network. Such hire schemes have an increasingly important role to play in providing sustainable and healthy (active) means of travel as a viable alternative to the private car.

11.2.2 Local public transport and car club principles
 The following principles relating to improvements in local public transport will be applied in determining development proposals coming forward in the ENSRA - see Fig 25:

- M9 Local bus connections and improvements to existing services** – in order to minimise the number of private car trips generated by the development of the ENSRA, improvements in local public transport (bus) facilities and services will be required to help support sustainable patterns of movement. Contributions to improvements to local services and facilities - such as improved waiting facilities and service information - will be the initial priority to help encourage sustainable patterns of movement for new residents and workers from the outset. Liaison with bus service providers will be required to agree appropriate improvements.
- M10 Carrow Works service** – delivery of the ENSRA should be supported by improved local bus services. The Carrow Works site is well located to support a new or revised existing service with a route passing directly through the Carrow Works site.
- M11 Bus stops** – new stops should be distanced appropriately - approximately 400m apart - to encourage patronage in locations where activities are clustered. A stop or stops should be located as close to the underpass connection with the Deal Ground as possible to ensure new services benefit the whole of the ENSRA.
- M12 Access to rail services** – Norwich Railway Station is within walking distance of the ENSRA. Development should support measures to improve accessibility to Norwich Railway Station from the ENSRA. This will be achieved through improved pedestrian, wheeling and cycle routes and supporting improved bus services between the site and the Station.



Fig 23 North - south connection showing how pedestrian and cycle links can be formed using a combination of new and re-purposed existing infrastructure between the May Gurney site, across the Deal Ground and Utilities sites to the Cremorne Lane area.

Fig 24 East - west connection - showing how the proposed primary east-west pedestrian and cycle route across the site, linking the city with the Broads can be achieved, across the Carrow Works and Deal Ground sites, through the provision of new bridges and improvements to the existing underpass connection.

M13 Car clubs – access to electric car sharing/clubs for new residents and businesses across the ENSRA would help to provide an alternative to car ownership which will help to encourage active and sustainable patterns of travel and reduce the number of car trips generated by the redevelopment of the ENSRA.

11.2.3 Vehicular and road access principles

Access to the sites is a major constraint. Establishing vehicular and road access to the sites is fundamental to enabling the sites to come forward for development. The following principles relate to the establishment of road and vehicular access to the sites across the ENSRA (see Fig 26).

M14 Primary, secondary and emergency vehicular access – for the resilience of the local highway network, each site should have a primary and secondary point of vehicular access. Specific constraints, however, may result in the need for bespoke solutions. Whilst potentially workable primary, secondary and emergency access options are put forward below, further feasibility work is required to establish the suitability of these routes as part of Transport Assessments associated with development proposals.

M15 Carrow Works site movement principles (see Fig 26)

a The primary vehicular access will be via a remodelled existing junction off the Bracondale / Martineau Lane roundabout. There is considerable potential to reduce the scale of this junction from the 5 lanes which served the operational factory.

b Given the constraints associated with the site, secondary access may only be possible to deliver in later phases of development. The preferred location for secondary vehicular access is via the existing Paper Mill Yard entrance. This access is currently privately controlled and agreement on the use of this access for vehicles will need to be established with the current owner. This route does however provide emergency access to the site.

c Emergency access may be provided via the upgrading of the existing Carrow House access-way south of Carrow House which links to the existing Carrow House car park. An alternative emergency access could be formed in the vicinity of the existing Fire Station on Bracondale.

M16 Deal Ground / May Gurney sites movement principles (see Fig 26)

a Primary vehicular access will be via a new/replacement junction in close proximity to the existing Bracondale entrance to the May Gurney site.

b There are a number of options for emergency access to the Deal Ground site. The existing vehicular service access to the Tarmac aggregate plant directly off the railway bridge can serve as an emergency access. In the longer term when the Utilities site has come forward, emergency access would be provided via the new Wensum road bridge, with emergency access to the Utilities site being gained via either the existing vehicular bridge to Cremorne Lane over the railway to the north, or (for smaller vehicles only) under the height restricted railway bridge to the west.

c Weight restrictions for vehicular use of the existing Cremorne Lane bridge will need to be established.

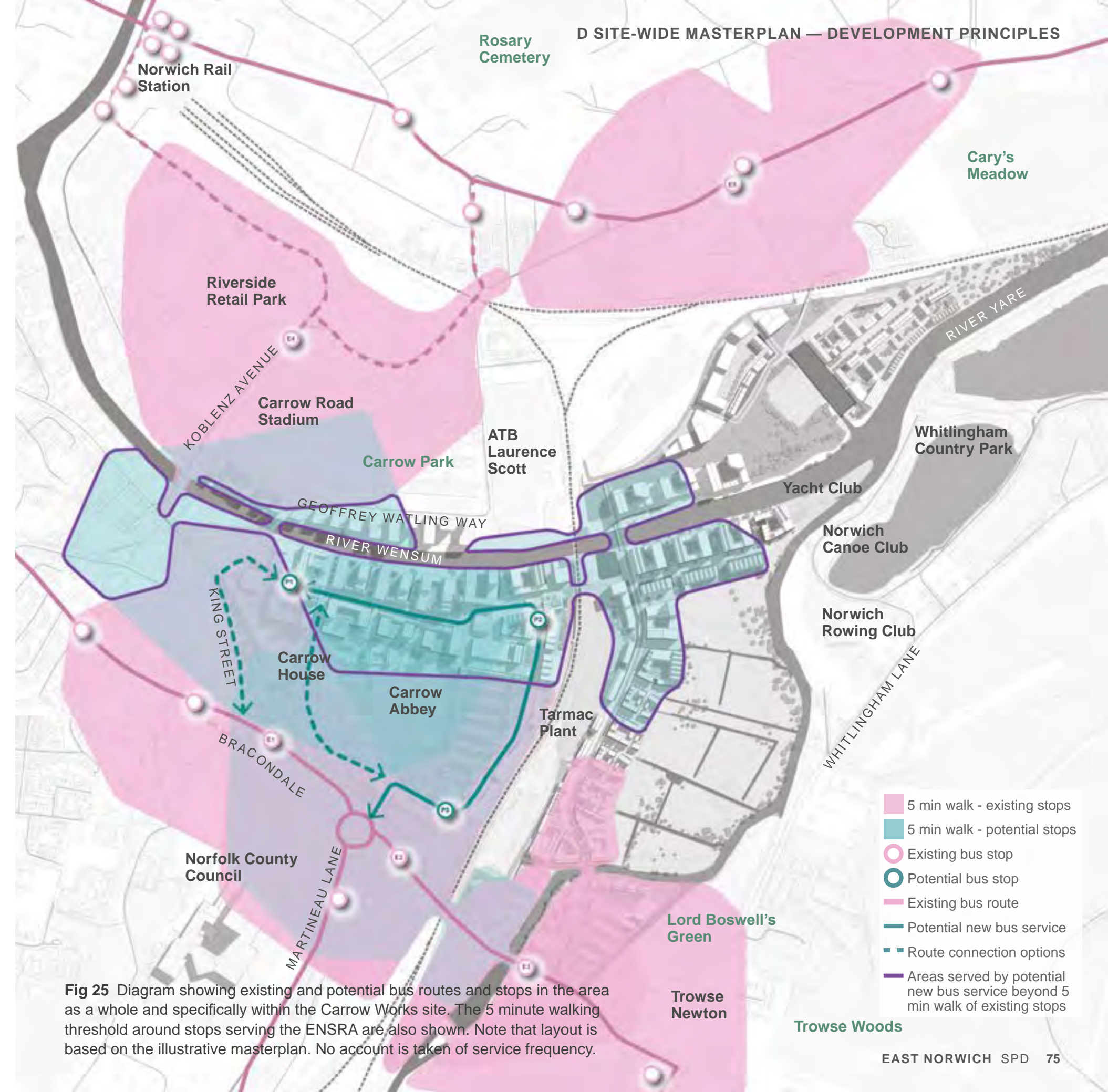


Fig 25 Diagram showing existing and potential bus routes and stops in the area as a whole and specifically within the Carrow Works site. The 5 minute walking threshold around stops serving the ENSRA are also shown. Note that layout is based on the illustrative masterplan. No account is taken of service frequency.

Strengthening work may be required to ensure the bridge can service emergency vehicles in liaison with the relevant authorities.

M17 Utilities site movement principles (see Fig 26)

- a The primary vehicular access will be provided by the new Wensum road bridge connecting directly with the Deal Ground site.
- b Provision of secondary access is unlikely to be possible in the short term.
- c Emergency access may be gained via either the existing vehicular bridge over the railway to Cremorne Lane or, for smaller vehicles only, under the height restricted railway bridge to the west.

11.2.4 Adoption and maintenance principles

With all sites within the ENSRA being in private ownership with only limited or compromised access to the surrounding adopted highway network, the following principles relating to the adoption and maintenance of the highway will be applied in determining development proposals coming forward in the ENSRA:

M18 Road adoption – this ENSRA SPD has been produced on the basis that all principal roads across the area and new bridges connecting to it will be adapted or built to adoptable standards and will form part of the adopted highway network. The masterplan concept (Fig 16) and illustrative masterplan (Fig 17) have been designed to retain the majority of the existing road alignments through the sites.

M19 Commuted sums for maintenance – it is likely that Norfolk County Council will require commuted sums for

the adoption and maintenance of the particular or special connections such as the underpass between the Deal Ground and Carrow Works sites and the existing bridge over the railway line north of the Utilities site.

11.2.5 Parking principles (see Fig 27)

This major brownfield site, located within walking distance of Norwich Station and the city centre, presents a unique and exciting opportunity to deliver sustainable forms of mixed use, high density and high-quality development which makes the very best use of urban land and the infrastructure already in place in this part of the city. Redevelopment should come forward in a form which reduces reliance on the private car in order to promote and prioritise active and sustainable modes of transport. In promoting the ENSRA for redevelopment, GNLP Policy 7.1 East Norwich emphasises the need for traffic restraint.

The greatest priority, in terms of ensuring the site is accessible, will be placed on promoting and supporting, first, active travel patterns and then public transport. The approach to the provision of parking for new development will have a direct bearing on travel behaviour of those who live and work within the ENSRA, and in the total number of trips generated by the development. Alongside the provision of good quality walking and cycling infrastructure and investment in local public transport services and facilities, flexibility in the provision of parking and the application of parking standards will therefore be required to help encourage active and sustainable patterns of movement .



Fig 26 New road connections and vehicular access points - based on the illustrative masterplan

Parking principles for new development across the ENSRA include:

- M20 Car free development** – the principle of car free development is supported within the ENSRA.
- M21 Flexibility in application of parking standards** – adopted Norwich City Council parking standards confirm that the ENSRA is an ‘accessible location’. Parking standards are expressed as minimums and maximums with a minimum standard of 0.5 spaces per dwelling in this location. However, whilst this location is not currently identified as being within the City Centre Parking Area, in supporting high density and sustainable forms of development, the planning authority will take a flexible stance on the application of car parking standards across the ENSRA.
- M22 Community transport hub concept** – COVID-19 has fundamentally changed working patterns. More people are working remotely, closer to or within the homes. Creative approaches to supporting these new patterns of work are called for. Flexible workspaces, shared amenity facilities and community (decked) parking provision could potentially be combined to support high density residential and employment developments. In the longer term and as demand for car parking declines car sharing and hire become more established, other redevelopment options may be explored.
- M23 Hire schemes** – in addition to improvements to public transport services, support for the introduction of new, or expansion of existing, e-car, e-bike and e-scooter hire schemes will help provide new (and nearby existing) residents with viable alternatives to private car ownership.

M24 A range of parking types – with such a wide spectrum of dwelling types anticipated across the ENSRA, from high density apartments to town-houses, a range of parking approaches are likely to be required which could include the following as considered appropriate for specific housing typologies:

- A limited amount of dedicated on-site parking, potentially within lower-level podiums of apartment blocks.
- On- and off-street surface parking, noting that the City Council parking standards stipulate that a minimum of 25% of all car parking spaces provided will be ‘on-street’ or in communal areas and not allocated to particular households.
- On-plot or integrated parking within housing-based developments noting that the City Council parking standards stipulate that no more than 20% of the parking spaces will be provided as individual garages.
- A purpose built but temporary decked community transport hub to provide for shorter-term parking requirements associated with employment (and potentially residential) uses. See M22.

M25 Area-wide and wider measures – to help manage on-street parking, the introduction of new or revision of existing parking permit schemes should be considered to help enforce appropriate patterns of parking on the ENSRA site and in nearby residential areas to mitigate against potential impacts of new development on nearby streets.



Fig 27 Illustrative parking strategy - in the context of a restricted approach to parking provision across the ENSRA, a range of types of parking will be required, informed by the building types it supports. This diagram shows potential parking provision based on the illustrative masterplan

12 OPEN SPACE, PUBLIC REALM AND ECOLOGY PRINCIPLES

12.1 Context

The ENSRA presents the city with an unparalleled opportunity to reconnect with an important part of its history. The Colman’s estate and operation at East Norwich has played a pivotal role in the city’s successes. This new phase of regeneration will reconnect this historic part of Norwich with the city – and in doing so, facilitate a much stronger and more direct connection between the city and the Broads.

The public realm is the primary tool through which these connections will be made. A range of spaces and links will be opened up through the coming forward of the ENSRA. GNLP Policy 7.1 East Norwich acknowledges the need to enhance green spaces and links and notes that “development must protect and enhance key areas of landscape and biodiversity value, green infrastructure assets, corridors and open spaces within the area, including enhancing linkages from the city centre to the Broads, Whitlingham Country Park, Carrow Abbey County Wildlife Site, the wider rural area and elsewhere in Norwich”. The policy also requires that development must demonstrate the means to retain and maintain these assets in perpetuity through a long term management plan for all open space, public realm and areas of ecological value to be submitted as part of future planning applications

Relevant City Council planning policies:
DM6, DM7, DM8, JCS 1, JCS 2, JCS 11, GNLP 2, GNLP 3, GNLP 7.1

12.2 Principles

12.2.1 Open space, public realm and ecology principles

A number of principles relating to the provision of public realm, open spaces and biodiversity across the ENSRA are relevant, as follows:

- OS1 Accessible and open to all** – where ecologically appropriate, the vast majority of the ENSRA - its spaces and places - will be open to public access and an integrated part of the city of Norwich.
- OS2 Stewardship** – a bespoke management and maintenance regime will be required for the more ecologically and historically sensitive open spaces across the ENSRA. These are likely to include the County Wildlife Site on the Deal Ground and parts of the Carrow Abbey grounds. In scoping and agreeing the appropriate regimes to secure and protect these assets in perpetuity, close collaboration with the relevant stakeholders will be required including the Norfolk Wildlife Trust and Historic England respectively and potentially Whitlingham Charitable Trust and the Norwich Fringe Project.
- OS3 Ecological Impact Assessment (EclA) and Ecological Management Strategy (EMS)** – working in liaison with Norfolk Wildlife Trust, a full EclA based on appropriate survey work will be required to support development proposals to demonstrate how the ecological mitigation

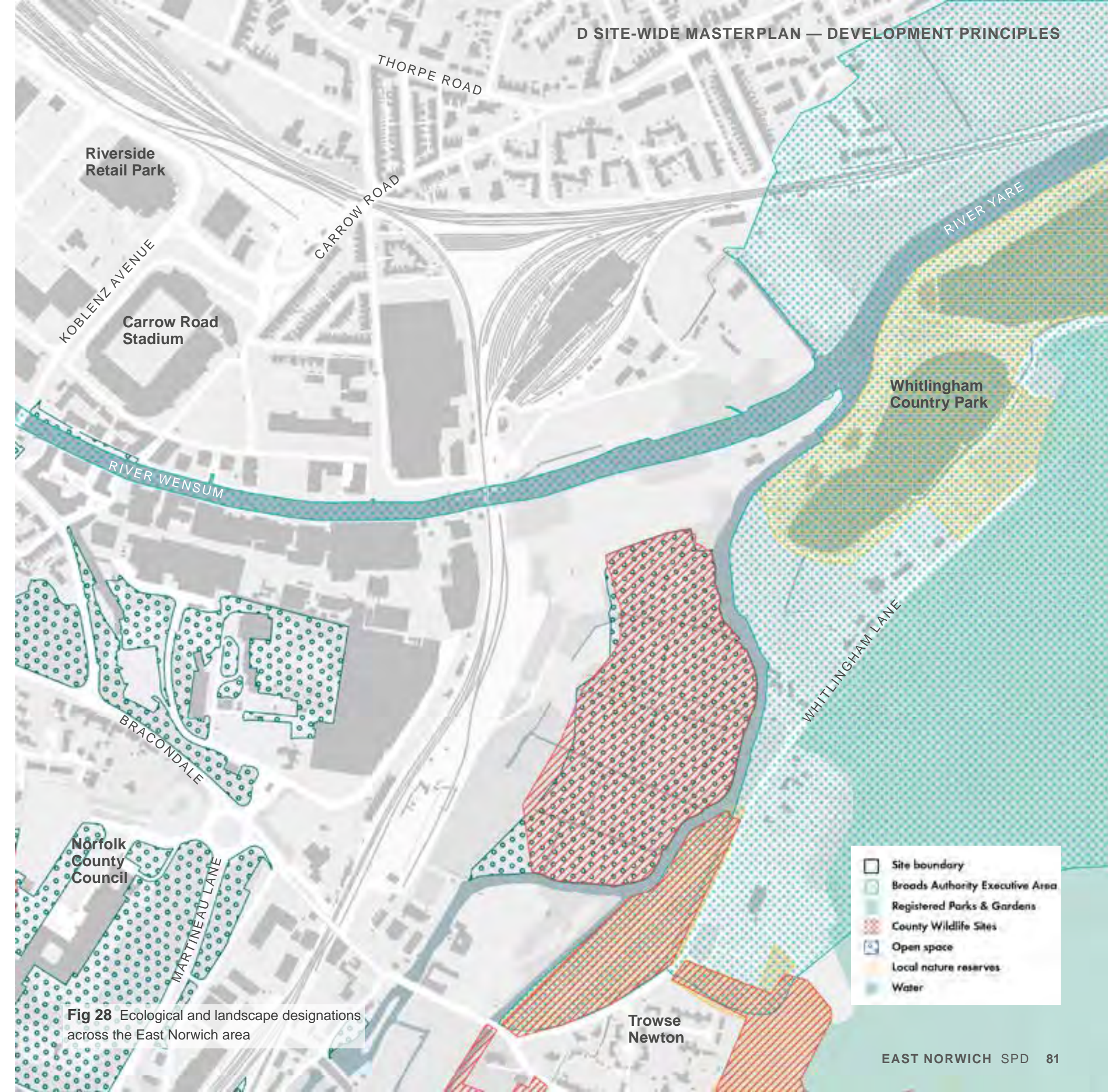


Fig 28 Ecological and landscape designations across the East Norwich area

hierarchy has been applied to all potential impacts on ecological receptors. There may be ecological constraints not yet understood because surveys have not been undertaken. EclA and associated species surveys should be commissioned at the earliest opportunity to inform the detailed design of the scheme. The EclA should inform a site-wide Ecological Management Strategy (EMS).

os4 Biodiversity net gain (BNG) – In accordance with BS 8683 “Process for Designing & Implementing Biodiversity Net Gain” and as required under GNLP Policy 3, the ENSRA presents an important opportunity to achieve biodiversity net gains on-site. The need for development to deliver measurable improvements for biodiversity by creating or enhancing habitats is recognised in national planning policy and in the GLNP’s Climate Change Statement. The government has confirmed, through the recently approved Environment Act that has now gained Royal Assent, that it intends to legislate the requirement for development to deliver a minimum 10% biodiversity net gain nationally. On a site-by-site basis, in addition to adherence with the mitigation hierarchy, development will therefore be required to deliver a minimum 10% net gain. An ENSRA-wide approach might be appropriate and acceptable if binding assurances are put in place between relevant landowners.

os5 Environmental enhancement and mitigation – a number of environmental enhancement and mitigation opportunities should be promoted through redevelopment of the ENSRA including:

a Suitable mitigation and enhancement strategy for protected and notable species, informed by species specific surveys.

- b Incorporation of green/brown roofs, living walls rain gardens and other green infrastructure for biodiversity.
- c Incorporation of species-specific enhancements into dwelling for example, bat and bird boxes (and nesting platforms) and insect bricks.
- d Use of Norfolk based seed mixes for grassland and wild-flower meadows (rather than generic, commercially available mixes).
- e Protected and enhance retained habitats and notable features such as woodlands and river through suitable buffers and management.
- f Design of SuDS and other blue-green infrastructure for biodiversity.
- g Secure the delivery of biodiversity net gains for at least 30 years through a suitable management plan.
- h A sensitive lighting strategy provided to demonstrate how impacts on nocturnal wildlife including bats, birds otters and fish (e.g. eels) are avoided and minimised.
- i In designing energy and resource efficient new buildings, in view of issues associated with water stress, new development should be designed to be low uses of water.

os6 County Wildlife Site – the following principles relating to the County Wildlife Site (CWS) will apply:

- a The Carrow Abbey Marsh CWS should be managed to preserve and enhance its biodiversity and ecology with improvement works to restore condition of the CWS and enable future management.
- b This will likely involve limiting or avoiding public access to the CWS in order to preserving the area for the sole benefit of wildlife.



Fig 29 Public realm framework based on the illustrative masterplan



c Where possible, new development should seek to provide a buffer between the extent of new development and the CWS boundary.

os7 Quality and quantity – the context of the ENSRA is important in relation to the provision of open space in new development. The ENSRA benefits from both a city and rural context – improved links to both are fundamental to successful delivery. High density mixed-use development across parts of the site will benefit from the opening up of some of the site’s open spaces for public enjoyment. The delivery of the bridge to Whitlingham, the riverside walks and leisure marina facilities, connections with the adjacent Country Park and the wider Broads will bring significant benefits to all those who live and work nearby. These two aspects combine to deliver quantitative and qualitative benefits and improvements in terms of provision of and access to open space.

os8 Meeting open space policies and standards – the opportunity to improve access to the nearby Country Park and the wider countryside will help to ensure occupiers of new development will benefit from good and convenient access to nearby public open space.

os9 Dog walking – as confirmed in Natural England Accessible Natural Green Space Standard, the needs of dog walkers should be addressed with the provision of, or access to, circular dog walks of various lengths and provision of secure off lead areas (not in the CWS).

os10 Public realm network, see Fig 29 – the coordinated redevelopment of the ENSRA will bring forward the

opportunity to create a high quality and connected network of public spaces and public realm which is directly connected to, and serves to expand, the existing public realm network of the site. Key spaces and connections will include:

a Carrow Abbey grounds – the key central space on the Carrow Abbey site. The space plays a critical role in establishing the setting of Carrow Abbey and Priory. The site presents the rare opportunity to create a peaceful place of quiet separation from the city, potentially through managed public access. This would be established through a Management Plan. Established existing trees play a very significant role in the character of the space. The sunken rose garden to the west of the Abbey should be restored and form part of a linked network of public spaces across the Carrow Works site.

b Carrow House Grounds – the grounds form an important part of the landscaped connection between the Abbey and Carrow House and now benefit from their own listed building status. These formal gardens present opportunities to form part of a managed public network of informal leisure routes across the historic Carrow Works site. The gardens should be restored, maintained and managed accordingly, via Management Plan, to ensure to provide a positive setting to the listed Carrow House and Conservatory.

c Carrow west gate – this is one of the site’s principal pedestrian and cycle gateways forming the primary connection with the city of Norwich. This threshold will play a particularly important role for pedestrians and cyclists but should also be considered as a potential



Grand II listed Carrow House, the Grade II* listed Conservatory and the Grade II listed gardens



The Grade II listed Carrow Abbey sunken gardens

entrance to the site for bus services (subject to approval of bus operators and transport authorities). It will be a hard landscape space but one which, given the activities likely to be sited around it, should be designed to accommodate concentrations of people. It should be a flexible space, potentially a focal point for informal pop-up events and activities.

d The 'F' building space – this refurbished building will be a focal point of commercial activity across the ENSRA. The form of the existing listed building provides an opportunity to create a hard landscaped space for activities and events with a good south-facing aspect and opportunities to create new points of riverside access for visitor or commercial moorings.

e Seed Square – this is an important space which sits on the prominent axis of the primary east-west link across the ENSRA. The space would be framed by the recently listed Mustard Seed Drying building which presents exciting refurbishment and reuse opportunities.

f Carrow river front – access to the river-front on the Carrow Works site might be intermittent. But where opportunities exist to establish open access to the riverside they should be taken. The redevelopment of the factory buildings on the eastern end of the site's river frontage would appear to offer the greatest opportunities in this regard. This access could be complemented by new river moorings, bringing increased leisure activities to the Wensum.

g Carrow south gate – the arrival experience from the Carrow Works site's principal vehicular entrance off Bracondale. Key issues here will be to reduce the scale

of the existing access arrangement and consider how new development responds positively to, working with other heritage buildings associated with the Abbey, the approach to the Abbey building and grounds.

h Pumping Station – this is an interesting cluster of heritage buildings. The buildings would lend themselves to arts and community uses and the space outside the buildings could support their reuse by offering flexible space where activities could spill out into south facing courtyards.

i Village greens – development of the May Gurney and Deal Ground sites will create a new mixed use residential cluster. Set in the Yare valley, public spaces should be set between and around new houses to complement the village character of new development in this location and offer complementary environmental and ecological conditions close to the County Wildlife Site.

j Broads gate – the connection between the Deal Ground site and the new Yare ped-cycle bridge crossing is a key threshold space in the ENSRA. Improving connections between the city and the Broads is achieved through this link and this location will form the new threshold between town and country. Its design and treatment should be handled accordingly. It will also be important to retain site security for the Yacht Club and ensure their operations can continue without obstruction.

k Small leisure marina – this is a zone of functional flood plain which might present opportunities for a small leisure-based marina to support leisure boats and recreation vessels. This is a complex space with many level changes at a point of convergence between numerous routes. Careful design and treatment will therefore be required.



The Grade I listed Carrow Abbey in its formal gardens - all falling within the area covered by the Carrow Priory (ruined portions) Schedules Monument



I **Large leisure marina** – the ENSRA presents a major opportunity to create a wonderful new ‘Gateway to the Broads’ facility focused around a large leisure marina.

12.2.2 **Factors relating to the provision of a new large leisure marina**

os11 **Purpose and benefits of a new large leisure marina**

- a new leisure marina will be delivered along the River Wensum, east of the Trowse Bridge and any new fixed bridge across the Wensum. This marina will be a destination and could support a small cluster of associated commercial and/or leisure activities. The marina is important as it will:

- Contribute, along with riverside moorings and other improvements, towards compensation for the loss of access for larger boats to the Port of Norwich.
- Help to deliver better connections between the city and the Broads.
- Help to support increased use of the rivers for leisure and visitor activities and attractions.
- Provide scope for improved private moorings, potentially including riverside (on-line) moorings for visitors, facilities building at marina, hard-standing for boat storage and slipway to improve access to reinforce wider benefits.
- Potentially deliver some flood mitigation which benefits the East Norwich Regeneration Area as a whole.

os12 **Preferred location of large leisure marina**

- the preferred location for the marina has been incorporated into the SPD masterplan, on the eastern side of the Utilities site sub-station. Other locations may be appropriate if they are shown to be environmentally and financially viable

and meet the criteria outlined below. The Broads Authority are the key stakeholder for any such facility and should be engaged throughout all stages of work. Key factors which have informed the preferred location for the large leisure marina in the masterplan concept and illustrative masterplan include:

- The leisure marina will need to be located downstream of any fixed bridge across the River Wensum.
- The Utilities Site is less ecologically sensitive & will need to be decontaminated.
- The suggested preferred location efficiently addressed offset distances associated with large sub-station facility.
- The suggested preferred location causes minimum conflicts with underground utilities.
- The suggested preferred location provides marina access at a location of an existing water inlet.
- The suggested preferred location is at the confluence of the Rivers Wensum and Yare where the channel is wide.
- The suggested preferred location may present opportunities for operational efficiencies/synergies with other water-based facilities.
- The alignment of the marina in the masterplan concept creates new waterfront development opportunities which is good for development values.



Fig 30 Public realm framework based on the illustrative masterplan

13 LAND USE PRINCIPLES

13.1 Introduction

The ENSRA creates an opportunity to create a distinctive new part of the city – working with natural and heritage assets to embrace and enhance the city’s relationship to the river and its economic and cultural past.

At the heart of the opportunity is a focus on introducing a range of residential, commercial, leisure and community activities that enliven the area and create a vibrant location for people to live, work and enjoy their spare time.

The SPD seeks to integrate spaces for living and working, supporting these with retail and leisure facilities that meet the needs of both residents and workers, reflecting the diverse and integrated mix found in the heart of Norwich that makes the city so successful and attractive.

Norwich has seen significant levels of development in recent years both within the city and around its edges, this has delivered a range of new properties including apartments, urban town-houses and larger suburban semi-detached and detached homes. This reflects the mix of people who want to live in Norwich, who range from young first-time buyers, families and older people looking to ‘downsize’ – supplemented by a more transient student population.

In the main development has focussed on ‘traditional’ property tenures in the form of build to sell market homes or affordable housing both to rent and purchase. However,

Relevant City Council planning policies:
DM1, DM12, DM13, DM16, DM17, DM18, DM19, DM21, DM22, JCS 5, JCS 7, JCS 8, JCS 9, JCS 11, GNLP 2, GNLP 5, GNLP 6, GNLP 7.1, Policy GNLP0360/3053/R10

in recent years there has been an increasing quantum of development focussed on specific parts of the housing market including older persons/ retirement living and new build to rent units.

The land use strategy which underpins the masterplan outlined in this SPD seeks to provide the appropriate setting and development opportunities to respond to each of these markets and ensure East Norwich can accommodate a truly mixed and balanced community of residents.

The strategy seeks to leverage the site’s riverside setting to support the delivery of new apartments, both within retained buildings at Carrow Works and new buildings along the river frontage on Carrow Works, the Deal Ground and the Utilities site. The sale, location and nature of these opportunities can support a mix of tenure types including general sale/ rental development, specialist provision (such as retirement living or build to rent) and sector specific homes (such as student accommodation or extra care).

The SPD also provides for new houses to be built offering a unique opportunity for families and larger households to live close to the city centre but still benefit from connections to the river and wider countryside. The mix responds to the attractiveness of Norwich as a city for families and the strong levels of demand and need for larger properties within the city.



Fig 31 Strategic land use clusters based on the masterplan concept - showing broad land use strategy for the ENSRA

13.2 Principles

13.2.1 Land use principles for East Norwich

The opportunity to integrate amenity provision and new homes is crucial to East Norwich's success and its ability to achieve the mix of residents envisaged and creating a community that benefits from a wide range of facilities. The co-location of residential and community/commercial space will be critical to supporting residents across all age and socio-economic groups.

At the heart of the masterplan outlined in this SPD is the integration of new community facilities that can provide for the population of East Norwich, with space for a school, health facilities and community space as part of new neighbourhoods in the city. These will be highly accessible to residents of the area, linking to the main pedestrian, cycle and bus network.

The approach to non-residential uses has been developed to both complement the existing offer within Norwich but also create new and distinctive opportunities to meet the needs of residents and businesses alike. It will provide residents with places to work close to home and new leisure, dining and entertainment opportunities, these will also offer attractive opportunities for people whose businesses are based here.

LU1 Land use strategy - the following land-use areas comprise the high-level land use strategy for the ENSRA - see Fig 31 to which the following text directly relates:

- 1 Carrow Works West Gate** – the main gateway to the ENSRA from the city, the 'Carrow Works West Gate' area will be a vibrant, characterful and lively place with a mix of new and refurbished historic buildings supporting ground floor commercial, retail and leisure uses combining with high density housing and employment uses above.
- 2 Carrow Works 'main street'** – a housing-led area with a lively 'main street' environment with active frontages along its length culminating in the refurbished Mustard Seed Drying building. Active frontage is critical along both side of this important route - achieved through ground floor commercial, community or other non-residential uses together with housing development which directly addresses this route. A range of housing typologies will be delivered including high density riverside apartments, maisonettes and terraced housing with scope for other innovative forms of high-density housing of all tenures. This street-based environment is a suitable location for a new local centre with an appropriate level of convenience retail floorspace together associated community uses and facilities.
- 3 Carrow Abbey** – the area centred around Carrow Abbey and Carrow House and their associated and connected historic gardens will be a housing-led area. Similar to the Carrow Works 'main street' area, this location, because of the nature of the development parcels in the vicinity of the main entrance to the site, is also considered appropriate for uses associated with a new



Fig 32 Ground floor uses of the illustrative masterplan. Note that this is the land use framework tested in the masterplan production process and illustrates only one way in which the masterplan could be delivered

local centre and has been earmarked for a cluster of community uses in the illustrative masterplan including a new primary school and healthcare provision (see Fig 36 for healthcare floorspace requirements from the HUDU model). Some limited convenience retail may be acceptable as part of mixed used development subject to retail impact studies. The format of any retail must be for a local 'walk-to' customer base. Low rise, out of centre retail formats with generous parking will not be acceptable. Carrow House is a flexible building, suitable in the short term for employment uses with future scope for conversion to other uses. Conversion of the listed former Trowse railway station building into small offices and workshops would be welcome.

4 Railway axis – the Tarmac Plant site will remain operational for the foreseeable future. Housing development is unlikely to be suitable in the immediate vicinity of this facility together with the mainline railway and water treatment works. Employment uses which can act as an environmental buffer to nearby residential developments would be the most suitable land use.

5 Pumping Station – this small cluster of heritage buildings are associated with the water treatment works. It is a sensitive area with many heritage assets. Small scale housing development infill together with community, leisure and cultural uses would be suitable.

6 May Gurney – this is a location suitable for mixed and family housing of a scale suitable for the Yare Valley setting.

7 Deal Street – This strip of land is suitable for mixed and family housing with a wonderful Broads outlook. Given the flooding constraints in this location, habitable rooms should be located on upper floors.

8 Waterfront east – suitable for higher density forms of housing with riverside apartments with a mix of types and tenures.

9 Crown Point – this part of the Utilities Site, backing on to the Crown Point Rail Depot, is suitable for employment-led uses. The ongoing operation of the rail depot will be a priority. Subject to improving access to the site, this part of the ENSRA may be appropriate for larger scale institutional or higher education uses.

10 Marina – the opportunity for a new boating marina east of the existing sub-station creates the opportunity for a discrete new mixed use quarter with a range of higher density housing and commercial / leisure uses associated with the marina.

11 Utilities east – this zone will be characterised by mixed family houses with gardens.

LU12 Residential development capacity

Whilst the masterplan set out in this SPD is illustrative, the development framework embedded within it has been tested against the headline guidance under the Regulation 19 version of GNLP Policy 7.1 which states that the site will, in the plan period, deliver in the region of 4,000 homes.

Overall, the illustrative masterplan provides capacity to deliver between 3,600 to 3,900 new homes of different forms and tenure types, with approximately 40% being houses and 60% apartments - see Fig 33.

LU13 Non-residential use strategy

The Regulation 19 version of GNLP Policy 7.1 states that the site will, in the plan period, deliver at least 6,000 jobs. The illustrative masterplan outlined in this SPD delivers over 80,000sqm of non-residential floorspace,

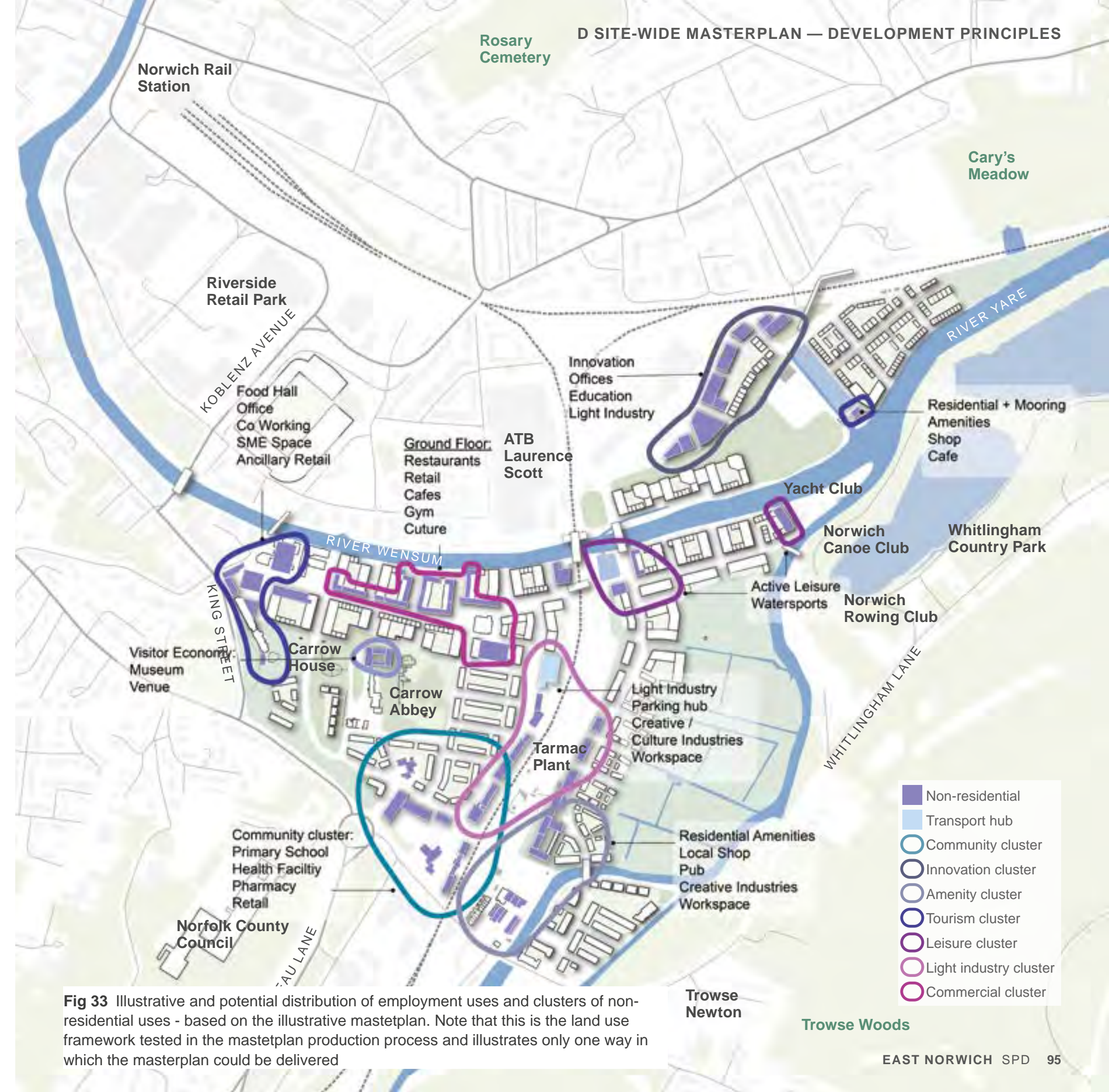


Fig 33 Illustrative and potential distribution of employment uses and clusters of non-residential uses - based on the illustrative mastetplan. Note that this is the land use framework tested in the mastetplan production process and illustrates only one way in which the masterplan could be delivered

incorporating a range of employment uses including new workspace, retail, leisure, education, community and healthcare activity. It is considered that these uses can accommodate at least 4,100 jobs.

The non-residential uses will be critical to the long-term success of the ENSRA in creating a desirable place for people to live, work and visit. A mix of vibrant uses across East Norwich will encourage people to a site that has been closed off to the public for a number of years. An important part of creating a vibrant and exciting place will be meanwhile uses that will bring life to an area before development begins and whilst it is going on.

The use mix outlined in this SPD has been developed through market analysis and engagement with the East Norwich Partnership, stakeholders and the community. Furthermore, it has been refined through engagement with landowners, partners and stakeholders during its production.

LU14 Carrow Works

The Carrow Works site provides an opportunity for a dynamic mix of non-residential uses to serve not only the new residents and employees but those visiting East Norwich. Its mix of heritage buildings and industrial character can provide a point of difference from other areas of the City.

The cluster of non-residential buildings around Carrow House and towards the river will be a gateway to East Norwich from the City and provide an interesting mix of

office, co-working, small and medium-sized enterprise (SME) space, open-plan flexible and ancillary retail space. The workspace will house growing sectors and new businesses in Norwich including, media, culture, digital and creative industries and will be supported by a vibrant Food Hall that provides space for local businesses and entrepreneurs.

The ground floor uses along the main east-west street will create a new active street providing a mix of interesting uses that connect the main employment areas on the site whilst also connecting the riverside. These uses could include:

- Traditional amenities that support residential and workspace such as a small format food store, hair and beauty salons and dry cleaners;
- Experiential leisure such as Escape Rooms, Mini Golf and other interactive games;
- An improved offering for families with young children including nursery and soft play facilities;
- Food and beverage to support the day and evening economies including, coffee shops and cafés, pubs, bars, restaurants. Furthermore, evening economy and community and commercial leisure including live music venues or locations for e-sports; and
- Health facilities including a gym and facilities such as pilates and yoga studios, cross-fit and spin class facilities, spaces for private gyms/personal training, dentist, physiotherapist, chiropractors and pharmacies.

The buildings to the east of the site, adjacent to the railway line will provide a mix of creative workspace and

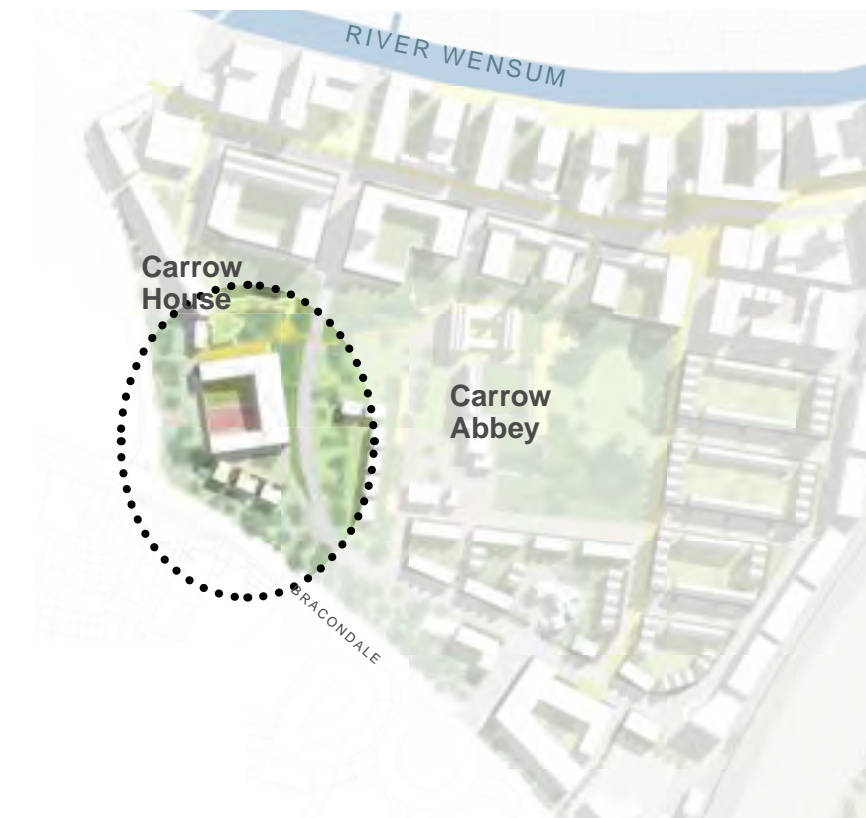
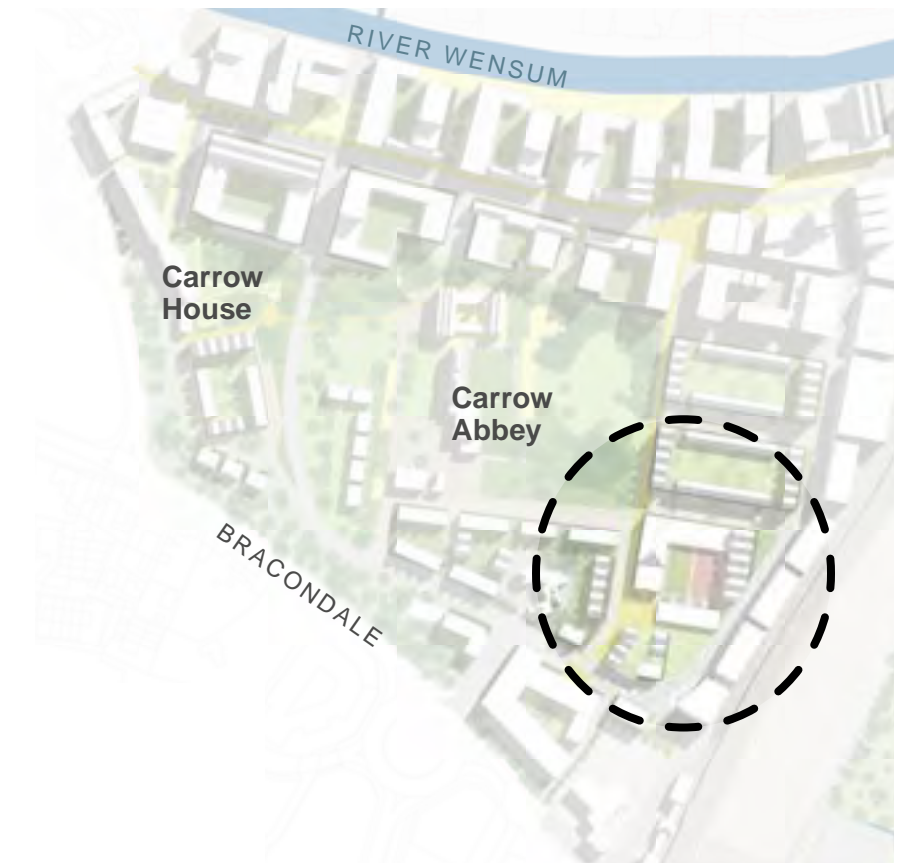
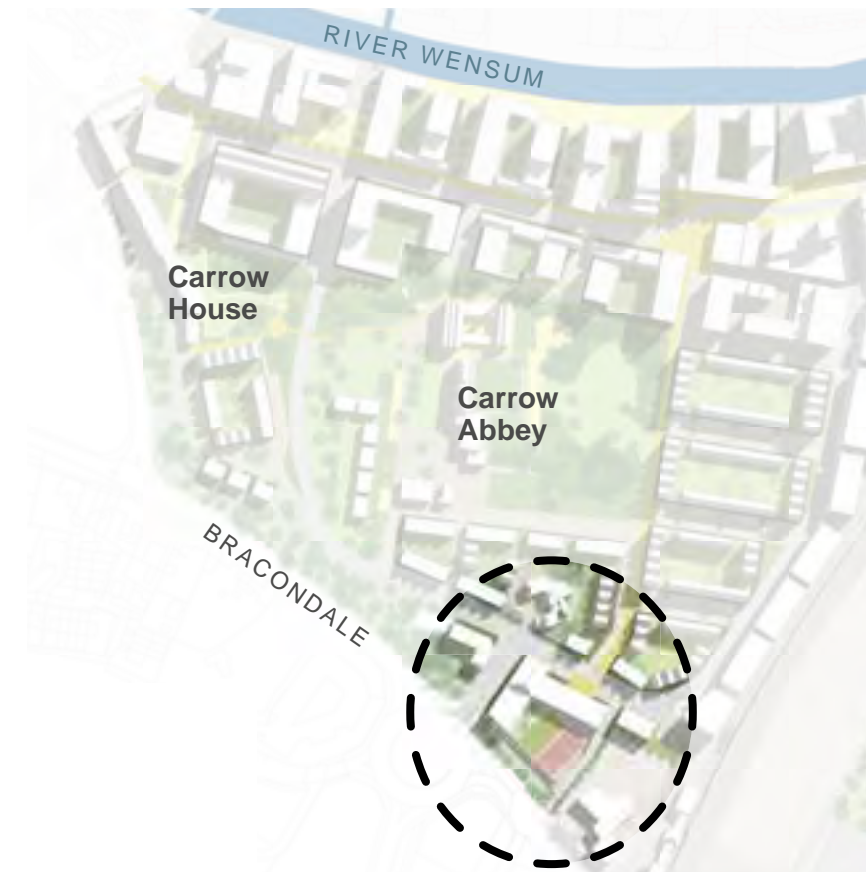


Fig 34 Masterplanning studies undertaken to explore potential locations for a 2FE primary school on the Carrow Works site. Three options are presented here but other locations may be shown to be appropriate, subject to appropriate mitigation measures associated with neighbouring or nearby uses (incl. the railway and aggregates plant in particular)

light industrial uses, which will buffer the residential uses to the west of the railway line. These spaces will provide space for light manufacturing and the production of goods.

The mixed-use cluster to the south of the site will include a two form of entry primary school, primary health facility, nursery as well as other non-residential and community facilities deemed necessary. The SPD supports mixed use development in this area with non-residential uses at ground floor and residential above, where viable.

New homes delivered on the East Norwich sites will require a range of community facilities and although the masterplan outlined in this SPD is indicative, the number of new homes will drive the need for a primary school, nursery and primary healthcare facility. Beyond the primary care there will be a need and/opportunity to integrate wider healthcare facilities from both public and private sector operators to ensure the needs of the community are met. This would most likely include dentists, physiotherapists, chiropractors, mental health specialists and pharmacies. These can be integrated into a health centre or could help to create active street frontages in appropriate locations across the masterplan area.

Further engagement, market testing and technical work is required to understand the future of Carrow Abbey. It is an important heritage asset for the City that should be celebrated with the integrity and historic character protected. Benefits for the city as a whole would come

with the Abbey and its grounds being made accessible to the public. Stewardship of this important asset and others across the ENSRA will be important and liaison with relevant stakeholders and authorities will be required to agree a management plan.

LU15 Primary school provision

Given the anticipated level of housing development and the associated population increase, with reference to the Norfolk County Council Planning Obligations Standards document February 2022, there will be a requirement for a new two form entry (2FE) primary school within the ENSRA.

The location of the school is a very important consideration. A number of options have been considered and should be further explored as detailed proposals come forward (see Fig 34). There are a number of important factors associated with the provision of a new primary school in the masterplan, including:

- The school should be a fully integrated part of the new neighbourhood, designed to encourage trips by active travel means.
- The school could make a positive contribution to the establishment of a community hub, contributing to the potential provision of a range of services to meet the everyday community and convenience needs of new and nearby existing residents.
- The locations outlined in the options are preferred because they would enable the school to more easily operate and be collocated with complementary community and other facilities.

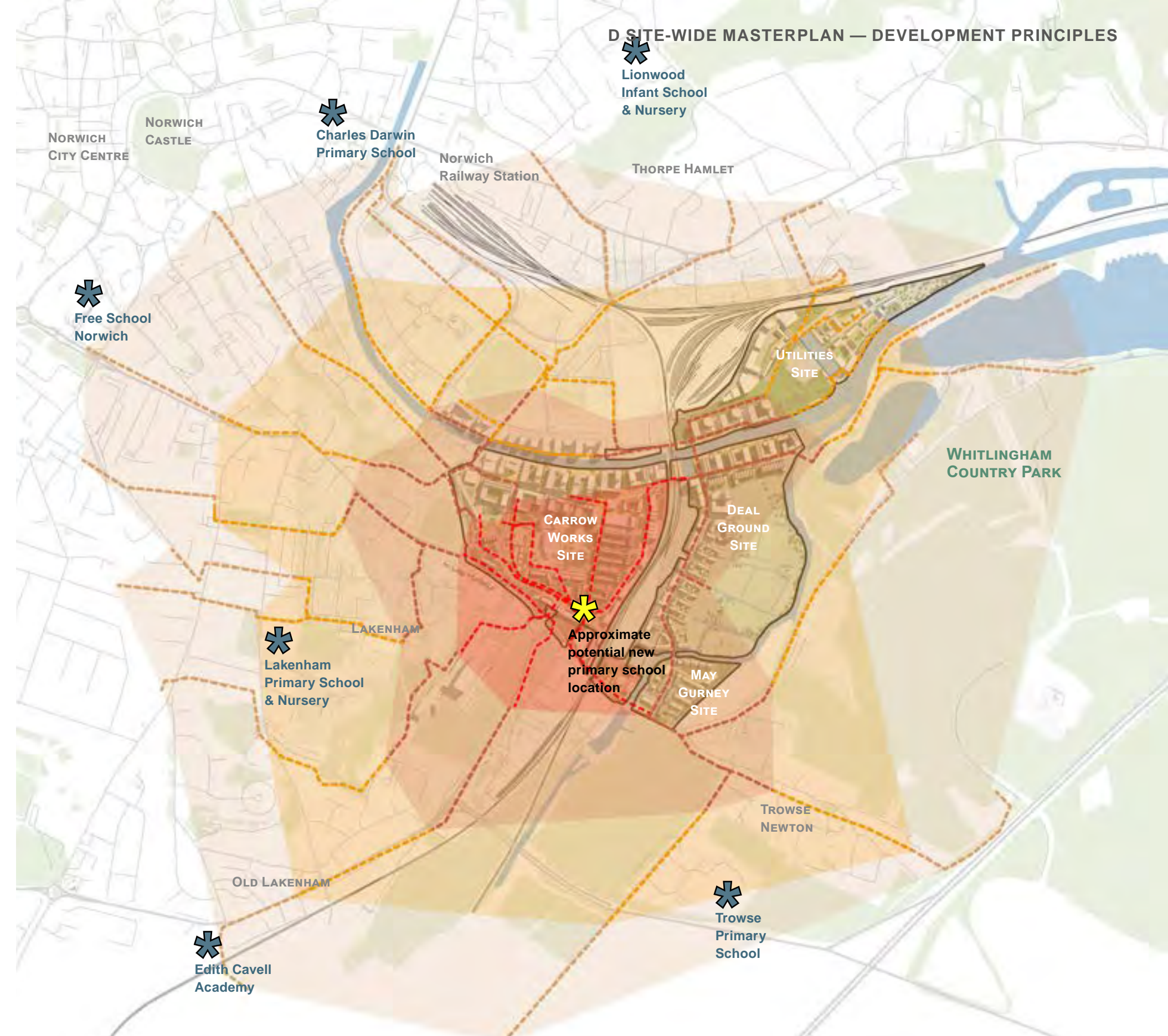


Fig 35 Estimated walking distance from potential new primary school on Carrow Works site - in increasing 5 minute bands (NB Routes based on illustrative mastetplan)



- A location in the southern part of the Carrow Works site would ensure the school was in close proximity to other parts of the ENSRA, with its catchment therefore reaching the areas of the site it will need to serve (see Fig 35).
- This location is broadly equidistant from the two nearest existing primary schools - Trowse and Lakenham Primary School are both approximately 15 minutes' walk away.
- Given the urban location, the nature of the constraints associated with the site and the need to make best use of brownfield land for a range of land uses, an urban form of school - multi-storey and potentially an integrated part of a mixed-use development - is likely to be required.
- Some location options explored raise different site-specific environment constraints. The potential impact of adjacent uses on the school will be a factor and, vice-versa, the operation of a new school should not

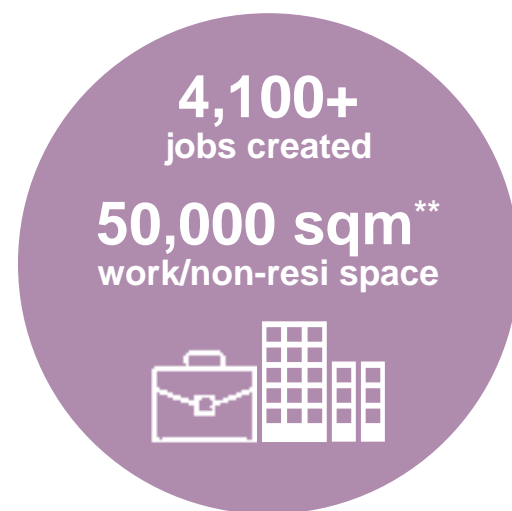
undermine the ongoing operations of other consented uses in the area. The proximity of the railway line, rail head and the Tarmac plant and their associated noise and dust issues will be important considerations.

The approximate walking catchment of a potential new primary school on the Carrow Works site, in 5 minute walking bands, is shown for information in Fig 35. The estimated walking times are based on the routes shown in the illustrative masterplan. Note that other locations may be shown to be appropriate and deliverable across the ENSRA.

LU16 Deal Ground and May Gurney

The Deal Ground and May Gurney sites will be the gateway to the Broads and the historic village of Trowse, merging the City into the countryside.

The areas to the north of the Deal Ground will provide spaces for active leisure associated with the river and



* Approximate estimate based on illustrative masterplan
** Approximate estimate of net internal area (NIA) floorspace

Examples of contemporary urban schools. From top, (i) Wyvil Primary School, Keybridge House and (ii) King's Cross Academy are both primary schools incorporated into mixed use housing developments; (iii) 'commuter parking' at King's Cross Academy; (iv) Hackney New School is an urban secondary school knitted within a constrained urban context

water. The small marina will provide day boat hire facilities and ancillary uses such as food and beverage, helping make East Norwich a destination. Next to the Yacht Club there is the potential for complimentary uses to be provided that make the most of the location on the banks of the river.

Large parts of the site are liable to flood. Flood mitigation works will be required across the site and it may be necessary to avoid habitable rooms on ground floors of new dwellings.

Areas adjacent to the Tarmac plant and railway lines will include appropriate employment uses, to buffer residential properties located elsewhere on the Deal Ground site. These uses will include a mix of creative and workspaces, light industry and education spaces. Development will need to be carefully planned, zoned, orientated and constructed to mitigate the impact of noise and odour and to take full advantage of the western outlook and environmental conditions.

The buildings to the south of the Deal Ground, to the north of the River Yare, will include local amenities to support the lower density residential development of the southern part of the Deal Ground and May Gurney sites. They will include uses associated with a small village or local centre such as a Post Office, small convenience food store and pub.

LU17 Utilities Site

The Utilities Site is currently inaccessible to the public and is located adjacent to the Greater Anglia/Network Rail depot. The site is the home of a former Power Station and still contains a number of underground and overground utilities including an electricity substation. Despite these constraints the site's location on the northern bank of the River Wensum and Yare presents a unique opportunity to re-stitch it back into the City.

The land adjacent to the Greater Anglia depot will be non-residential to ensure there is no conflict between the depot and residential. There are two scenarios that could be considered for these collection of buildings, the first of these is centred around education facility that links to the railway industry. Such as a rail education facility, in partnership with rail operators or education providers. An example of this is the Ilford Tunnelling and Underground Construction Academy (TUCA) which is a training academy located in Ilford in East London. As well as the education facility in this scenario would be light industrial and office spaces.

The second scenario of this part of the Utilities Site is dependant on the wider success of the delivery of East Norwich and the ability of the ENSRA to deliver wider infrastructure to re-stitch this site back into the City. In this scenario these buildings would provide space for a large institution such as an international employer, higher education provider or Central Government

department to locate here. Whilst market analysis has not demonstrated demand from these uses currently, there is the potential for the Utilities Site to be a desirable place to locate a large institution once wider infrastructure and landscaping has been delivered.

To the east of the Utilities Site, east of the existing sub-station, there is the potential to provide a boating marina. A new marina presents an economic opportunity for the City to attract new visitors and would act as a destination in its own right, and a gateway to both the city and the Broads. Uses such as residential and food and beverage would benefit from being located adjacent to a marina and additional value generated by this unique feature.

Not only would a marina provide real benefits to the city, but it would serve as a compensatory measure in the event that bridges over the River Wensum are required to be in a fixed position. Fixing of the bridges would result in larger vessels no longer able to navigate the Wensum into the Port of Norwich, which is protected by an Act of Parliament from 1827. A marina would act as a mooring point for those larger vessels and mitigate the loss of direct access into the Port.

Net Population Gain (net new population occupying the development)

	Total
Total	5,295

Floorspace Outputs

Annual floorspace requirements by type of healthcare provision (square metres)

Acute Healthcare Provision	Total
Total Acute Floorspace	376.18
Mental Healthcare Provision	Total
Total Mental Health Floorspace	55.37
Intermediate Healthcare Provision	Total
Total Intermediate Care Floorspace	103.22
Primary & Community Healthcare Provision	Total
Total Primary & Community Care Floorspace	459.36

Fig 36 Results of the HUDU model which calculate the floorspace requirements for healthcare services associated with the projected population increased in the ENSRA based on the development capacities of the illustrative masterplan. Note that this model does not take into account the possibility of any existing latent capacity in existing nearby facilities

14 BUILDING HEIGHT PRINCIPLES

Relevant City Council planning policies:
DM3, GNLP 7.1

14.1 Context

The ENSRA presents a starkly contrasting set of environments and opportunities. This brownfield regeneration area is both a city regeneration opportunity but also will form a new threshold between city and country. The site has both urban and rural characteristics. This context combined with the need to protect and enhance the setting of important heritage assets primarily associated with the Carrow Works site and the opportunity to improve and expand the city's river-front gives rise for the need for a carefully crafted and responsive townscape response.

14.2 Building height principles

The following principles relate to density and building heights for new development across the ENSRA:

BH1 General massing distribution – massing of new development across the ENSRA should respond positively to its context, taking account of the following opportunities and characteristics:

- a The setting of heritage assets will be a primary consideration in determining the heights and scale of new development.
- b Further, the area around and between Carrow Abbey, Carrow House and their gardens will be an area where new development should be more modest in scale.

- c The Wensum waterfront presents opportunities to maximise development potential whilst taking account of the potential impact of local views to/from key ENSRA heritage assets and the historic city core.
- d The threshold with the Broads calls for development of more modest scale at this urban/rural threshold. The landscape character of the Broads and their setting is a key consideration as reflected in their [Landscape Character Assessment](#).
- e Some parts of the site are considered to be more sensitive to potentially adverse impacts of taller buildings. These sensitivities are associated with townscape issues including the setting of heritage assets, the relationship of the site to the open character of the Broads and the potential impact of new development on views towards both the city and the Broads. An assessment of potential relative sensitivity to the adverse impact of building heights and a strategy guidance on anticipated typical building height ranges are outlined in Fig 37 and Fig 38 respectively. The heights ranges outlined is guidance. Development proposals within or outside of this guidance will need to be supported by appropriate evidence such as massing and view studies and Townscape and Visual Impact Assessments.

BH2 Setting of Carrow Abbey – key massing principles include:

- a This is a highly sensitive location in terms of building heights. The height of new developments in this zone would typically be between 1 and 3 storeys.



Fig 37 Given the heritage assets and Broads context, the whole of the ENSRA is sensitive to potentially adverse townscape impacts of new development - although some areas are, relatively, more sensitive than others. This plan outlines a qualitative assessment of relative levels of sensitivity across the ENSRA

- b Whilst making the best and most efficient use of land, the massing of new development will need to respond positively to its context to ensure the character and qualities of the Abbey grounds and wider setting of the Abbey is protected and enhanced.
- c The setting of Carrow Abbey and the scheduled monument of the Priory is primarily formed by formal landscape and mature trees. The factory buildings to the east do not contribute positively although their roof-lines do not generally rise above the tree-line. The mature trees in the Abbey grounds should continue to be the most prominent feature in establishing the setting of the Abbey. They should continue to mask the majority of new development in adjacent areas.
- d Redevelopment of the long existing factory buildings to the east has some sensitivity should present breaks in this development frontage to ensure this development line does not dominate. A sequence of short terraces with setbacks and variation in elevation and roof forms will help to achieve this. New development would typically range from 2 to 6 storeys in this location.
- e To the north, beyond any building frontage directly addressing the Carrow Abbey site, sensitivities are relatively low. The drop in level to the north helps to contribute to the Abbey's peaceful isolation. The brick chimney provides a visual and historic connection to the site's industrial past. Massing of new development to the north should be articulated to ensure a sense of landscape and openness is retained, with heights typically ranging from 3 to 10 storeys across this zone.

- f The flank walls and gable ends of new development blocks will ensure that this northern threshold of the Abbey grounds does not have an overbearing effect.
 - g The existing silo building north-east of the Abbey rises significantly above the tree-line of the Abbey grounds. Redevelopment of the silo building will improve the setting of the Abbey.
- BH3 The Waterfront – key massing principles include:**
- a This is an area of lower sensitive location in terms of building heights. The height of new developments in this zone would typically range from between 3 and 10 storeys.
 - b The robust and urban 'bricky' character of the existing warehouses on the Carrow Works Wensum waterfront provide the context for an extension of this urban waterfront extending across the length of Carrow Works, the Deal Ground and the western side of the Utilities site.
 - c Heights along this waterfront condition should create a strong urban edge to the waterside, with opportunities for taller elements at appropriate locations.
 - d There may need to be some transition and stepping down in heights from across the northern part of the Carrow Works site between waterside buildings and those closest to Carrow Abbey.
 - e The areas either side of the Trowse Bridge are likely to be the most appropriate locations for maximum heights given the urban context of this location and the limited contribution development here will have on the setting of heritage assets.

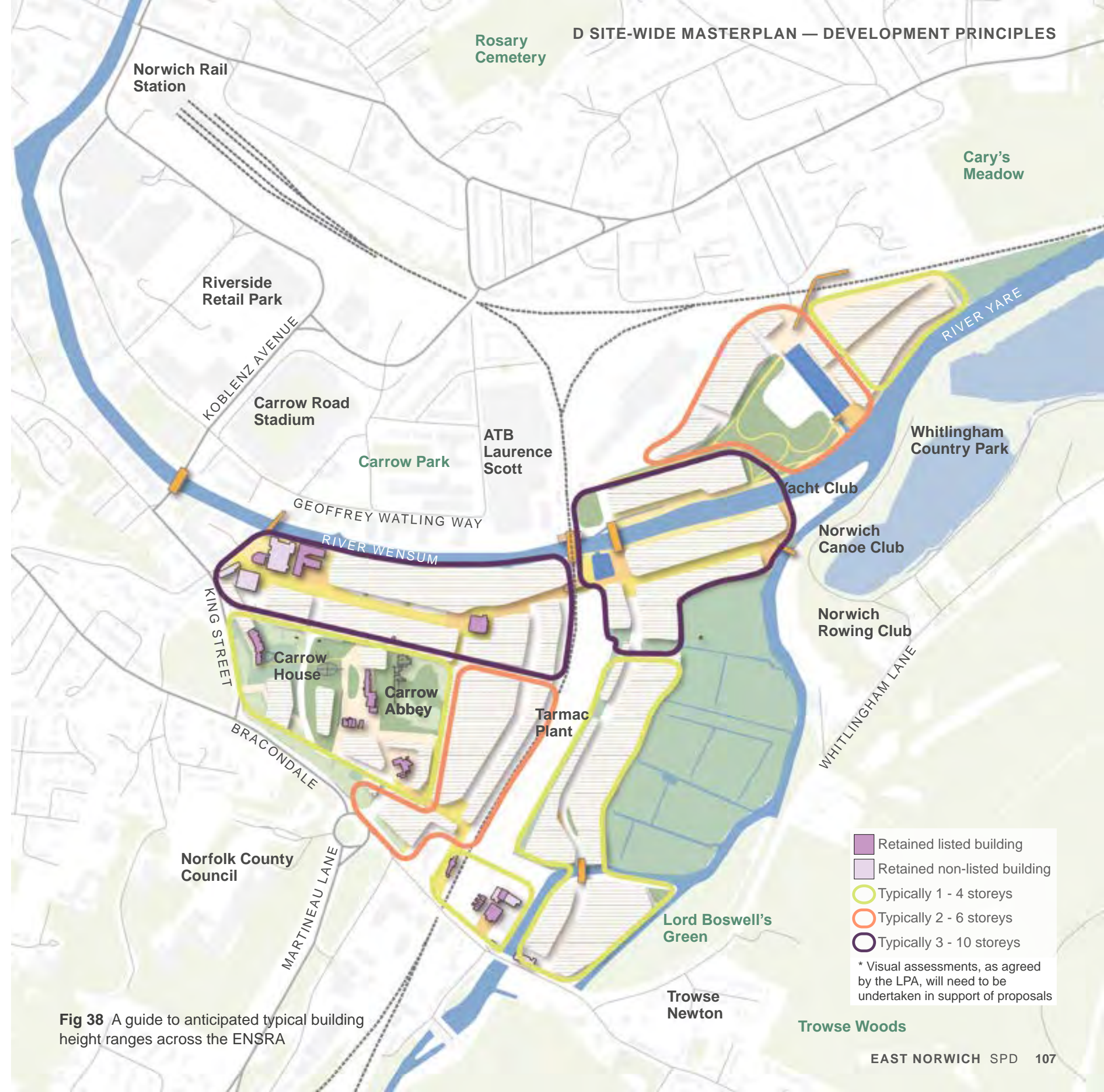


Fig 38 A guide to anticipated typical building height ranges across the ENSRA

BH4 Rural/Broads threshold – the eastern extents of the ENSRA for a new threshold between the city and the countryside. These tend to be locations sensitive to taller buildings and new development in these locations would typically be between 1 and four storeys. New development here should be of a more traditional, housing-based scale. Zones where this principle applies include:

- a The May Gurney site where development will both affect the setting of the Grade I listed St Andrew’s Church, Trowse Newton conservation area and the Broads as the site sits within the valley of the River Yare.
- b The area immediately west of the County Wildlife Site on the Deal Ground site given this will form an important new city/rural threshold.
- c The eastern end of the Utilities site given its location within the Broads.

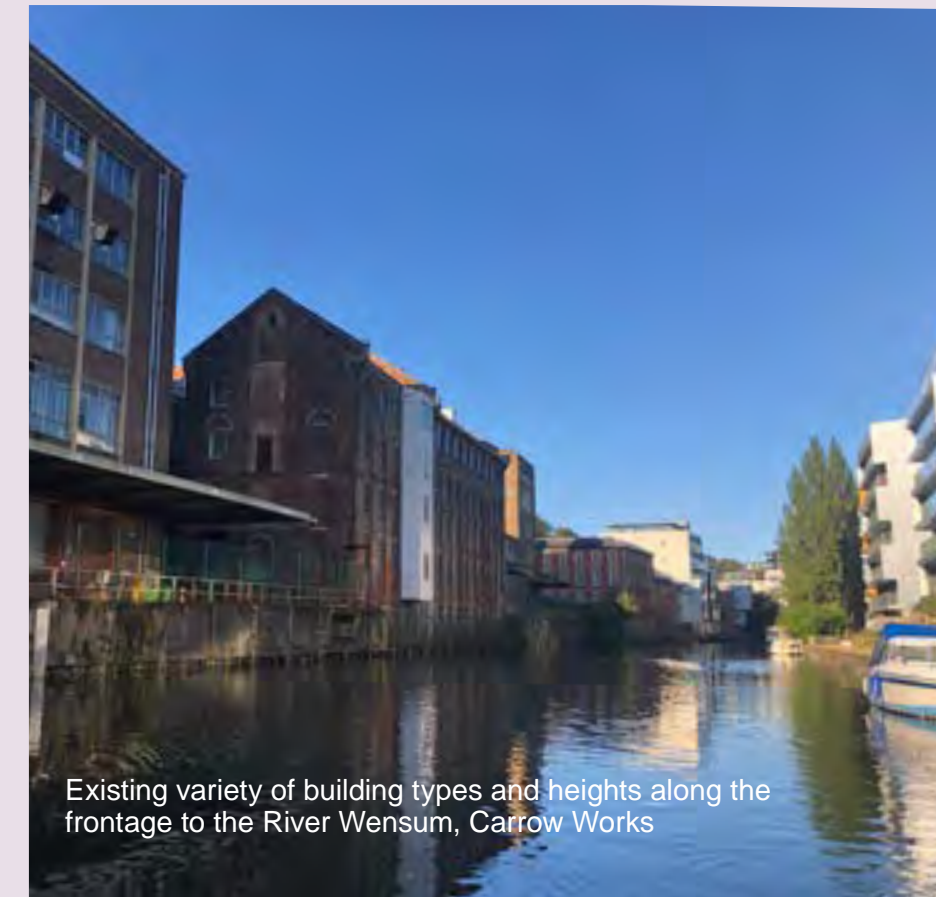
BH5 Views – whilst development is unlikely to directly impact views identified in the Local Plan, views from the Broads into the city should be considered carefully. Planning applications should be supported by studies of views to be agreed with the Local Planning Authorities, to demonstrate the proposed massing and form of development is contextually appropriate and would not adversely affect the setting of heritage assets or the Broads.



Developed incrementally, the massing of existing buildings on the Carrow Works site creates a robust and urban character



Existing buildings on the pumping station site



Existing variety of building types and heights along the frontage to the River Wensum, Carrow Works



Looking north from the grounds of Carrow Abbey where some of the former industrial buildings are visible through the trees

15 HEAT AND ENERGY STRATEGY

Relevant City Council planning policies:
DM4, JCS 1, JCS 3, GNLP Climate Change Statement, GNLP 2, GNLP 4

15.1 Introduction

The ENSRA, one of the largest brownfield regeneration projects in the east of England, presents a unique opportunity for innovative, low carbon, best practice solutions. These solutions will benefit the whole of the area and potentially beyond.

All the relevant Council's have policies on climate change which are relevant. Norwich City Council declared and passed a climate emergency motion in October 2019 and aims to achieve carbon neutrality before 2050, continuing their carbon reduction journey which began in 2008. The Broads Authority have also declared a climate emergency.

Norwich City Council have produced their Environmental Strategy 2020-2025, including policy which sets out the following commitments:

- Reduction in CO2 from council operations to achieve net zero by 2030.
- Per capita reduction in CO2 emissions to achieve net zero by 2050.

Specifically in relation to the East Norwich Strategic Regeneration Area, Policy 7.1 states “providing for sustainable energy generation, including a local network serving the area as a whole”.

In recent years the Government has published a number of policy documents aimed at meeting their targets of 78% reduction in carbon emissions, compared to 1990 levels, by 2035 and net zero by 2050.

The following list are just some of the recent Government publications that have been published as instruments to assist in achieving these targets:

- The Amendment Regulations and Approved Documents Part L1 and L2 (2021, coming into force June 2022). These regulations will require homes to produce 31% less carbon emissions and non-domestic buildings 27% less carbon, compared to current levels.
- The Future Homes and Buildings Standard (consultations took place in 2021, standard to be introduced in 2025). These regulations, when introduced, are expected to require the following:
 - 75-80% reduction in CO2 emissions compared to current levels.
 - Homes to be non-reliant on fossil fuels, effectively ruling out natural gas and oil heating.
 - Greater energy-efficiency in fabric.
- Electric Vehicles (Smart Charge Points) Regulations 2021 (consultations took place in 2021, publication awaited, coming into force in 2022). Note that Norfolk County Council have also published their Norfolk EV strategy, October 2021.

- Approved Document Part S - Infrastructure for charging electric vehicles.

In addition, the Government has available a number of grant and funding schemes to promote the uptake of low and zero carbon technologies:

- HNIP (Heat Networks Investment Project)
- RHI (Renewable Heat Incentive)

Built Environment organisations, RIBA, UKGBC and LETI, have released publications supporting the governments ambitions and providing, perhaps, greater detail and wider influences to consider in reducing carbon emissions:

- RIBA 2030 Climate Challenge Version 2.
- LETI Client Guide for Net Zero Carbon Buildings.
- LETI Climate Emergency Design Guide.
- UKGBC - Net Zero Carbon Buildings: A Framework.

15.2 Primary objectives

The four land parcels forming the ENSRA offer opportunities for low and zero carbon technologies to be utilised to power and heat new residential and commercial developments.

The integration of solar PV panels to new and existing buildings and the use of water source and other forms of heat pumps for heating and hot water is likely to be adopted throughout the development to reduce carbon emissions. The interaction between technologies such as water source systems and geothermal with the

conservation designations and in particular the County Wildlife Site should be explored. The following features of the land parcels provide the opportunity to integrate solar PV and heat pumps into systems that can serve communities and the wider development:

15.2.1 Heat and energy principles - all sites

HE1 Developers will be expected to demonstrate how a low carbon solution can be provided through early discussions with neighbouring landowners, with consideration given to phasing of development.

15.2.2 Carrow Works site

HE2 Close proximity to water courses and existing boreholes can be utilised for local heating systems/networks.

HE3 Existing electrical infrastructure can be utilised with battery energy storage systems (BESS) and solar PV.

15.2.3 Deal Ground

HE4 Close proximity to water courses and low water table offer similar opportunities for local heating systems/networks subject to ecological assessment.

HE5 Extra High Voltage buried cabling enables relative ease of adding of substation/s for BESS and solar PV.

15.2.4 Utilities Site

HE6 Close proximity to water courses offer opportunities for local heating systems/networks.

HE7 The presence of a large electrical substation offers great opportunities for integration of BESS and solar PV.



HE8 Potential for existing Medium Pressure and Intermediate Pressure gas mains to be utilised for hydrogen gas in future.

15.2.5 **May Gurney**

HE9 Close proximity to water courses offer opportunities for local heating systems/networks.

HE10 Close proximity to a large electrical substation offers great opportunities for integration of BESS and solar PV.

15.3 **Principles for energy generation and heat networks**

Collectively the Government regulations and industry publications indicate the potential for “net zero carbon” for new build development by 2030. This should be the minimum target. Norwich City Council is taking part in a Heat Network Zone pilot project run by BEIS and this may provide opportunities for feasibility work to be undertaken. To achieve this, collaboration of all land owners and developers will be required to fully exploit the opportunities:

HE11 The commitment to, and adoption of, shared heat networks, microgrids and on-site generation and electrical storage including sharing of feasibility study and specialist design costs.

HE12 All buildings, residential and non-residential, to be designed to use the heat and energy networks.

HE13 Heat and energy networks designed to expand to suit the phased development.

HE14 Creation of new, or partnership with, DSO’s (distribution system operators), ESCO’s (energy supply companies), and similar, to build, manage and maintain heat and energy networks for the benefit of all parts of the development.

15.4 **Heat networks**

15.4.1 **Deep Geothermal**

HE15 A deep geothermal well has the potential to serve the entire development with heat and cooling. Typically, a deep geothermal well comprises one or a series of deep (up to 5km) boreholes tapping into the natural occurring 150°C heat at this depth. The well head, when completed and operational, occupies an area of approximately 10m x 10m. However, the views of the Environment Agency/Anglian Water on potential drinking water impacts would need to be sought given the aquifer which Norwich sits on.

HE16 An energy centre, comprising pipework connections, heat exchangers, pumps and control equipment, would distribute the heat and cooling via district network pipelines. A deep geothermal specialist would drill and construct the well and an ESCO would be employed to build, manage and maintain the energy centre and district heat network. Homes and businesses would be fitted with heat meters.

15.4.2 **Water Source Systems**

HE17 Due to the rapid de-carbonisation of the electricity grid, electrification of heat now provides a plausible pathway to net zero emission new buildings. Water



Fig 39 How the illustrative masterplan has worked with and taken account of the alignment of existing underground infrastructure - with the objective being to minimise necessary diversions given associated expense

source heat pump systems use the near constant temperature of lakes, rivers and the suchlike, to generate low temperature heat via the refrigeration cycle at efficiencies of 300-600%. A number of different systems exist:

- **Open loop (Fig 40)** - Intakes and return sources are separated. Rivers, aquifers and flooded boreholes or a combination of these connected to an energy centre/s comprising heat pumps, heat exchangers, pumps and controls and distribution pipework. Heating systems typically need to be underfloor type or larger radiators to suit the lower temperature of the system.
- **Shared ground loop arrays (Fig 41)** - similar to open loop, ambient water is distributed to each home/building which has a heat pump to convert this to a higher temperature.
- **5G Ambient Loop (Fig 42)** - Ambient loop or 'fifth generation' (5G) district heat networks provide heating or cooling to connected buildings via a pipework loop held at ambient temperatures. The network facilitates the delivery of low-cost and low-carbon heating or cooling where energy can be extracted or rejected to a common loop, enabling the 'sharing' of energy between buildings when there is a simultaneous demand for heating and cooling.

Each building uses a water source heat pump which is connected to the ambient loop network. Any imbalance in heating and cooling loads is resolved by central energy sources (ASHP, GSHP, waste heat, seasonal thermal storage).

On a site which requires both cooling and heating demand, this network provides higher efficiencies than a conventional air or water source system since there is a large potential for sharing waste heat/cooling to where it is needed.

15.4.3 **Electrical generation and storage**

HE18 Battery Energy Storage (BESS, Solar PV)

Large scale battery energy storage is suited to locations close to utility company high voltage networks and can be incorporated into the electrical infrastructure either "in front of the meter" as part of the utility company's/DSO's assets or "behind the meter", owned and operated by an ESCo.

Combining BESS with solar PV maximises the use of power generated on-site and excess generated power can be sold to the "grid". Additionally, grid supplied lower cost electricity can be stored at night and delivered to the development, or sold back to grid, at peak times to reduce carbon, peak demand and energy bills.

HE19 Microgrids (Fig 43)

Similar to above arrangement but typically serving groups of dwellings and businesses with a single grid point-of-connection (POC) with all generation (including rooftop PV), supply and metering owned by, and connected directly into, the microgrid with its associated digital infrastructure and smart controls system. It is the smart controls that enables forecasting to be carried out to optimise when to produce, consume, store or sell energy based on the flexibility of batteries, EVs, and site loads connected to the microgrid. It can also perform use-cases such as tariff management and metering and billing for the site.

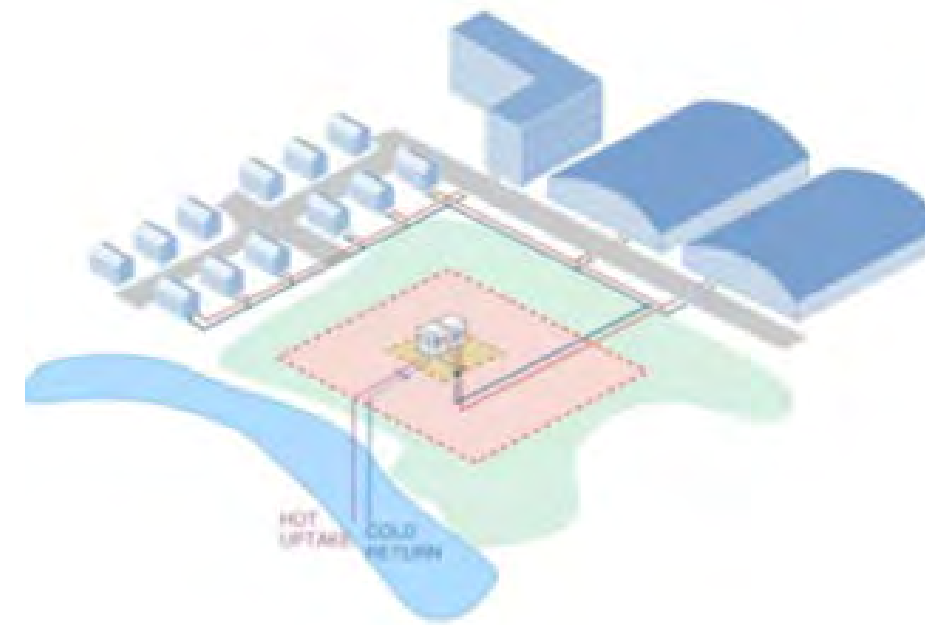


Fig 40 Open loop water source system

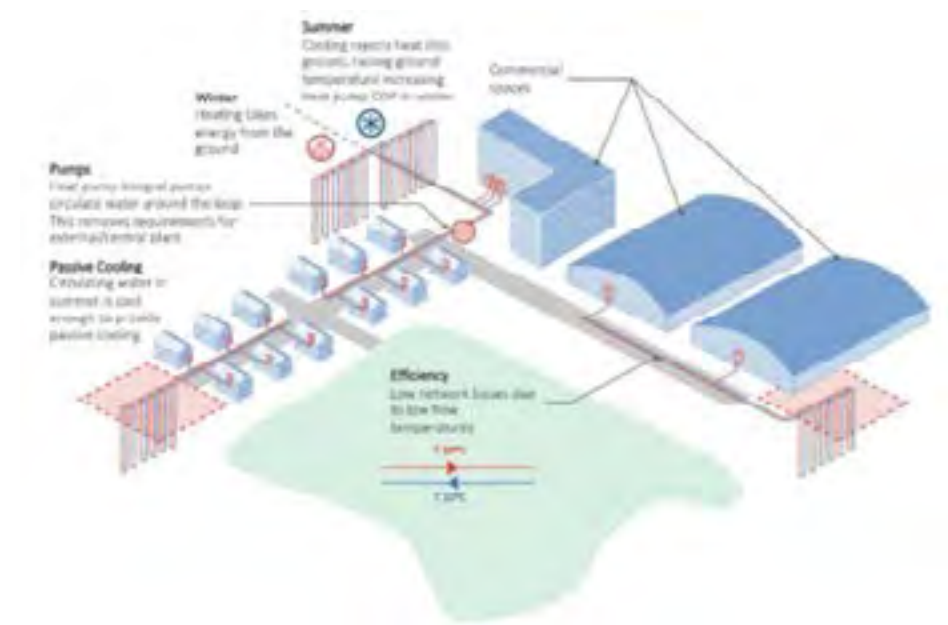


Fig 41 Shared Ground Loop Arrays



Fig 42 5G Ambient Loop District Heat Network

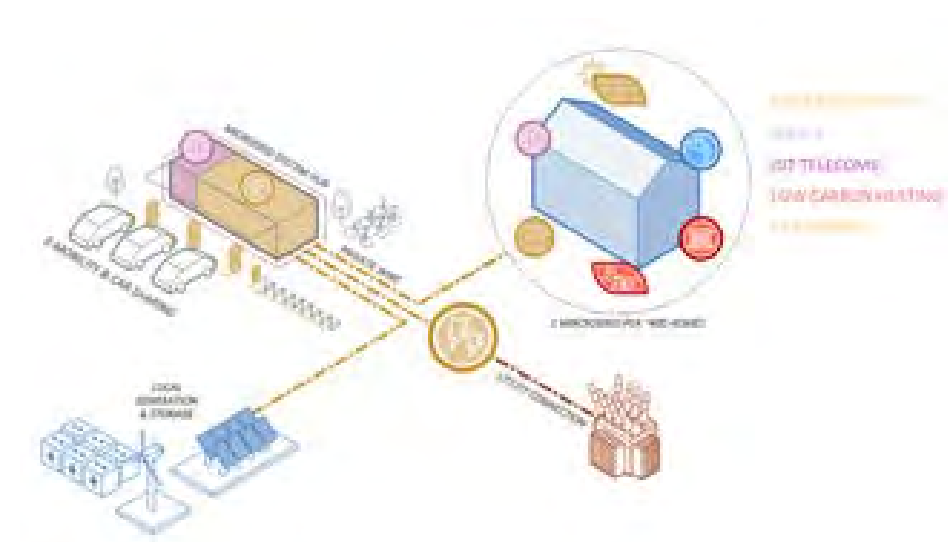


Fig 43 Microgrid

16 INFRASTRUCTURE DELIVERY PLAN

16.1 Introduction

To support the preparation of the SPD and to understand the investment needed to unlock the East Norwich opportunity an Infrastructure Delivery Plan (IDP) has been prepared.

Drawing on a range of technical analysis and assessments that support the SPD the IDP:

- Establishes the key infrastructure that is needed to deliver the East Norwich vision,
- Provides high level cost estimates for that infrastructure,
- Identifies when particular infrastructure is needed to unlock delivery,
- Considers where the full range of benefits of that infrastructure will be experienced, and
- Considers how items could be funded as part of a coordinated delivery approach.

16.2 Infrastructure needs

The development of the SPD has led to a number of key infrastructure items being identified as required to be delivered in order to deliver a sustainable new community in East Norwich.

The IDP brings these needs together under the following themes:

Relevant City Council planning policies:
GNLP2 & 3, DM5, DM8, DM30, DM33

- **Accessibility** – which captures river crossings, upgraded and new pedestrian and cycle routes, sustainable transport, highway improvements and public transport;
- **Education and community** – a new two form entry primary school;
- **Flood management**
- **Environment and open space** – which captures low carbon energy, open space, play space, landscaping and ecology;
- **River and Broads** – facilities for pleasure boats; and
- **Other enabling works** – which captures demolition, reclamation and site services.

The IDP focuses solely on infrastructure that is specific to the delivery of the ENSRA vision, however it is recognised there are a wider set of infrastructure requirements across physical, social, health and community activity that will also need to form part of the East Norwich delivery. A number of these are identified in the GNLP and summarised in Appendix 5 of this SPD. It is assumed development will be liable for both Section 106 and Community Infrastructure Levy (and potentially other contributions) to fund these both locally and across the wider Greater Norwich Area.

- A number of interventions could be funded through this approach, such as:



Fig 44 Essential on-site infrastructure (NB does not show any required off-site infrastructure requirements)

Table 1.1 ENSRA Infrastructure requirements

	ITEM	PURPOSE
ACCESSIBILITY		
A1	New all modes bridge for cars, pedestrians and cycles across the River Wensum	Provide access to/from the Utilities site from the Deal Ground and new connections to other areas north of the Wensum.
A2	New pedestrian / cycle bridge across the River Wensum	Provide connections between Geoffrey Watling Way/ Football Ground and East Norwich sites
A3	New all modes bridge for cars, pedestrians and cycles across the River Yare	Provide access to/from the Deal Ground and Utilities site
A4	New pedestrian / cycle bridge across the River Yare	Provide access to/from Whittingham Country Park and the Broads and create new high quality strategic cycle route
A5	Improvement to existing underpass for pedestrians and cycles	Provide connection between Carrow Works and Deal Ground under the railway line and create new high quality strategic walk/cycle route
A6	Upgrades to existing pedestrian / cycle routes within Carrow Works	Provide cycle/pedestrian access to/from all parts of the Carrow Works site that link to strategic route
A7	Provision of pedestrian and cycle routes through the May Gurney, Deal Ground and Utilities	Provide cycle/pedestrian access to/from all parts of the these sites that link to strategic route
A8	Contributions to support bus services through the Carrow Works site	To provide bus stops and associated infrastructure to promote public transport usage
A9	Infrastructure to support e-bike hire, e-car-hire scheme and e-car charging	To provide infrastructure to promote low carbon transport modes
A10	Upgrading of primary route through Carrow Works	To provide vehicular access to all development plots within the site

	ITEM	PURPOSE
A11	New vehicular routes within the May Gurney, Deal Ground and Utilities Sites	To provide vehicular access to all development plots within the site
A12	Remodelling of existing vehicular access from A147/ A1054 roundabout to Carrow Works	Allowance for improvement to 'County Hall' roundabout to improve access to Carrow Works for all modes
A13	New vehicular access at point of existing access from A147 into Carrow Works	To provide secondary access to Carrow Works for all modes
A14	Remodelling existing vehicular access from Bracondale into the May Gurney site	To provide primary access point for May Gurney, Deal Ground and Utilities Sites
A15	Allowance for other works to estate roads within the sites	To provide improved estate roads including drainage, planting, lighting
A16	Off-site Highways & Associated Works	Allowance for upgrades to the wider road network to manage any transport impacts
EDUCATION AND COMMUNITY		
EC1	2FE Primary School	To meet the additional primary education needs associated with an increased local population
EC2	Healthcare and community provision	Ensure capacity of local healthcare and community facilities are increased to provided for needs from population increase the design principles outline'
FLOOD MANAGEMENT		
FM1	Low level riverside walk along banks of the River Wensum	To provide flood mitigation for Deal Ground, May Gurney and Utilities sites
ENVIRONMENT AND OPEN SPACE		
EOS1	Site wide low carbon/zero carbon heating and power network.	To provide net zero energy and utilities provision within East Norwich within new developments

	ITEM	PURPOSE
EOS2	Local public open and child play space as required	To provide appropriate levels of open and play space for residents within East Norwich
EOS3	Ecology and Archaeology	Allowance for provision of specific interventions that may be needed to address archaeological/ecological issues on site
EOS4	Site-wide landscaping and public realm	Allowance for public realm treatment to deliver a high quality environment
RIVER AND BROADS		
RB1	Small leisure Marina	To provide small marina for day boats, canoes, SUP etc.
RB2	Large boating Marina	To provide large boating marina for overnight stays, boat hire etc.
OTHER ENABLING WORKS		
OE1	Demolition and Alteration Works	Allowances for utilities disconnection, asbestos removal, building demolition and removal of hard standings etc.
OE2	Reclamation and Earthworks	Allowance to cover remediation, decontamination etc.
OE3	Off-site and On-site Services	Allowance to cover utilities connection costs and for bringing services into the site to a fixed point
OE4	Other Off-site and On-site Drainage	Allowance to cater for surface water management, including SUDS, within development plots etc.

- Highways adoption and maintenance
- Improvements to the County Wildlife Site
- Contributions for any increase emergency services provision
- Contributions to social services, adult education, libraries etc..

Further, the GNLP is supported by a Green Infrastructure Recreational Avoidance and Mitigation Study (GI RAMS), which has led to a specific contribution mechanism being adopted to fund compensatory investment in Greater Norwich's sensitive green spaces. This will apply to development at East Norwich and has been included in the viability assessment.

Outside of these arrangements costs for the delivery of physical spaces for the likes of healthcare, community facilities, early years provision etc.. are incorporated within the SPD's viability assessment via the development build costs.

16.3 Approach to river crossings

At this point discussions around the nature of river crossings required at East Norwich are ongoing, and will only be resolved as part of continued review and agreement between key stakeholders including the Broads Authority, the City Council, Network Rail and the County Council (as a minimum).

The future approach will need to be based on a pragmatic approach to balancing the navigational needs of the city and the opportunity to deliver the regeneration of the East Norwich area. All parties are collaborating on an approach to decision making, approvals and time-scales to review the future provision of bridges.



Within the SPD the East Norwich Partnership has agreed to assume all bridges within East Norwich are ‘fixed’ in order to allow a clear set of viability assessments and infrastructure costing to be established. From a masterplan perspective it is possible to accommodate opening or fixed bridges within the framework designed without an impact on the overall approach to development or levels of residential/employment space. The main impact of providing opening bridges would be on the cost of delivery, there would also most likely be an impact on delivery time-frames.

16.4 Requirements and benefits

The IDP provides an assessment of both the driver of need for each piece of infrastructure and the scale at which any benefit from its delivery would be experienced. A specific assessment has been made for each infrastructure item, but broadly the balance is:

16.4.1 Planning needs

- Items that deliver the integrated and sustainable vision set out in the GNLP
- These items tend to have the widest benefit, creating positive impacts for individual sites in East Norwich, East Norwich as a whole and the wider city/sub-region.
- Example interventions include:
 - Pedestrian/cycle crossings to Whitlingham and Geoffrey Watling Way
 - E-Cycle/E-Vehicle hire infrastructure
 - Lowered riverside walk areas

- Zero carbon utilities
- Boating marinas

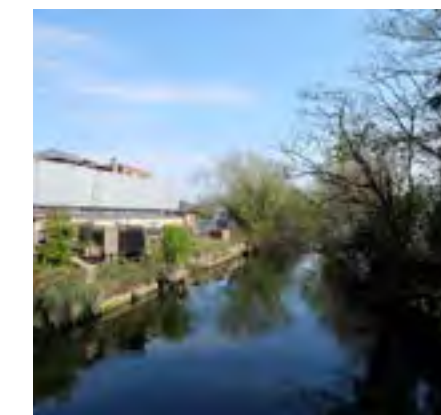
16.4.2 Key Infrastructure

- Items that deliver key infrastructure to unlock development delivery.
- These items tend to have primary benefits within specific sites and East Norwich as a whole, with lower benefits for the wider area.
- Example interventions include:
 - All modes bridges across the Wensum and Yare
 - Bus servicing
 - Junction upgrades
 - Primary school

16.4.3 Development Specific

- Items that are part of the development process but, given the nature of the sites, are likely to be of a higher order than ‘standard’ development sites in the city.
- These items have a main benefit for a specific site, with limited wider benefit created.
- Examples include:
 - Public open and child play space
 - Demolition works
 - On-site and off-site services

It is this assessment of requirement drivers and benefits that informs the approach to delivery and funding, set out later in the SPD.



17 WATER, FLOOD RISK AND MITIGATION STRATEGY

17.1 Summary of the ENSRA's flood risk

The north western corner of the Deal Ground is shown as being at 'high risk' and within Flood Zone 3.

As shown in Fig 45, an area of Flood Zone 3 extends along the northern boundary of the Deal Ground and along the frontage of the River Wensum.

The eastern and south eastern sections of the Deal Ground are shown as being within Flood Zone 3. On review (and not shown in Fig 45) this area of Flood Zone 3 predominantly affects the lower lying areas.

Large areas identified as residential development opportunities in the illustrative masterplan within the Deal Ground are shown as being within Flood Zone 2 and at 'medium' risk of fluvial flooding.

Large areas (almost the majority) of Utilities Site are shown as being within Flood Zone 2.

17.2 Water management strategy

Given the identified risk and following discussions with the Environment Agency, a number of measures have been investigated in order to 'manage' the flood risk through the site. Each of the options have been

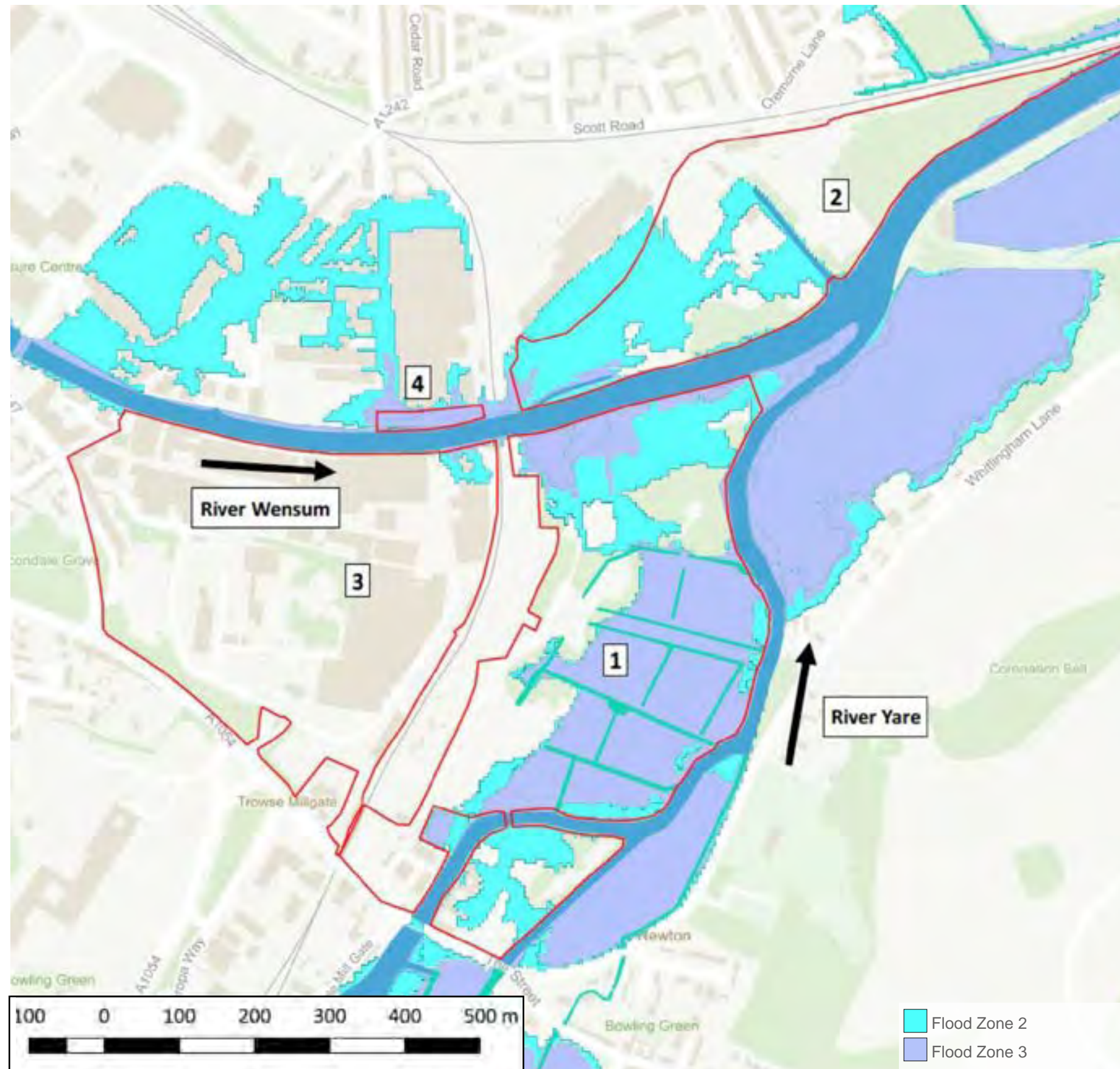


Fig 45 Flood map for planning - this is an updated and more accurate assessment of existing flood risk across the ENSRA following recent modelling work



Fig 46 Ground raising compensatory storage areas to enable masterplan delivery



Fig 47 1 in 20-year flood extent with post development mitigation in place

modelled in detail and the following measures are put forward as potential measures to manage flood risk across the ENSRA:

- w1 Lowering of river frontage** - 10m wide corridor to be lowered to provide a 'blue corridor' whilst also providing amenity space.
- w2 Installation of marinas** - these are to be areas of new marinas achieved through ground lowering. These areas have been set to provide a conservatively low volume of storage to make an allowance for existing constraints such as groundwater levels.
- w3 Raising of development parcels (for 100yr+CC events only)** - it is proposed for development parcels to be raised to a level of 2m AOD. This sets the development at a level of 300mm above the predicted flood level and in line with typical EA guidance. See Fig 46.
- w4 Compensation storage provided through lowering of areas to the north of the CWS** - this area has been modelled to be at a level of 1.1m AOD to ensure it freely drains back to the River Yare - see Fig 47.

All of the above measures have been modelled in detail and the outputs have demonstrated that such measures have managed the flood risk through the site such that the proposals can come forward in line with policy with respect to fluvial flooding but, and critically, resulting in no increase in flood risk to third party land.



Bath North Quay before development



Artist impression of Bath North Quay riverside improvements



Bath North Quay after development



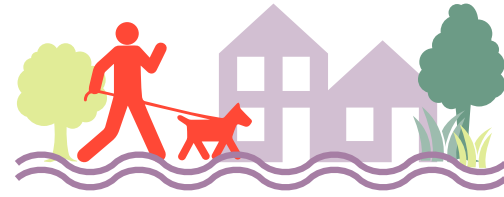
Bath Riverside



CHARACTER AREAS — DESIGN PRINCIPLES



18 CHARACTER AREAS



18.2.1 Introduction

This section of the SPD will describe in more detail the various places and neighbourhoods – character areas – that delivery of the ENSRA will create.

The preceding site-wide strategies provide a site-wide masterplan framework for East Norwich. Whilst new connections are proposed to radically improve the links between the area’s different parts, the stark and stimulating environmental and contextual contrasts between these different parts of the masterplan area will remain. These contrasts play a hugely significant role in making the area as a whole so special.

As phases of the masterplan are realised, the ENSRA will be knitted into the wider city network. New links and connections provide exciting opportunities for those who live, work and visit the city to enjoy a strengthened relationship between the city and the Broads.

Four distinct, discrete but connected character areas emerge. Buildings and landscape play a critical role in establishing character. But it is people and their activities – living, playing, working, making, learning – which will bring life to these areas. Four character areas have been identified, as follows:

- Waterside East
- Carrow Abbey
- Waterside North
- The Villages

Plans, views, artist’s impressions and precedent images are presented here for each area to help convey the opportunities they each present. The plans and views are all based on the site-wide masterplan framework outlined in this SPD. The final form of development will of course differ, but the design principles outlined in the following pages are considered useful in conveying the Local Planning Authorities’ aspirations for new development.

Each area has been explored and illustrated in the following sections by urban concept, land uses, scale, density and form and public realm and spaces.



Fig 48 Figure number caption



19 WATERSIDE EAST

19.2.1 Vision statement

Waterside East will be an extension of the city's Wensum waterfront – with a warehouse character, historic conversions and new buildings, and a range of activities and uses all connected by an attractive riverside walk. New bridges will support new connections between the sites and the wider city. The river itself will emerge as a focus for recreation and leisure-based activity, with new moorings and facilities. Interventions along its length will be introduced to improve the river's ecology.

- 1 Norwich City Football Ground
- 2 Paper Mill Yard
- 3 Carrow Works
- 4 The chimney
- 5 Carrow Quay
- 6 Mustard Seed Drier
- 7 Trowse Rail Bridge
- 8 Carrow Link Underpass
- 9 The Utilities Site
- 10 Deal Ground
- 11 Carrow Yacht Club



Fig 49 Existing location plan of Waterside East





19.2.2 **Urban concept principles**

Waterfront East will be:

- WE1** A busy, vibrant urban extension to the city, characterised by a warehouse character with waterside apartments and businesses occupying historic building conversions and new mixed-use buildings which directly address the river.
- WE2** Connected by riverside walks and spaces and enlivened by riverside moorings and an improved riverside ecology.
- WE3** Centred on a primary east-west spine from Paper Mill Yard development to Whitlingham Country Park which provides a safe and legible route primarily for pedestrians and cyclists via a new 'Carrow Footbridge' on the axis of the old Carrow Bridge, Carrow 'main street' with mixed uses and activities along the street edge, an improved railway underpass, the new Deal Bridge connection with the Utilities site, and a new footbridge to Whitlingham Country Park.
- WE4** Characterised by old and new buildings that face and frame the riverside, adding life activity to this important corridor between the city and the Broads.
- WE5** Host to a hierarchy of new public spaces along routes that help to define gateway locations, nodes of commercial / community activity, or where green links and parkland intersect. These spaces will be designed



Fig 50 Indicative urban concept plan of Waterside East

-  gateway
-  key access point
-  development plot
-  building of heritage

as public squares, with treatments helping to reduce the impact of traffic, promote pedestrian and cyclist priority and provide space for active building uses to spill out onto the street.

19.2.3 **Land use principles**

- WE6** The primary route east-west route will be lined with active ground floor uses which would bring life and movement throughout the day and into the evening.
- WE7** The route connects two clusters of non-residential uses – the primary one at the western end next to Paper Mill with a smaller cluster around the converted seed drying building in the north-eastern corner of Carrow Works.
- WE8** Zone A will host flexible spaces to support small and medium enterprises and co-working spaces with ancillary retail in a range of converted and new buildings. These smaller units can help new businesses adapt to flexible working patterns evolved through the pandemic.
- WE9** Uses supporting the everyday community needs of local residents and workers would be appropriate along the main route between Zones A and B. The importance of this has been highlighted as more people work from home following the COVID-19 pandemic.
- WE10** Zone B is considered to be appropriate for a mixture of creative and cultural industries with working and exhibition spaces.
- WE11** Zone C will be residentially led with river-based waterside activities such as a boat house and leisure facilities, potentially supported by café/bar spaces for visitors and locals



Fig 51 Indicative urban concept plan of Waterside East

19.2.4 **Scale, density and form principles**

WE12 Waterside East will be a high-density neighbourhood with apartments benefiting from a riverside setting and vibrant urban character.

WE13 A mix of building heights, typically ranging from 3-10 storeys with some exceptions, will create variety to the skyline and enable penetration of daylight and sunlight into open spaces between.

WE14 The Waterside East area will be appropriate for a range of types of building, from higher density perimeter blocks along the riverside to mixed blocks which help to transition towards the more historically sensitive Carrow Abbey area.

WE15 The design of apartment buildings must maximise dual aspect dwellings, avoiding single aspect north facing units, minimise the length of internal corridors, ensure good levels of natural ventilation and natural light.

WE16 The least constrained and sensitive area is considered likely to be the western end of the Utilities Site which was once home to two of the city's power stations. This part of the site may be more appropriate for slightly larger buildings, set back from the river front.

WE17 The form of development should respond positively to the setting of designated heritages including 'the F building' on the waterfront and the Seed Drying building.

WE18 Retention and re-use of other non-designated assets – including the brick chimney and a number of warehouse buildings – help to deliver sustainable development and contribute positively to placemaking and urban character.

WE19 The routes created and framed by existing and new buildings should create a clear and direct route to the underpass connection between Carrow Works and Deal Ground.

WE20 The scale and form of the southern side of the Waterfront East area is sensitive – given the boundary with Carrow Abbey on the Carrow Works site and the County Wildlife Site on the Deal Ground site. These elevations will need to ensure they are varied in scale, with frequent breaks to avoid any 'wall-like' qualities.

19.2.5 **Public realm and public spaces principles**

WE21 The primary east-west route across Carrow Works and Deal Ground will be a shared surface with the potential for a bus route through the Carrow Works site. Whilst service access will be required for vehicles, the route should be designed as a route with pedestrian priority.

WE22 An improved underpass connection between Carrow Works and Deal ground is critically important, both for the ENSRA to come forward as a 20 minute neighbourhood, and more strategically to deliver improved connection between the city and the Broads.

WE23 The approach to the underpass from both sides should be clear, direct, overlooked and well-lit.

WE24 Studies have demonstrated the benefits of deepening and widening the underpass link to improve the quality of the connection. Further feasibility, engineering and drainage work will be required in conjunction with Network Rail, relevant landowners and the County Council to ensure the quality of the route meets the required standards. It will be important that improvements to this link incorporate flood prevention measures, especially if the levels are lowered to improve head heights.

WE25 The connection presents a primary opportunity for public art to make a positive contribution to placemaking and way-finding.

WE26 Key urban spaces framed by key buildings will provide flexible, durable and adaptable spill out spaces for temporary events, supporting commercial activities at their built edges.

WE27 Particular opportunities include the south-facing space at the foot of the 'F building' and the space in front of the Seed Drying building.

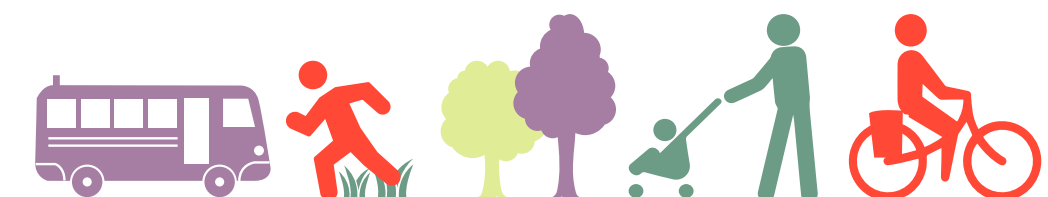
WE28 Waterside paths will have an important leisure and flood management role, particularly on the Wensum frontages of the Deal Ground and Utilities sites and extending west of the railway bridge south of ATB Laurence Scott. These low level waterside paths will provide flood protection to developments whilst also providing an access, leisure, open space and ecology amenity.

WE29 Redevelopment along the Wensum waterfront should support greater use of the river for leisure and recreation. This could include more moorings, slipways and facilities for boat users.

WE30 The opportunity for the creation of a small leisure basin should be considered to support such activities, as shown adjacent to the Deal Ground Bridge.

WE31 The spaces associated with the approaches to other proposed bridge connections are all important spaces – including the approaches to the new Carrow footbridge, and the pedestrian/cycle bridge connection to Whitlingham Country Park.

WE32 Service access to Carrow Yacht Club, originally established by the Colman family itself, must be maintained at all times.



- 1 Homes with water views
- 2 Public square
- 3 Private podium level gardens
- 4 Mustard Seed Building
- 5 Carrow Waterside
- 6 Potential Mooring locations
- 7 Carrow Garden
- 8 Carrow play area
- 9 Active frontage - restaurants, bars, cafes and shops
- 10 The Chimney
- 11 Carrow Abbey

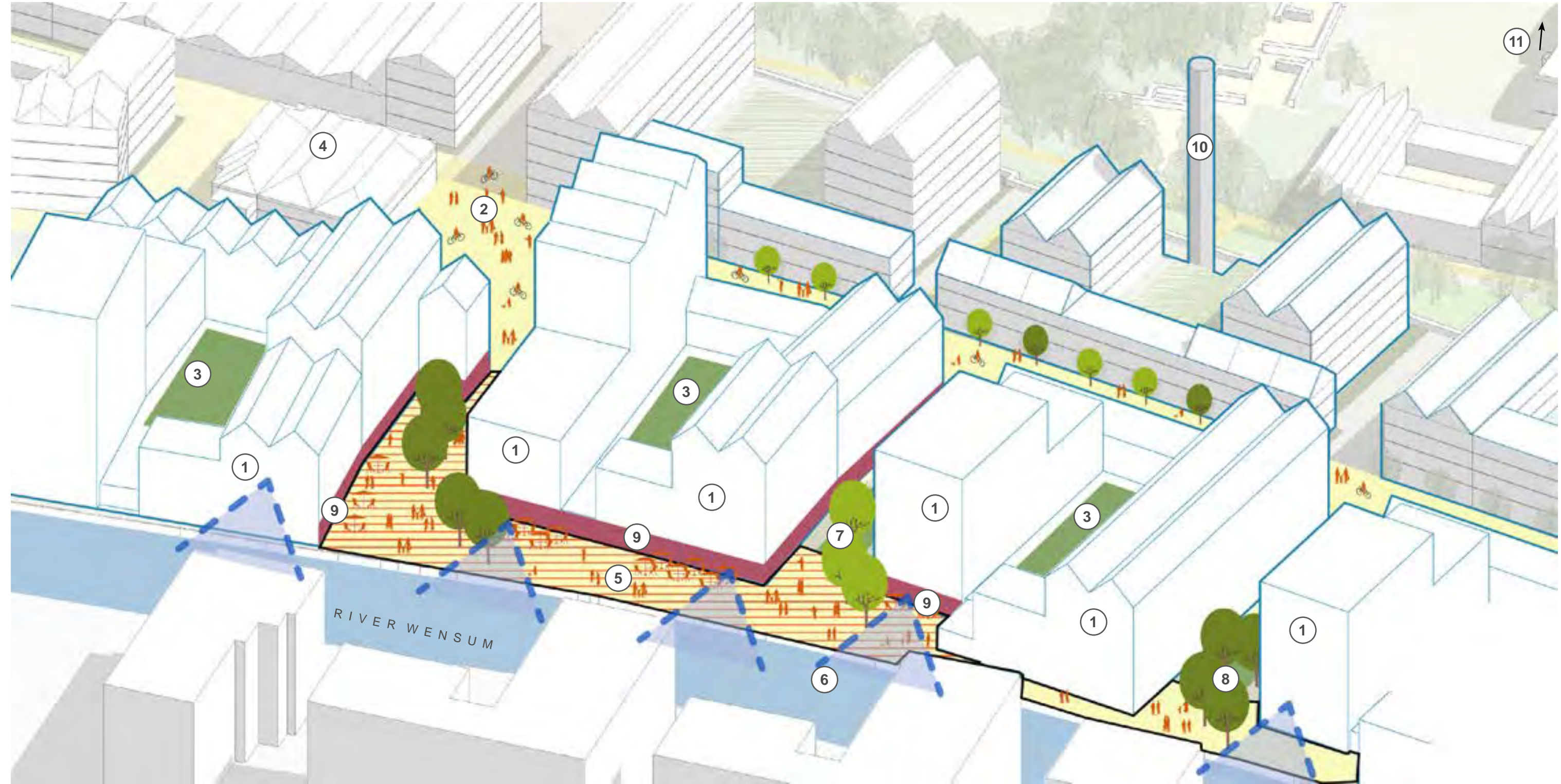


Fig 52 Indicative axonometric of public space A - Waterside East - looking south



- 1 Thorpe Waterside
- 2 Deal Bridge
- 3 Deal Basin
- 4 Marina-side
- 5 Boathouse
- 6 Private podium level gardens
- 7 Shared surface street
- 8 Community Square
- 9 Active frontage - cafes and shops
- 10 Deal Waterside
- 11 Landscaping
- 12 Trowse Bridge
- 13 Carrow Link

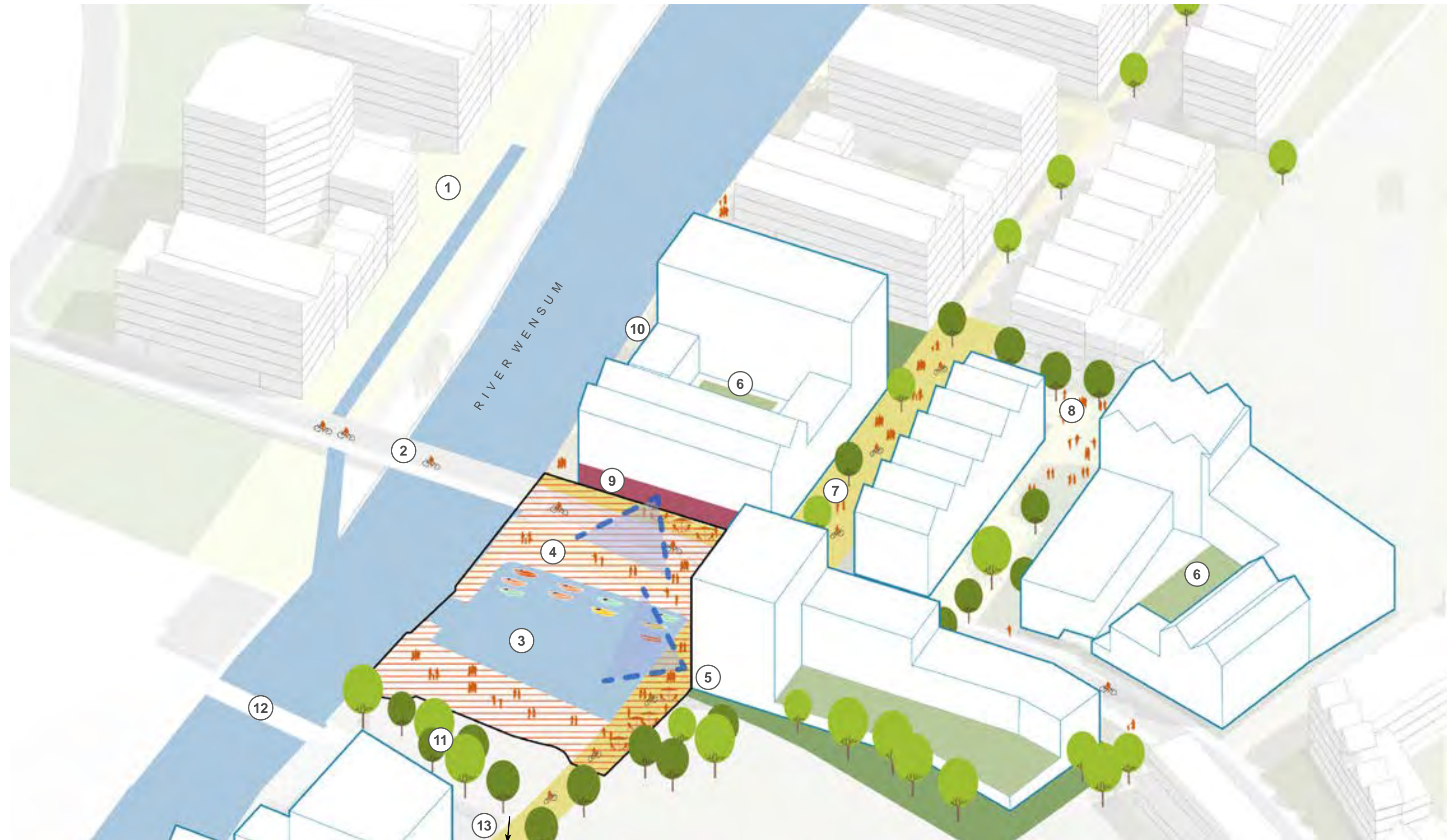


Fig 53 Indicative axonometric of public space B - Waterside East - looking east



Fig 54 Artist's impression looking east along the River Wensum with the ENSRA redevelopment addressing the waterfront on the river's south bank



Fig 55 Artist's impression looking east along the main street through Carrow Works from outside the refurbished buildings on the site's western end. This shared street will be designed to support active and sustainable modes of transport



Cutting Room Square, Ancoats, Manchester



Great Suffolk Street, London



Murray's Mills, Manchester (© Daniel Hopkinson)



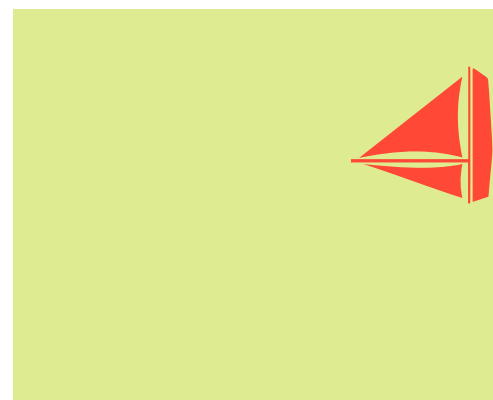
German Gymnasium, King's Cross



German Gymnasium, King's Cross



Cutting Room Square, Ancoats, Manchester





20 CARROW ABBEY

20.2.1 Vision statement

Carrow Abbey will be an area of tranquillity at the heart of the bustling ENSRA – an enchanting historic retreat for those who live, work and visit the city. The Abbey building in its formal landscaped setting defines the character of the area – one where mature trees provide enclosure in a carefully managed landscape.

The Carrow Abbey area will be reintegrated into the city, with public routes traversing the grounds. The setting of the Abbey and Carrow House will be enhanced, with new development contributing to their formal setting. New development will redefine the main approach to the Abbey from Bracondale, with the existing ancillary buildings being brought back into use alongside new residential development which enhances the setting of the Abbey and former Priory.

- 1 Carrow House
- 2 Carrow House conservatory
- 3 Carrow House gardens
- 4 Carrow House car park
- 5 King Street
- 6 Bracondale
- 7 The chimney, Carrow Works
- 8 Carrow Abbey
- 9 Carrow Priory ruins
- 10 Carrow Abbey Sunken Garden
- 11 Bracondale Roundabout
- 12 Diamond Jubilee Fire & Rescue Service
- 13 Former Trowse railway station building
- 14 Stable Cottages

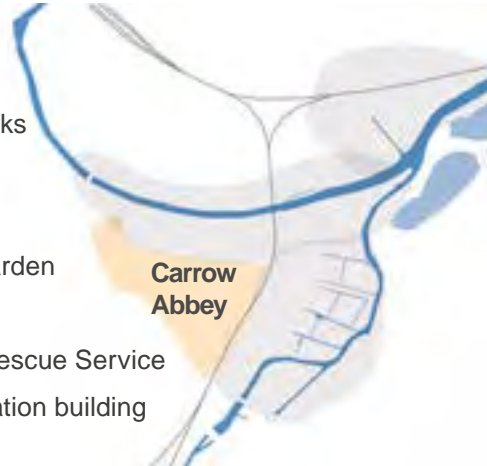


Fig 56 Existing location plan of Carrow Abbey character area

20.2.2 **Urban concept principles**

- CA1 The landscaped setting of the Abbey and Carrow House will remain the defining characteristic of the area. Trees will continue to screen these historic buildings from redevelopment of the surrounding factories.
- CA2 The historic gardens associated with both Carrow House and Carrow Abbey will be refurbished and reinstated to, where possible and appropriate, become an integrated part of the city's heritage trail. The potential opening up of these important spaces to public access must be subject to an agreed Management Plan (see OS10 on page 84).
- CA3 The Bracondale entrance is the principal gateway to the site. The form and layout of new development should respect and improve the setting of heritage assets. The relationship between the entrance to the site, the Stable Cottages, the Lodge and garden cottages and the Abbey should be improved.
- CA4 Clustered around the remodelled junction with Bracondale, a new mixed-use cluster of community and commercial uses will be established to serve the ENSRA and the wider local community. Any potential impact on other nearby retail locations and trip generation will however be key issues for forthcoming planning applications.



Fig 57 Indicative urban concept plan of Carrow Abbey

CA5 The factory buildings to the east of the site will be comprehensively redeveloped to provide a mixed new high-density street-based neighbourhood which helps to define the historic setting of the Abbey and Priory grounds.

20.2.3 **Land use principles**

CA6 Residential uses will predominate in the phased redevelopment of the Carrow Abbey character area.

CA7 Reuse of Carrow Abbey must preserve and enhance the integrity of the building. Future use of this former residence is to be determined, but a public facility could make a significant contribution to the city's historic story.

CA8 The Abbey's curtilage buildings such Stable Cottage would be well suited to nursery or similar use.

CA9 Redevelopment of the factory buildings to the east presents opportunities for mixed housing types and tenures including high density apartments and houses with private gardens.

CA10 The area around the main site entrance off the Bracondale roundabout is considered suitable for the establishment of a cluster of community uses with commercial, community and residential uses coalescing through high-density mixed-use development. This could include a new primary school, community health provision and limited convenience retail provision (subject to retail impact). Out-of-centre format retailing with generous car parking areas is not appropriate.

CA11 Carrow House is a flexible building with scope for refurbishment for a number of uses. In the short term however it and its annexed extension are well placed to provide a range of flexible business floorspace options.



Fig 58 Indicative land use plan of Carrow Abbey

- CA12 If the existing office extension to Carrow House came forward for redevelopment, this would present the opportunity to improve the setting of this important building by giving Carrow House greater sense of separation.
- CA13 The conservatory to Carrow House is listed Grade II* and through its refurbishment could be used in conjunction with the refurbished Carrow House building such as a conference or meeting facility. Subject to viability, public facing use such as a cafe or similar facility would also be appropriate given its direct relationship with the (also listed) historic formal gardens and the prospect of these and Carrow Abbey gardens being opened up to the public.
- CA14 The car park site to the south of Carrow House presents a good medium-term development opportunity suitable for housing. In the short term it is likely to continue to be required for parking associated with employment uses within the refurbished Carrow House. The location may also be considered suitable for education uses should other nearby locations provide not deliverable or suitable.
- CA15 The land backing on to the railway is suitable for employment uses. Residential uses will only be suitable if noise and air quality mitigation measures can be agreed to in view of the proximity to the railway and the aggregates works.

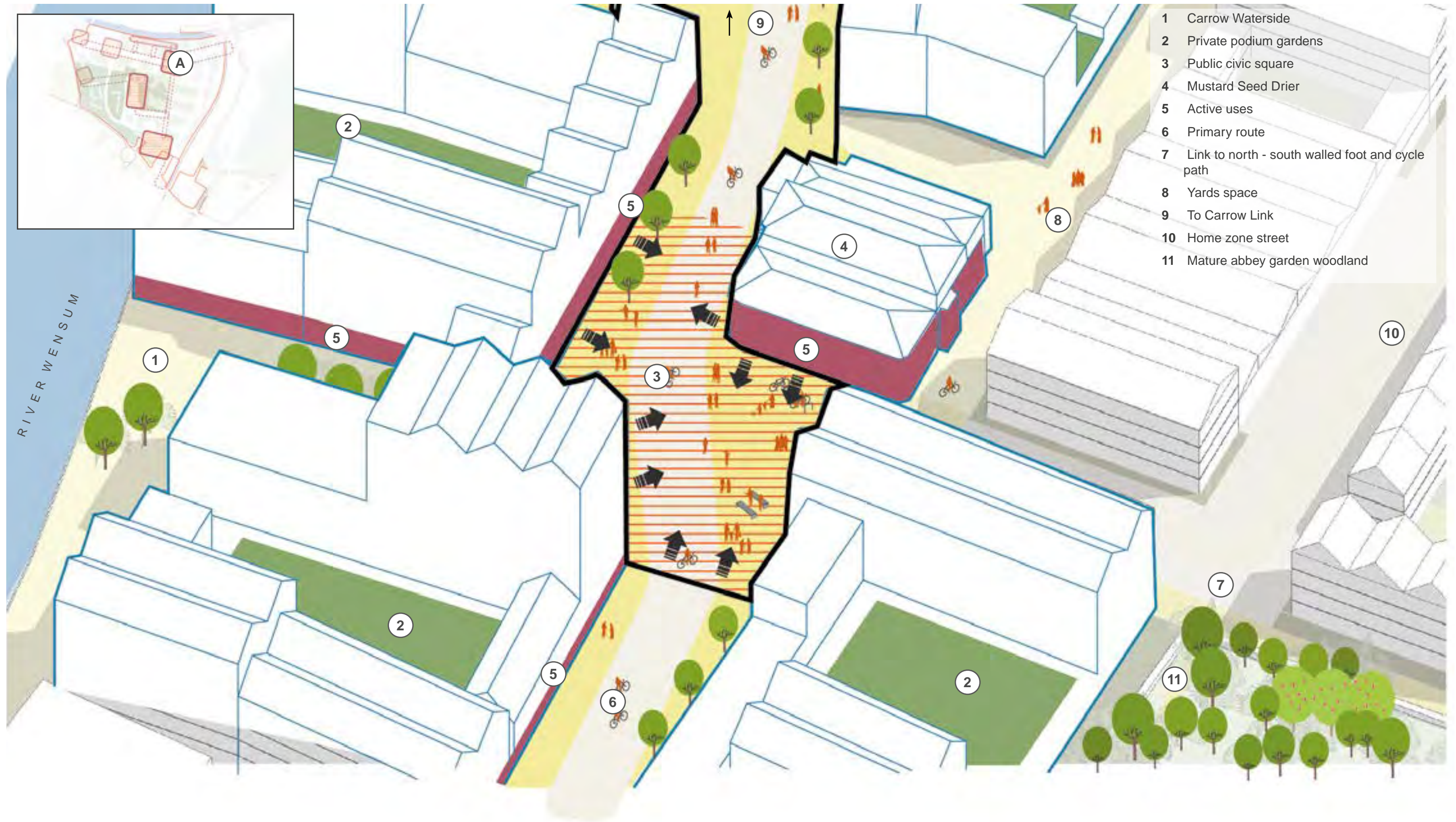


Fig 59 Indicative axonometric of public space A - Carrow Works - looking east

20.2.4 **Scale, density and form**

CA16 The priority will be that new development preserves or enhances the setting of Carrow Abbey and Carrow House.

CA17 Building heights and forms of development will respect the relationship with and between heritage assets and the historic and important landscapes that frame and connect them.

CA18 Incorporating the Abbey's ancillary buildings and its existing car parks to the south, new housing-based development (low rise buildings, steep roof pitches, almshouses) will help to line and define a new more direct route to the Abbey, improving its setting.

20.2.5 **Public realm and public spaces**

CA19 The gardens between and around Carrow Abbey and House are a series of historically important formal and informal spaces. Refurbishment and ongoing management and maintenance of these spaces will be required.

CA20 Links between the spaces should be improved, with the opening up and refurbishment of the existing footbridge link. This will help to ensure direct pedestrian access across the ENSRA to the southern end of King Street.

CA21 The gardens across the site should benefit from public access, creating a new informal network of walking and cycling lanes and routes. Existing openings in the historic perimeter walls should be used where appropriate, and connections with the Carrow Works 'main street' zone to the north should be formed wherever possible, through careful landscaping and level changes.

CA22 The main vehicular entrance to the site should be reformed to reduce the scale of the existing junction and provide more pedestrian and cycle priority.



Fig 60 Indicative axonometric of public space B - Carrow Works - looking north-west

- 1 Former Rail Station
- 2 Shared surfaces combining community uses through public realm treatments
- 3 Fire Station
- 4 Parking and restricted drop off areas
- 5 Stable Cottages
- 6 Main vehicular site entrance
- 7 Primary school play area
- 8 Primary school
- 9 Active frontages - convenience shops, pharmacy & cafes
- 10 Private Gardens
- 11 Almshouses
- 12 Mature woodland of Abbey Gardens
- 13 Mature woodland of Carrow Works perimeter gardens



Fig 61 Indicative axonometric of public space C - Carrow Works - looking south-west



Fig 62 Artist's impression looking east along the main street through Carrow Works site on the approach to the refurbished Mustard Seed building. Active frontages line this important route which extends directly to the railway underpass



21 WATERSIDE NORTH

21.2.1 Vision statement

Once the powerhouse of Norwich and with a magnificent south facing Broadland outlook, the Waterside North area is in walking distance to Norwich Station and the city centre. A new large leisure marina will be the focal point for a new mixed neighbourhood and will be a major new river gateway between the Broads and the city.

- 1 The Utilities Site
- 2 Crown Point Rail Depot
- 3 Thorpe Power Station (UKPN)
- 4 Water channel
- 5 Carry's Meadow
- 6 Cremorne Lane bridge
- 7 Salisbury Road
- 8 Whitlingham Little Broad
- 9 Whitlingham Great Broad
- 10 Former Cremorne Lane Gas Works



Fig 63 Existing location plan of Waterside North





21.2.2 **Urban concept principles**

WN1 Provision of a new large leisure marina and an extension of the riverside walk on the north bank of the Wensum are central and defining elements of the Waterside North area – creating a new gateway to the Broads. This would be a strategically significant facility with local and regional benefits.

WN2 The western part of the site, where the power stations once dominated, present an urban city regeneration opportunity for high-density mixed-use development, creating a new strong river frontage and buffering the ongoing operations of the Crown Point depot.

WN3 The eastern end of the site beyond the marina transitions in scale to be development of a more traditional street-based form with family houses with a Broads outlook.

WN4 Supported by a decontamination programme, a new landscaped park will deliver biodiversity and ecological improvements to this former industrial and polluted landscape.

21.2.3 **Land use principles**

WN5 Housing uses will predominate – with waterside apartments and mixed housing types and tenures. Smaller mixed tenure apartments on the waterside would transition into family houses to the east with town- and mews houses.



Fig 64 Indicative urban concept plan of Waterside North



WN6 Benefiting from support services and facilities, the marina, as an important new gateway to the Broads, presents an opportunity to create a new focus for water-based activities supporting the visitor economy. This would include long-stay, short-stay and visitor moorings – both within the marina and on adjacent riverbanks.

WN7 The marina would need to take account of associated operational needs, with space provided for car parking, hard standing for storage and space for boat launching.

WN8 Employment is the most suitable land use on the land closest to the Crown Point Rail Depot - which is a 24 hour operational depot. Subject to market demand, the site would be suitable for a range of employment uses – from large scale institutional uses to smaller scale manufacturing spaces. Synergies with the rail industry may present opportunities to strengthen the role of the rail depot. With improved connectivity, the site could also be a suitable location for high quality, flexible workspaces that create a new dynamic and innovative regional business hub, potentially for institutional uses.

21.2.4 Scale, density and form principles

WN9 Appropriate building heights will range from tall development of up to around 10 storeys towards Trowse Bridge, transitioning to more traditional low-rise dwellings to the east where buildings of 2-3 storeys are likely to predominate.



Fig 65 Indicative land use plan of Waterside North

Land Use

- Residential
- Commercial
- Active frontage

WN10 New development is likely to need to raise ground floor dwellings from potential flooding risks. A more formal riverside edge to development would give way to more informal park edge on the north side.

WN11 ‘Marina Village’ will be a quieter area for family housing and mooring residents, a mixture of town-houses and 2 storey mews buildings creating intimate streets and spaces and enhancing community interaction.

WN12 Employment uses next to Crown Point Depot will be medium to low height commercial buildings orientated by the lower height towards the park and buffering the residential development.

21.2.5 **Public realm and public spaces principles**

WN13 The alignment of utilities underground provide the opportunity to create a new parkland – Crown Park – centrally on the Utilities site which will act as a neighbourhood amenity for new and existing residents alike. Tree planting will screen the sub-station.

WN14 The opportunity to extend the Wensum riverside walk along the whole of the area’s riverfront should be explored. Lowering the level of this walk will play an important flood mitigation role for the area as a whole.

WN15 The marina will be home to a variety of mooring for boat owners and visitors, as well as creating a highly valuable location for waterside living.

WN16 With the new road bridge over the Wensum providing vehicular access, the existing road access bridge over the railway can play an important role in establishing a new pedestrian and cycle connection between the Cremorne Lane neighbourhood and the river and Broads beyond.



Christianshavn, Copenhagen



SUND Nature Park, Copenhagen



Goldsmith Street, Norwich (Mikhail Riches)



Accordia, Cambridge (Feilden Clegg Bradley Architects, Maccreanor Lavington and Alison Brooks Architects)
© Tim Crocker



Seven Acres, Cambridge (Formation Architects)



- 1 Upgraded Cremorne Pedestrian and Cycle Bridge
- 2 Equipped play area
- 3 Marina Village - shared surface streets
- 4 Homes with water views
- 5 Green connection to Crown Point Nature Reserve
- 6 Private gardens
- 7 Fruit trees and productive landscape for residents
- 8 Crown Point Nature Reserve
- 9 Marina pavilion
- 10 Marina lock gate and footbridge
- 11 Large leisure marina
- 12 UKPN Power Station
- 13 Parkland

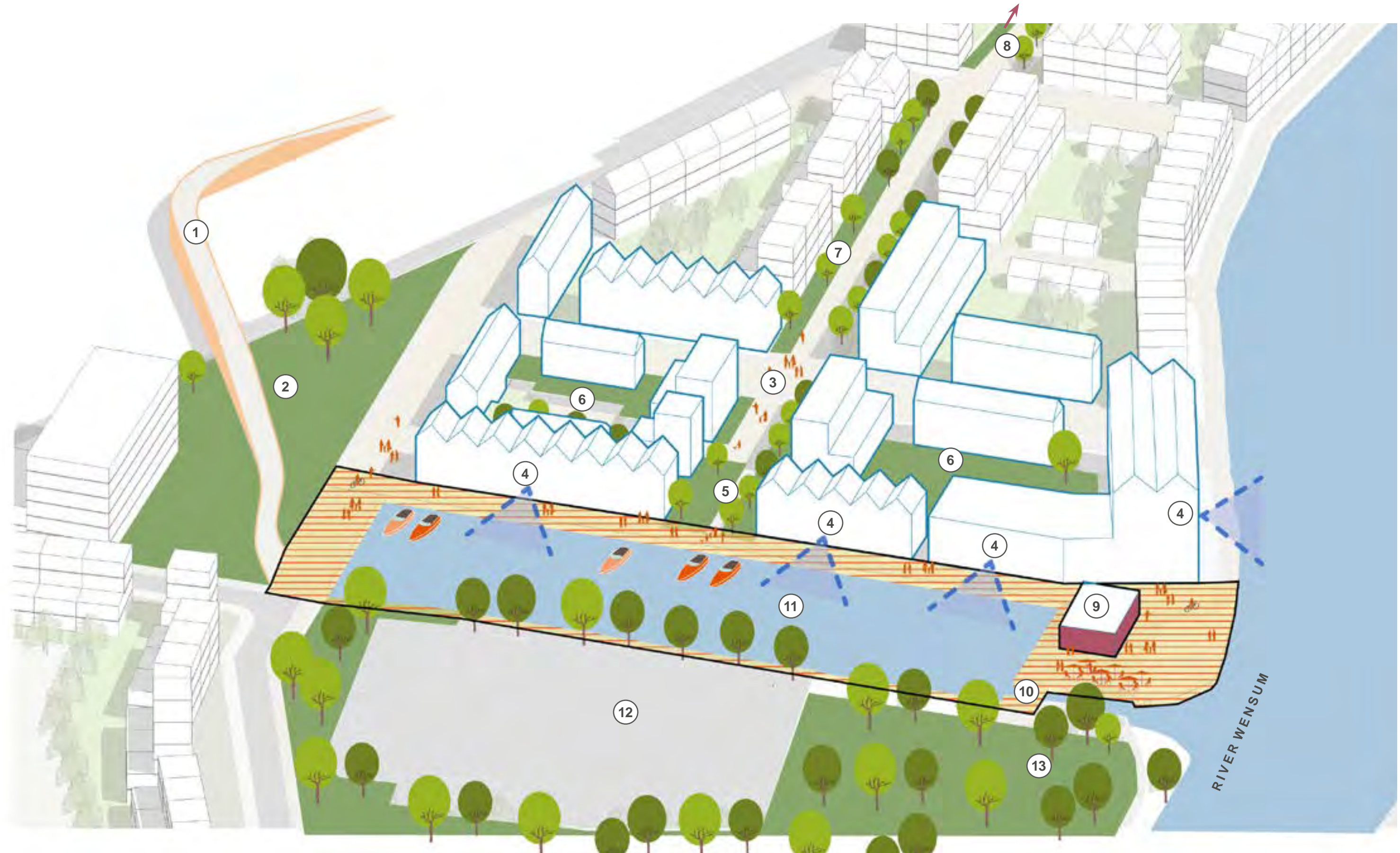


Fig 66 Indicative axonometric of public space A - Waterside North - looking east

- 1 Parkland offering a variety of green amenity spaces, both naturalised and recreational
- 2 Waterfront spill out area for cafes, bars and restaurants
- 3 Active frontages - cafes, bars, restaurants
- 4 Waterside apartments with river views
- 5 Upper level terraces linking the waterfront to the park
- 6 above podium levels
- 7 Private podium level gardens
- 8 Moorings
- 9 Terraced, stepped and planted waterfront
- 10 Waterfront foot and cycle path
- 11 Deal Bridge
- 12 Crown Link underpass to Carrow Quay

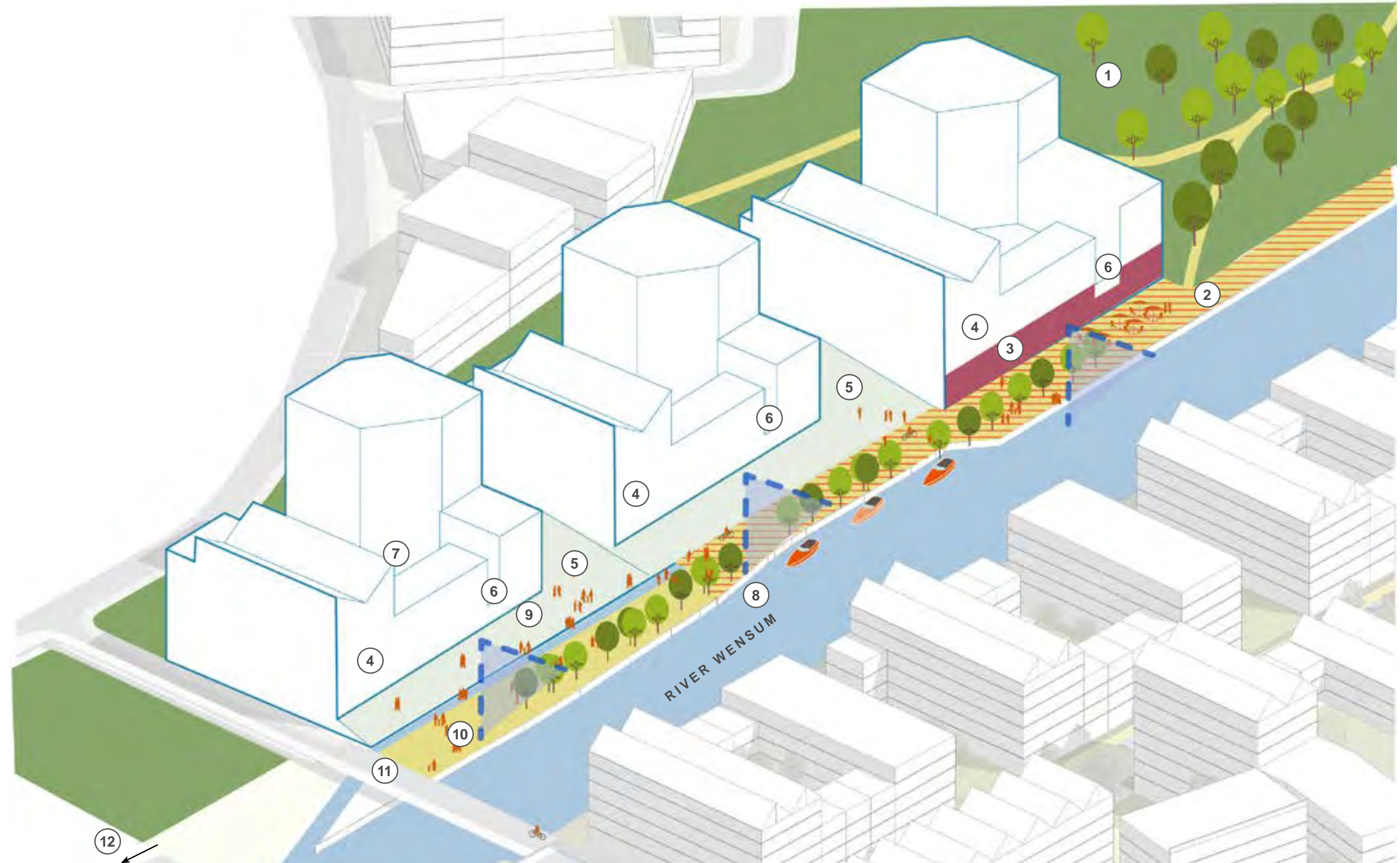


Fig 67 Indicative axonometric of public space B - Waterside North - looing north-east



Fig 68 Artist's impression of the proposed new large leisure marina on the Utilities Site from the banks of the River Wensum

22 THE VILLAGES

22.2.1 Vision statement

Sensitively designed and environmentally friendly new homes will provide a family-friendly environment with great access to the Broads whilst only a short cycle ride from the city centre. The area's special wetland character will provide a beautiful natural backdrop to this collection of new neighbourhoods for Norwich. The character of The Villages will respect the special qualities of the historic villages around the Trowse area whilst remaining distinct from them. Connections between public squares, greens and mews spaces will link the communities together to form networks of sustainable places to live, play and enjoy.

- 1 Trowse Rail Bridge
- 2 Tarmac Trowse Asphalt Plan
- 3 Deal Ground
- 4 Bracondale
- 5 Water treatment works
- 6 Fire station
- 7 May Gurney
- 8 Trowse Village
- 9 Whitlingham Country Park
- 10 Former Pumping Stations



Fig 69 Existing location plan of The Villages

22.2.2 **Urban concept principles**

- TV1 New mixed, family orientated environmentally friendly residential neighbourhoods with a Broads outlook will be created.
- TV2 There are opportunities to create small clustered development around village greens which would act as small village centres which is an appropriate aspiration for this part of the site.
- TV3 Development will respect the extent of the County Wildlife Site, with the need for agreement of a management plan.
- TV4 Connections need to be created in all directions to help bring this site forward – to Bracondale via a new junction and road bridge across the River Yare; to the Carrow Works site via improvements to the underpass; to the Utilities site via a new road bridge over the Wensum; and, crucially, with Whitlingham Country Park and the wider Broads via a new lightweight bridge across the Yare.



Fig 70 Indicative urban concept plan of The Villages

22.2.3 **Land use principles**

TV5 The Villages will be a collection of residential neighbourhoods, providing a range of house types and tenures within environmentally sustainable new homes. These new residential neighbourhoods could be supported by existing and new clusters of community facilities – a shop, small cafe and bakery, hairdressers, post office and public house.

TV6 New employment uses will be aligned alongside the railway line and aggregates depot to help buffer new dwellings from these operational uses.

TV7 The cluster of heritage buildings at the Pumping Station provide opportunities or cultural and community uses in these robust and flexible buildings.

22.2.4 **Scale, density and form principles**

TV8 Opportunity for a range of house and apartment types – typically ranging from 2-4 storeys – including mews style housing, back-to-back homes, town-houses, low height apartments, maisonettes and larger family homes. They will come together along varied streets creating beautiful and characterful places to live.

TV9 Employment uses adjacent to the aggregate work will help buffer nearby residential uses. There are significant environmental constraints to address in terms of new housing development - associated with the Tarmac Plant and the operational Sewage Treatment Works.

TV10 Development will need to be carefully planned, zoned, orientated and constructed to mitigate the impact of noise/odour and to take full advantage of the western outlook/environmental conditions.



Fig 71 Indicative land use plan of The Villages



- TV11** There might be opportunities for some points of higher density at key nodes or junctions.
- TV12** The threshold with the County Wildlife Site is a sensitive one and would be well suited to garden and outdoor amenity areas forming the boundary rather than built development.
- TV13** Much of the site is at risk of flooding and mitigation measures will be required (see 17 Water, Flood Risk and Mitigation Strategy on page 122). One such measure, subject to other measures and approval by the Environmental Agency and LPA, might be that no habitable rooms are placed on the ground floors of new dwellings in areas of flood risk.

- TV17** SuDS will make an important contribution in this location along the boundary with and threshold of the Broads.
- TV18** Improvements will need to be made to the County Wildlife Site in terms of its management and long term stewardship. The CWS will be managed primarily as an ecological asset. Access to the CWS can undermine this objective and will be tightly managed and controlled. It is not envisaged that the site will be open to the public.

22.2.5 **Public realm and public spaces principles**

- TV14** The impact of new development on the County Wildlife Site (CWS) is a primary consideration. Opportunities for biodiversity gains should be maximised here.
- TV15** The existing partial woodland character of the area should be enhanced through extensive tree planting seeking to define the character of new villages and provide an appropriate buffer at boundary points. The proposals are characterised by a significant emphasis of landscape improvements and open spaces which will give the area a unique natural identity and character.
- TV16** In addition to natural landscape settings, opportunities for the establishment of areas of formal and informal outdoor spaces, seated elements for adults and naturalised play areas for local children should be taken. The village greens will be a focal point in Deal Ground and May Gurney, bringing residents together in what might be quintessentially English villages greens.

- 1 Spine Road connecting Deal, May Gurney and the Utilities site
- 2 Generous pavement and cycle provision on spine road
- 3 Home-zone shared surface family streets
- 4 Mews street
- 5 Buildings orientating and framing the views to the County Wildlife Site
- 6 Private generous gardens
- 7 County Wildlife Site
- 8 Pocket park and play area

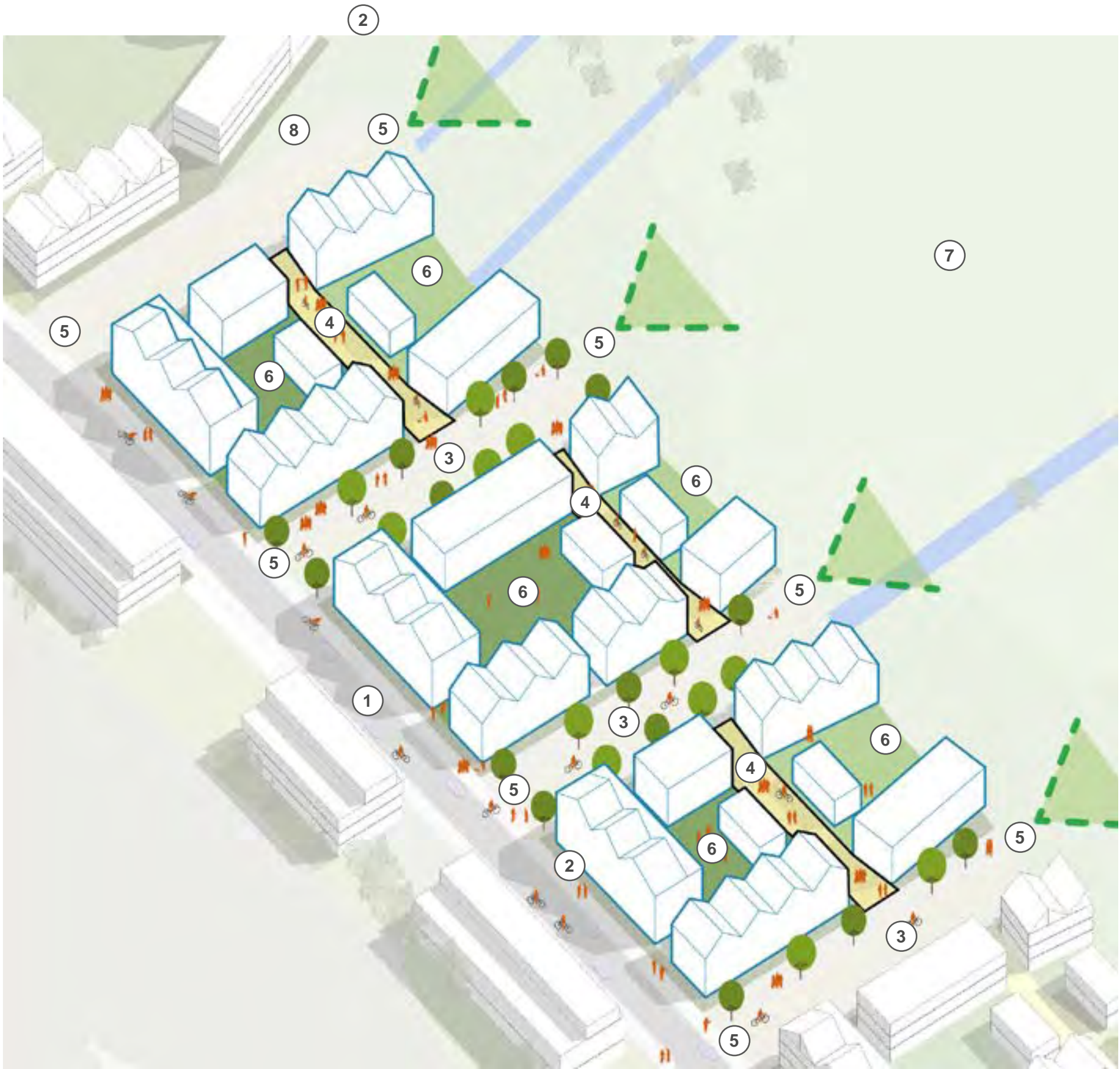


Fig 72 Indicative axonometric of public space C - The Villages - looking north-east

TV19 The shared surfaces connecting family orientated streets with reduced car usage in Deal Village will be interconnected by a long mews street from north to south, with green view corridors visually connecting new residents with the landscape beyond, dissecting points along the journey.

- 1 Housing with private generous gardens
- 2 Spine Road connecting Deal, May Gurney and the Utilities sites
- 3 Deal Village Green
- 4 Active frontages - cafe, shop, post office
- 5 Woodland areas retained where possible
- 6 Homes with water frontages
- 7 May Gurney Village Green
- 8 Drainage channel
- 9 County Wildlife Site



Fig 73 Indicative axonometric of public spaces B - The Villages - looking north-east

- 1 Bracondale Bridge
- 2 Active frontages - cafes, bars, bakeries, maker spaces
- 3 Civic space
- 4 Water treatment building
- 5 Former Pumping Station Extension
- 6 Former Pumping Station
- 7 Potential extensions to line of original cottages
- 8 Former Pumping Station Cottages
- 9 Woodland
- 10 Private gardens

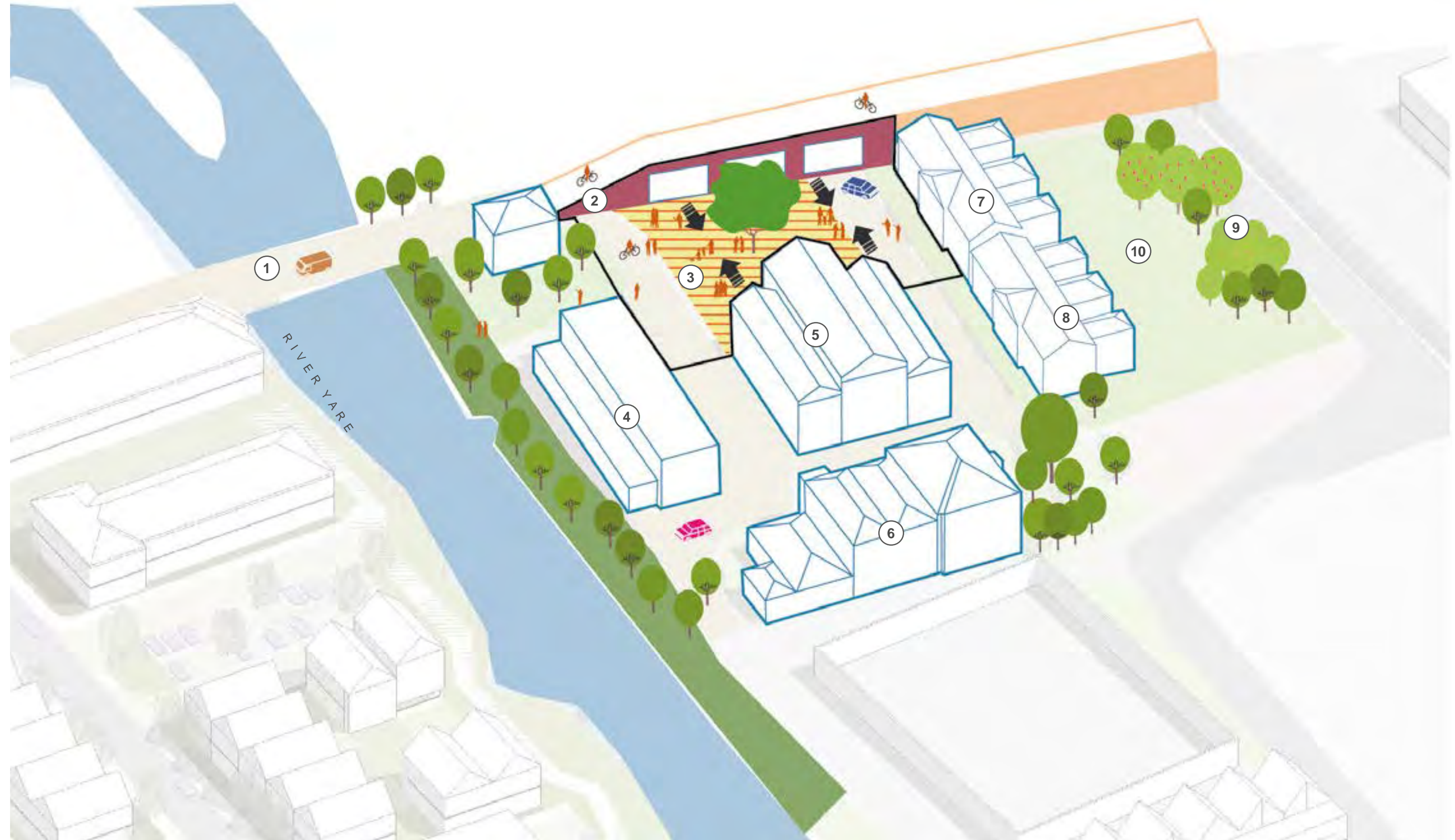


Fig 74 Indicative axonometric of public space A- The Villages - looking south



Fig 75 Artist's impression of Deal Ground development across County Wildlife Site looking north-west across the River Yare



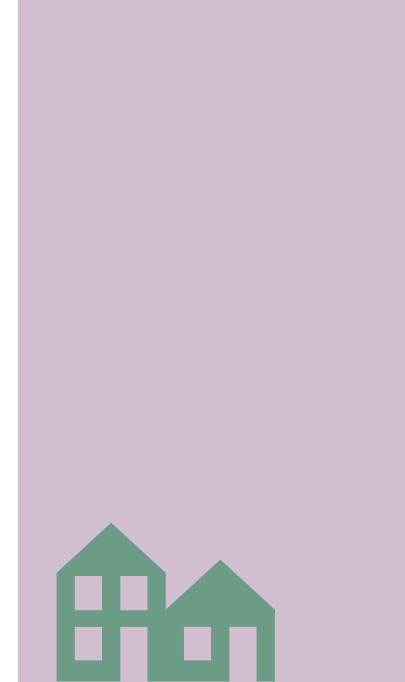
Goldsmith Street, Norwich
(Mikhail Riches) © Tim Crocker



Trumpington Meadows,
Cambridge (Allies and Morrison)



Goldsmith Street, Norwich
(Mikhail Riches) © Tim Crocker



Trumpington Meadows,
Cambridge (Allies and Morrison)



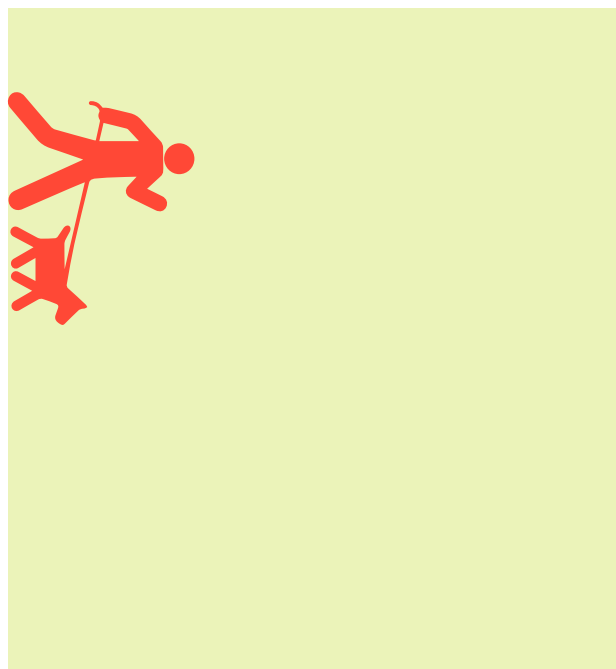
Trumpington Meadows,
Cambridge (Allies and Morrison)



Trumpington, Cambridge



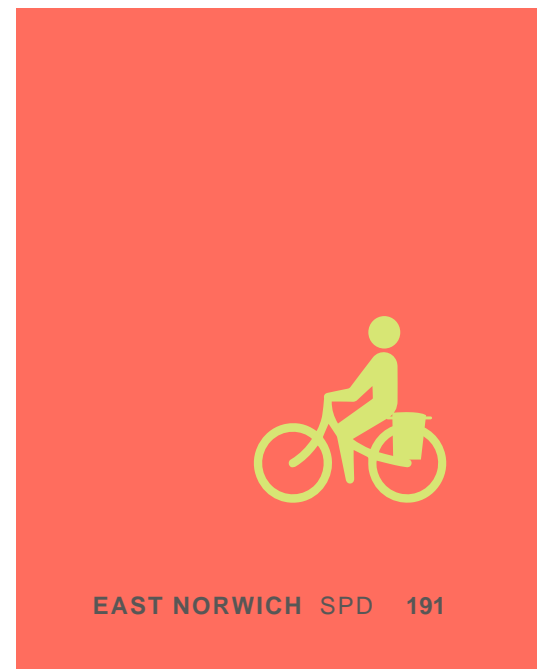
Alconbury Weald, Huntingdon

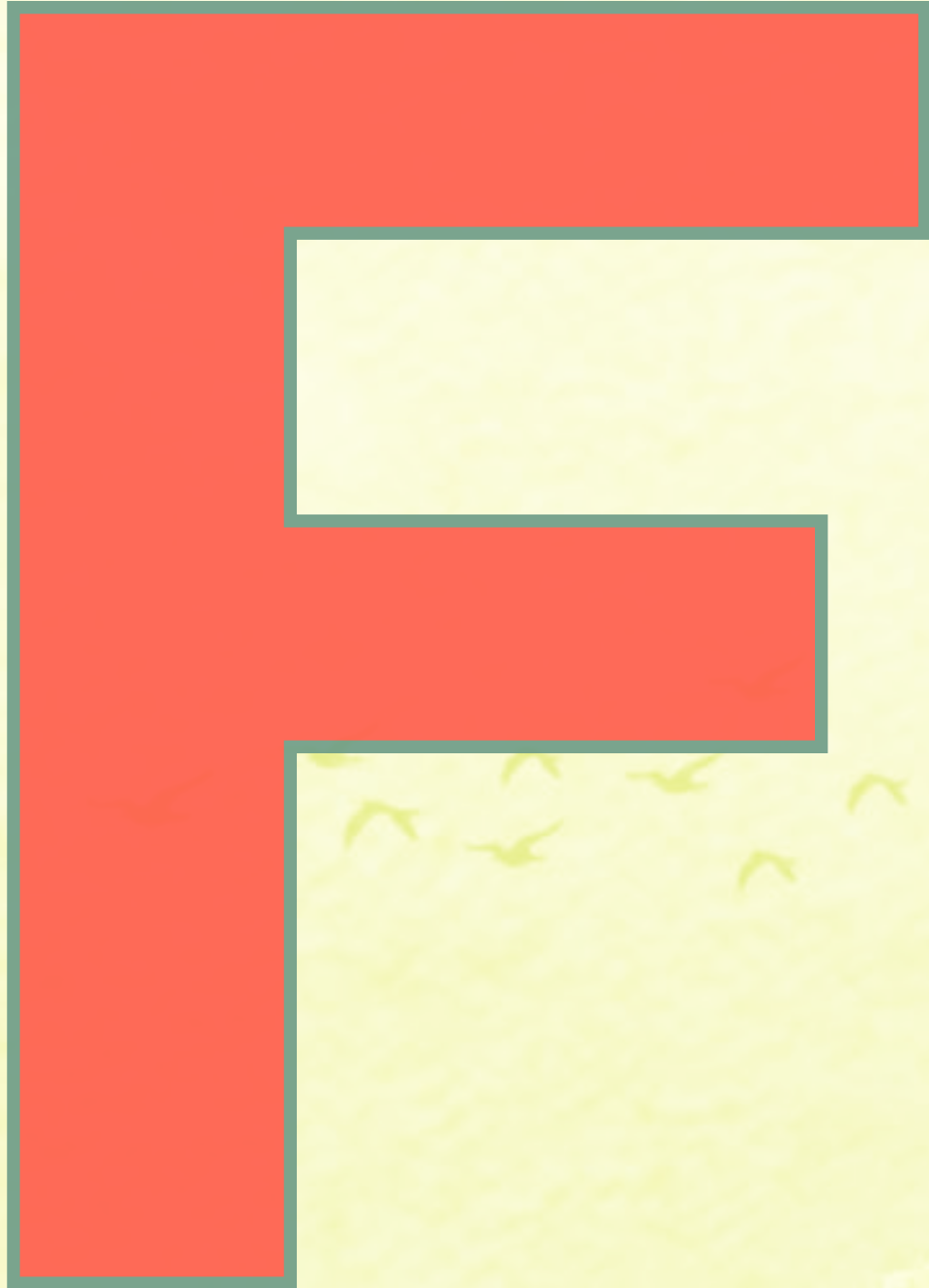


Trumpington, Cambridge



Cranmer Road, Cambridge
(Allies and Morrison)





IMPLEMENTATION

23 DELIVERY AND IMPLEMENTATION



23.1 Introduction

This Chapter provides a summary of the viability and delivery analysis that has been undertaken to inform and support the production of the masterplan SPD. It sets out a particular view and understanding of how the vision and objectives of the ENSRA can be achieved in order to understand the barriers to delivery and develop strategies to overcome these.

However, it should be recognised that there is not only one approach to delivery in the area and landowners may have alternate approaches that achieve the same outcomes but in a different manner based on the detailed characteristics of their proposals and own development approach.

This section is supported by a more detailed Infrastructure Delivery Plan, Record of Assumptions and Delivery Report, it is the findings of those documents that are summarised here.

To enable the delivery of the whole of the East Norwich area to be considered an illustrative sequencing plan has been developed. This plan has been established solely to show one potential approach to achieving the aims and objectives of the East Norwich area and ensure key infrastructure is delivered at the point it is needed to facilitate the next phases of delivery or secure critical

23.2 The Sequencing of Delivery

'city wide' benefits in a timely manner without over-burdening the scheme with upfront costs.

The illustrative sequencing has been developed at an East Norwich wide perspective. Whilst it has been cognisant of 'live' individual landowner delivery positions it has taken broader view of how all sites could come forward in a reasonable period of time.

It is recognised that a number of factors can only be known once specific proposals are put forward through the planning application process and a development mix confirmed. As shown a number of the phases in the plan are large and more detailed sub-area phasing plans are likely to be needed to demonstrate deliverability.

Despite this context, and in order to test deliverability and viability of the SPD proposals, the indicative sequencing approach has been centred on:

Phase Period	2022 - 2025	2026 - 2029	2030 - 2033	2034 - 2037	2038 - 2041
Pre-Construction	█				
Phase 1a	█				
Phase 1b		█			
Phase 2a		█			
Phase 2b			█		
Phase 3a			█		
Phase 3b				█	
Phase 3c					█
Post Construction					█

Table 1.2 Development phases



Fig 76 Outline phasing strategy which has formed the basis of high level development appraisal assessments to inform the viability and delivery strategies

23.3 Viability Assessment

- An understanding of how individual infrastructure items link to or unlock site delivery;
- Factoring in a broad understanding of infrastructure trigger points to ensure it is delivered when required;
- Estimated lead in times for infrastructure delivery based on level of current design development; and
- Consideration of the strength of the Norwich residential market and a need to not ‘overload’ the market with a particular housing type –for example across the whole area a balance has been sought between flats and houses in each phase;
- Delivery approaches for particular types of residential product, in particular build to rent.

Given the scale and complexity of the East Norwich sites to develop, the wider development context in the city, and the differing landownerships it is important to note that delivery phasing can differ from this illustrative sequencing. There are multiple approaches that can be taken to achieve the overall East Norwich vision and therefore this sequencing is not a blueprint for the area. The critical tests for any detailed phasing proposal will be 1. That it supports the timely delivery of all sites in East Norwich and 2. It responds to market needs and context.

To understand the levels of return an investor/ developer could generate from the scheme based on likely cost and value sets a development appraisal for the ENSRA utilising ARGUS Developer Software and market facing assumptions has been prepared.

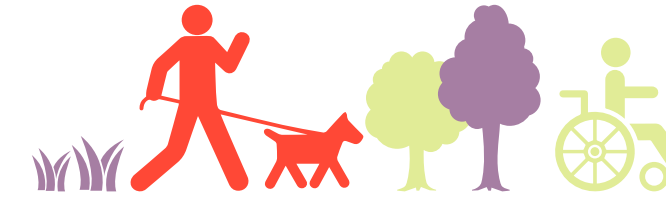
The viability test generates a loss/surplus for the scheme assuming nil land value and no target profit level owing to the high infrastructure costs. We are targeting a land value of £1 across each site and therefore all surplus in the respective appraisals will be shown in the profit generated.

Testing has been undertaken at 33% affordable housing provision. This reflects JCS Policy 4 within the Norwich Local Plan (Adopted December 2014) detailing that on sites for 16 dwellings or more (or over 0.6 ha) it must deliver at least 33 per cent affordable housing with approximately 85% social rented and 15% intermediate tenures.

The appraisals utilise market facing assumptions to simulate how a developer/ investor may approach delivery of the sites if they were brought to the market. It is important to note that appraisals are highly sensitive to changes in values and development costs involved and small changes in the values can alter viability.

Throughout the viability, IDP and SPD process land owners have been invited to review the inputs to the assessment and advise where they have more detailed information to allow the exercise to better reflect their understanding. At





23.4 Moving Towards Delivery

this point in time all principal landowners have provided inputs to help refine the viability assessment, the approach takes account of these and adopts them where it is robust and feasible to do so in the context of the wider SPD.

23.1.1 Base Assessment Results

The base appraisal results in a negative return which equates to -14.5% on GDV. This base position is largely being driven by a high level of abnormal / infrastructure cost that is having an adverse impact on the viability of the scheme.

It should be noted that there are significant areas of the scheme which are capable of being delivered without major infrastructure spend and are not reliant on public sector grant. These sites are located within Carrow Works and May Gurney, and we would anticipate some early delivery across these sites irrespective of the ENSRA viability results.

We would reiterate that appraisals are highly sensitive to changes in values and development costs involved and small changes in the values can alter viability. As a result, we have run a number of sensitivity analyses outlined below to improve the viability of the overall scheme.

23.1.2 Sensitivity Analysis

Using the base positioning as our starting point we have sought to understand how the viability position can be

enhanced to achieve reasonable levels of profit that are more in line with market expectations.

We have run several sensitivity analyses to demonstrate the impact on profit of reduced levels of infrastructure costs, introducing public sector grant and finally, introducing sales growth to reflect placemaking and regeneration uplifts. We summarise these as follows:

Version 1

- Reducing the overall infrastructure cost by removing marina costs and reducing the site wide low carbon / zero carbon heating and power network allowance.
- Including a 1% per annum sales value increase to reflect placemaking/regeneration uplift from the infrastructure investment. This is a net uplift i.e. assuming values increase above cost inflation.
- Introducing sufficient public sector grant to achieve a c.15% profit on GDV.

Version 2

- As above, but introducing sufficient public sector grant to achieve a c.20% profit on GDV.

Based on the sensitivity analysis around the base case, to achieve a base level of the developer's required return (c.15% on GDV blended across uses) would require public sector support of c.£56m. To move this to a blended profit level of c.20% would require public sector support of equate to approximately £129m.

Having established the overall viability position, we now consider how the challenges and opportunities it presents can be addressed in order to support the delivery of the East Norwich vision. This section considers some of the factors that influence the potential approaches to delivery and identifies potential routes to unlocking development across all parts of East Norwich.

23.1.3 Scope for Public Funding

The high level of requisite abnormal / infrastructure cost items outlined in the IDP have been flagged as a particular challenge from a viability perspective. Not only are these items costly they are also often required early in the development cycle, so create an additional funding burden.

The sensitivity analyses have demonstrated the positive impact on viability that public sector grant can have and this will be critical to unlocking the overall scheme.

Testing of the scheme has been undertaken at public sector support levels considered to be commensurate to a large-scale regeneration scheme of this nature, however, dialogue with public sector bodies is critical to ascertain whether these levels are realistic and achievable in the current climate.

There are a number of precedents that support the scale of intervention identified that have been achieved

through close public-private sector working. East Norwich compares favourably to these given the likely funding ask and the scale of development proposed:

- York Central - £77m from Homes England and Network Rail to unlock 3,705 homes and 1.2m sqft of commercial space through infrastructure funding
- Ebbsfleet Development Corporation - £170m from Treasury to unlock 1,300 homes and 1m sqft of commercial space through infrastructure funding
- Milton Keynes East - £94.6m, HIF funding to unlock 5,000 homes through infrastructure funding.
- Biggleswade Urban Extension - £69.6m HIF funding to unlock 3,000 homes through infrastructure funding

There has been significant engagement with Homes England throughout this master planning process to keep them well-informed as the project has progressed. More detailed work will be required as the project evolves to better understand Homes England's role such as in relation to matters including Subsidy Control and land position.

In addition it should also be noted that uniquely the authorities that comprise the Greater Norwich Development Partnership also, through the Greater Norwich Growth Board (GNGB) (which has the same membership), themselves are in control of an Infrastructure Investment Fund which was established following the City Deal of 2013 and has the potential to

borrow to deliver infrastructure which is then repaid from pooled CIL.

To date the GNGB have funded £40m towards the development of Broadland Northway (which was necessary to deliver the growth in the North East Growth Triangle) and has recently committed to fund c.£7m to fund the delivery of the Long Stratton bypass (needed to deliver strategic growth of c.1,900 homes at Long Stratton). The Growth Board have been engaged throughout the preparation of the East Norwich Masterplan and using funding sources available to them to assist with delivery of strategic infrastructure to serve East Norwich is considered a strong possibility.

23.1.4 **Potential sources of funding**

The IDP and Delivery Report identify a range of potential funding sources appropriate for each of the core infrastructure requirements. These range for direct funding via government departments and their delivery agencies including DHLUC, DfT, Homes England and Highways England, national agencies such as NHS England or the Environment Agency, sub-regional bodies such as GNGB or the LEP and special interest groups such as the National Lottery, Sustrans and Sport England.

Whilst the IDP considers individual interventions in their own right, there is the potential to bring together projects across domains as part of future funding opportunities for enabling infrastructure. This approach was common in the Housing Infrastructure Fund (for example) where there were opportunities in the full fund to present a combination of interventions including decontamination, accessibility infrastructure and utilities infrastructure for example. This combined approach may also allow a 'basket' of funding to be brought together to unlock East Norwich.

Outside of these infrastructure interventions there may be other opportunities to secure funding to support delivery linked to specific uses or activities within East Norwich. For example funding for capital works via Innovate UK, UK Research and Innovation or HEFCE to support business activity and education within East Norwich.

At present these cannot be considered in detail as more definition would be needed about the potential types of commercial space coming forward, the activities that would occur within them and the partners involved in their delivery.

Similarly there may be external funding opportunities linked to the approach to construction. Multiple sources

have sought to provide catalyst funding for the mass deployment of modern methods of construction, or the piloting of low carbon development.

Outside of public sector investment there are likely to be opportunities to secure private sector investment to deliver particular components of the ENSRA proposition. For example costs associated with the provision of energy/utilities provision, eVehicles and car clubs, and the provision of commercial workspace could all be delivered by third parties on the basis of the long term income they would generate.

All funding approaches would need to be considered on a case by case basis at later stages when development proposals are more detailed.



23.5 Conclusion and next steps

Overall, based on the IDP and SPD principles, there are a significant number of opportunities to seek funding support and strong initial basis for business case preparation to justify the nature of support needed, both from a needs basis (i.e. the viability challenge) but also from a benefit perspective (i.e. the positive impacts the investment could have on the city as a whole).

Whilst no single clear funding source can be identified and confirmed at this point in the process the analysis presented here provides a good deal of confidence that opportunities to address the viability challenge will be forthcoming both from public and private sources.

Determining the specific delivery interventions and approaches will need to be informed and shaped by the evolution of the SPD concepts into more defined proposals, which can in turn provide more detailed inputs to enable feasibility testing and modelling to set a clear course of action for partners.

To move East Norwich into its delivery phase a key series of next steps have been identified which the Partnership can take forward together, these include:

- Detailed financial modelling
- Design and feasibility assessment for the
 - Lowered riverside walk

- All modes bridges across the Yare and Wensum
- Site access and junctions
- Utilities provision
- Underpass improvements
- Refinement and testing of the employment offer
- Evolution of design guidance for each of the character areas

It is clear that the delivery of East Norwich will require some form of public sector intervention which, in turn, will require the preparation of Green Book compliant business cases to demonstrate the Value for Money of the interventions proposed.

The detailed financial modelling will shape the priorities in terms of investment asks and should form the starting point for business case development for the overall delivery approach and model to be deployed.

However, in parallel, and to respond to more immediate funding opportunities that are likely to arise in the next 12 months there would be benefit in focussing some effort now on developing Outline Business Cases (OBCs) for a small number of key interventions, building on the SPD and any other feasibility work.

As noted earlier it is likely that East Norwich will require a mixed approach to funding to enable delivery, bringing together developer contributions, direct developer delivery, public grant/loan funding and private sector development.

The strength for East Norwich in this context is the active participation of key partners within the process, ranging from Homes England and the LEP (both of which provide a route to government), landowners and their development partners (who have access to partner investment) and the GNDP/GNGB (which can leverage funds and provide links to other bodies).

If future funding is to be secured, this partnership approach will be vital, ensuring cross-site opportunities are realised and brought forward for funding in a coordinated way in order to demonstrate greater value for money from any investment.





APPENDIX

APPENDIX

- 1 DRAFT GNLP POLICY 7.1, EAST NORWICH**..... 207
- 2 CONTEXTUAL ANALYSIS** 208
 - 2.1 Introduction.....208
 - 2.2 Administrative boundaries208
 - 2.3 Urban grain and land use context210
 - 2.4 Building height context.....212
 - 2.5 Walking and cycling.....214
 - 2.6 Public transport context216
 - 2.7 Road network context218
 - 2.8 Land ownership.....220
 - 2.9 Flooding222
 - 2.10 Environmental analysis.....224
 - 2.11 Heritage and landscape.....226
 - 2.12 Utilities context.....228
- 3 SITE PHOTOGRAPHS** 230
 - 3.1 Carrow Works Site.....230
 - 3.2 Deal Ground Site232
 - 3.3 May Gurney Site and surrounding area.....234
 - 3.4 Utilities Site.....236
- 4 INFRASTRUCTURE REQUIREMENTS** 238
 - 4.1 Required infrastructure across the ENSRA238

1 DRAFT GNLP POLICY 7.1, EAST NORWICH (REG 19 VERSION)

Development of sites allocated in the East Norwich strategic regeneration area identified on the [Local Plan] Key Diagram including Carrow Works, the Deal Ground and the Utilities Sites will create a highly sustainable mixed-use gateway quarter accommodating substantial housing growth and optimising economic benefits.

Developments across the sites will provide in the region of 4,000 additional homes in the plan period and significant new employment opportunities for around 6,000 jobs. East Norwich also has the potential to act as a long-term catalyst for regeneration of the wider area, potentially including the following sites if they become available:

- Redevelopment of land adjoining the railway between the Deal Ground and Carrow Works as part the wider East Norwich strategic growth area masterplan supplementary planning document
- Land east of Norwich City F.C.
- Land owned by Network Rail on Lower Clarence Road and Koblenz Avenue
- Intensification of uses at Riverside Regeneration in the Rouen Road area

Site proposals within the East Norwich strategic regeneration area will meet the requirements of an area-wider masterplan to ensure co-ordinated development. This will include:

- An exemplar design approach, building at high densities and maximising the riverside regeneration potential to create a distinct, highly sustainable mixed-use community and new gateway quarter for the city, taking account of its setting adjacent to the Broads
- Creating an inclusive, resilient and safe community in which people of all ages have good access to high quality homes that meet housing needs the provision of area-wide economic and social infrastructure and services, including (but not limited to) the creation of new employment opportunities, a

new local centre, and a new primary school should need to be established

- Establishing an integrated access and transportation strategy which emphasises sustainable accessibility and traffic restraint, and allows for connectivity and permeability within and between the sites in the strategic regeneration area and beyond, including north-south links between Trowse and Bracondale and the north and south banks of the Wensum. Proposals should be designed for ease of access to, and by, public transport, with appropriate bridge provision to ensure the sites are fully permeable by sustainable transport modes
- Planning development to effectively manage and mitigate the impact of vehicular traffic from the sites on the local highway network including the Martineau Lane roundabout, Bracondale and King Street
- Protecting and enhancing green infrastructure assets, corridors and open spaces within the area, including enhancing linkages from the city centre to the Broads, Carrow Abbey County Wildlife Sites and the wider rural area and elsewhere in Norwich, include pedestrian/cycle links between Whitlingham Country Park and the city centre
- Providing and enhancing the sites' and wider city's rich heritage assets and their settings
- Achieving high quality, locally distinctive, energy efficient and flood resilient design which addresses identified risks from river and surface water flooding and mitigates against potential sources of noise and air pollution and establishes strong built frontages along the River Wensum and the defining network of streets and spaces within the sites
- Addressing and remediating site contamination
- Planning to allow scope or greater use of the River Wensum and Yare for water-based recreation, leisure and tourism including the potential inclusion of marinas and riverside moorings and access for waterborne freight subject to not impeding navigation of either river.

2 CONTEXTUAL ANALYSIS

2.1 Introduction

This section provides an overview of aspects of city area-wide analysis that has been undertaken as part of the baseline phase of work during the production of the masterplan for East Norwich. The following issues are included:

- Administrative boundaries
- Urban grain and land use context;
- Building heights;
- Walking and cycling;
- Public transport; and
- Road access.

The section that follows this city-wide contextual analysis includes a closer look at the attributes of the sites themselves.

2.2 Administrative boundaries

As shown in Fig 77, the ENSRA includes land within three adjacent local authority areas. In addition, part of the area falls within land under the administrative control of the Broads Authority.

The majority of the site falls with the Norwich City Council area. All of the Carrow Works and Deal Ground sites fall within the Norwich City Council administrative area. The May Gurney site to the south of the Deal Ground falls entirely within the South Norfolk administrative area. Whilst the majority of the Utilities Site falls within Norwich City Council, the furthest eastern extent of the site falls within the administrative area of Broadland District Council.

The Broads Authority area washes over local authority boundaries and defines the extent of the Broads National Park. The Park borders the eastern edges of the Deal Ground and Utilities Sites and covers the eastern half of the Utilities Site. The Broads Authority area extends right into the city of Norwich via the channel of the River Wensum.

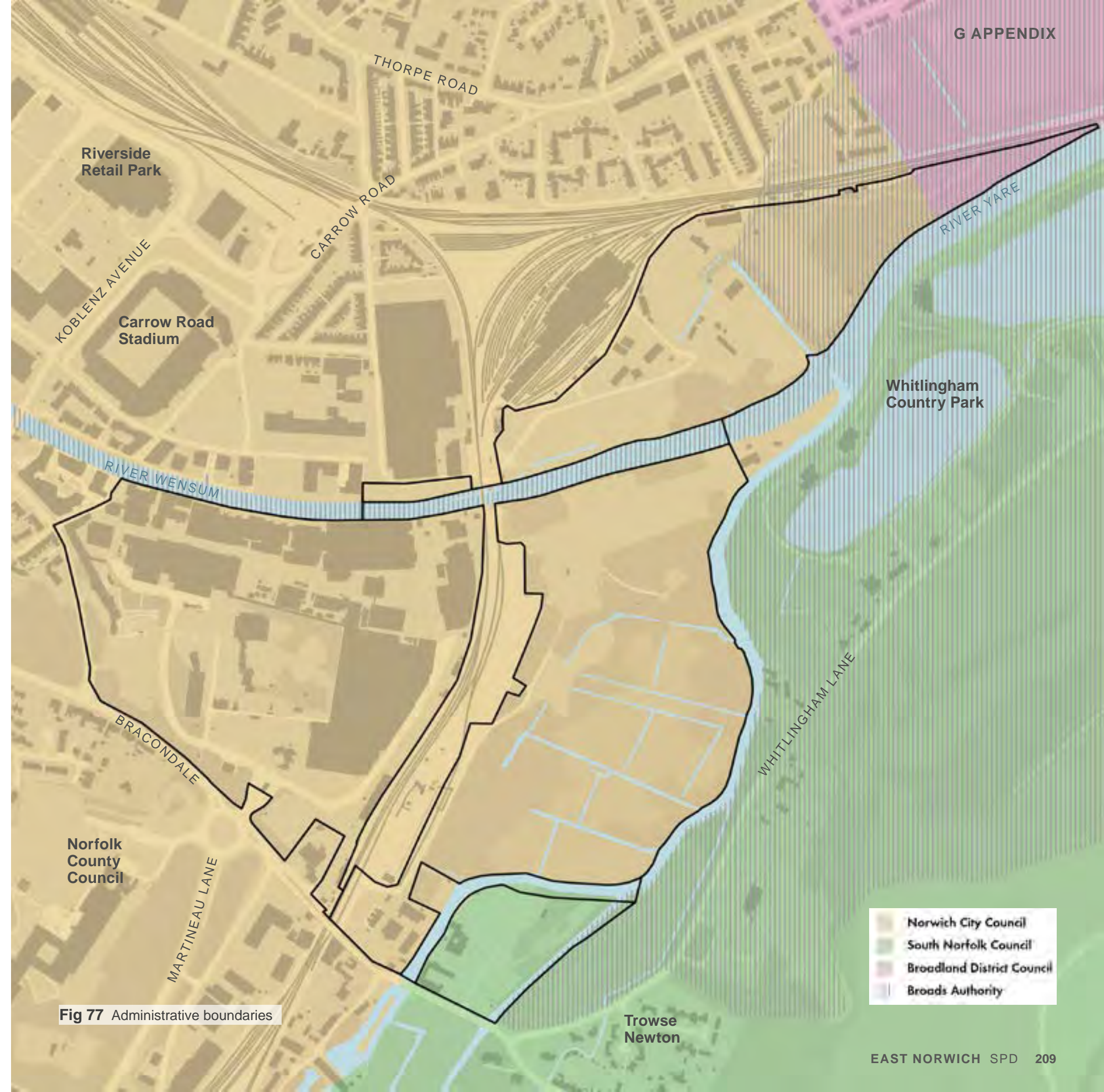


Fig 77 Administrative boundaries

2.3 Urban grain and land use context

2.2.1 High level land use analysis

This land use plan shows how the ENSRA marks the edge of the city - playing a pivotal role in the transition from urban Norwich to the surrounding countryside.

The legacy of this area's industry and the rivers and rail infrastructure which have shaped it, are clear in the irregular form of the development. However, there is a clear theme of development which has formed along the banks of the River Wensum, once purely industrial in use but now modern residential development.

East Norwich is one of the only remaining large inner city industrial sites which has not been developed. It is a site which can boast having both the significant heritage of the medieval city to its western edge, and the Broads at its southern and eastern edge.

Its central location, in close proximity to Norwich's key commercial and retail areas, whilst also bridging into the surrounding landscape, offers opportunities for a high density mixed-use sustainable development which benefits from its proximity to both city and countryside, provided the appropriate infrastructure can open it up.

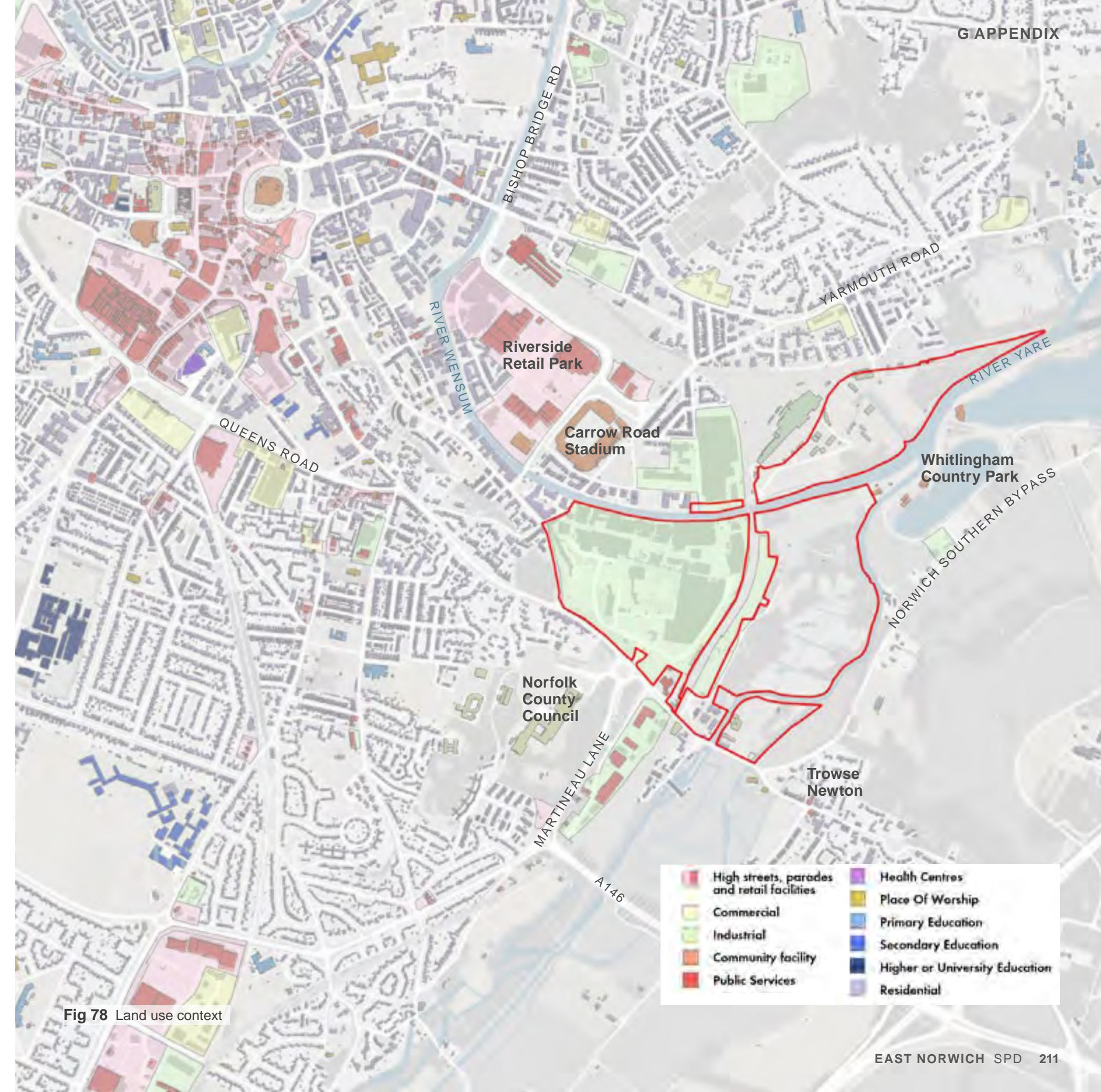


Fig 78 Land use context



2.4 Building height context

2.3.1 Typical building heights

Fig 79, using available on-line data sources, provides a generalised picture of existing buildings heights across the city area of Norwich.

Buildings on the site vary in height with the taller existing buildings tending to enjoy riverside locations. Many of the older warehouse buildings on the north side of the Carrow Works rise to heights of approximately 25m which would typically represent approximately 7 storeys in height.

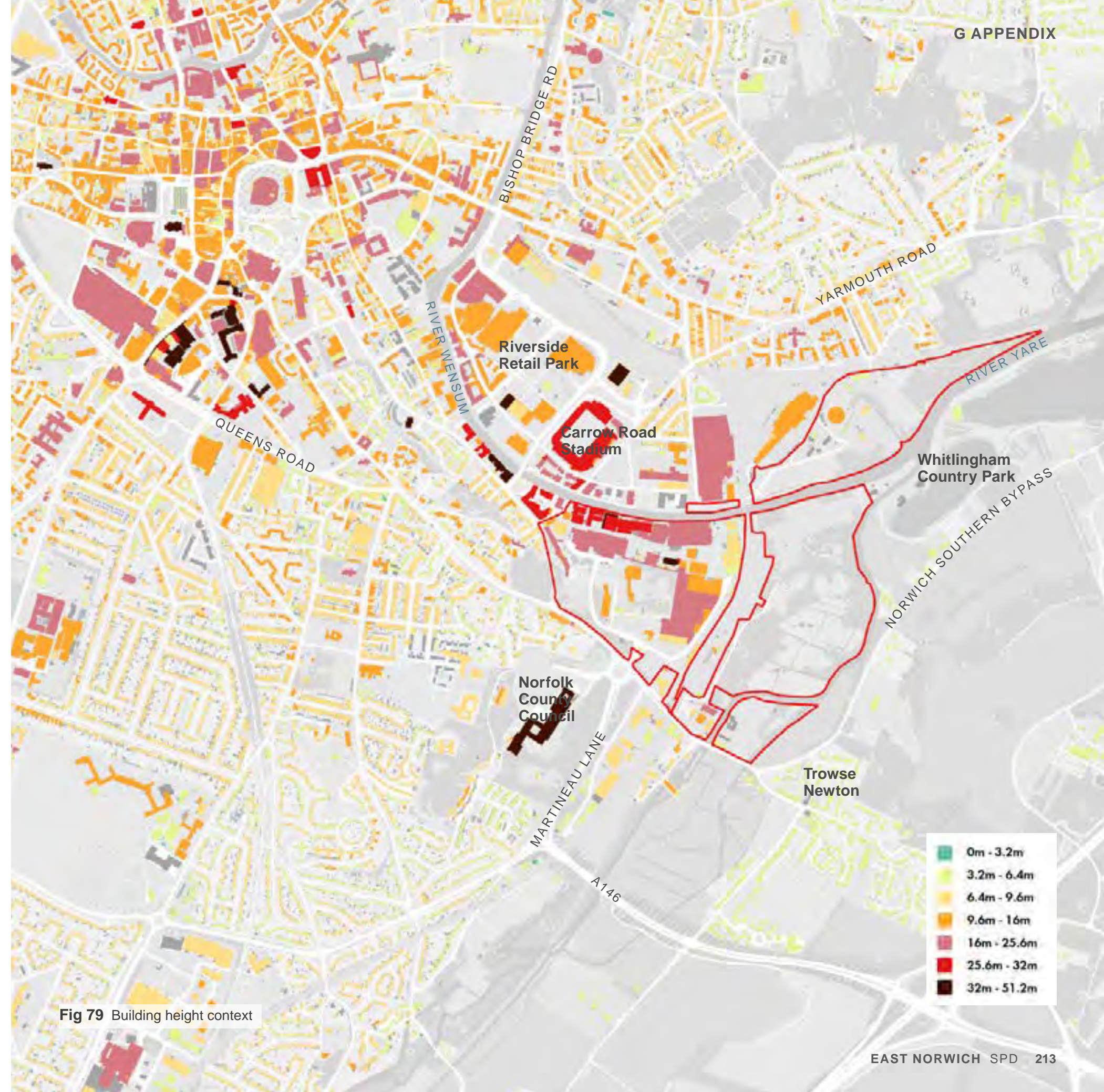


Fig 79 Building height context

2.5 Walking and cycling

2.4.1 Local Cycling and Walking Infrastructure Plan

The County Council are progressing a Local Cycling and Walking Infrastructure Plan (LCWIP) in line with the progress being made on the Greater Norwich Local Plan.

An objective of the LCWIP is to align improvements in the local walking and cycling network with known major development sites coming forward. The East Norwich Masterplan provides an ideal opportunity to influence the emergence of the proposals in the LCWIP.

Embedded in the LCWIP's proposals is the opportunity to realign the National Cycle Network Route 1 as it passes through Whitlingham heading towards the city centre.

The coming forward of the Carrow Works site and the opportunity to forge new connections between it and surrounding sites including the Deal Ground and the Carrow Road area to the north presents great opportunities to improve the local and strategic network of routes thereby giving greater priority in the local highway network to active travel modes.

The Wherryman's Way from Norwich to Great Yarmouth trail route passes along Whitlingham Lane towards the city centre via Bracondale. This route could also potentially be improved by its diversion across the Deal Ground and Carrow Works site.



Fig 80 Draft Local Cycling and Infrastructure Plan (extract)

- Pedalways**
- Green line: Easton ↔ Rackheath
 - Red line: Thorpe Marriott ↔ Whitlingham (National Cycle Route 1)
 - Orange line: Drayton ↔ Poringland
 - Yellow line: Horsford ↔ Harford
 - Pink line: Hethersett ↔ Wroxham
 - Blue line: Wymondham ↔ Sprowston
 - Purple line: Inner circuit
 - Black line: Neighbourhood routes
 - Blue circle with X: Pedalway terminus
 - Yellow starburst: Mobility hub (cycling accessibility and parking improvements)
 - Yellow square: Development area

- Projects**
- | | | | |
|---|--|---|--|
| <p>Short term funded</p> <ul style="list-style-type: none"> 1 Dereham Road (Longwater Lane - Wendene) 2 Dereham Road / Richmond Road 3 Dereham Road / Breckland Road with Costessey & Bowthorpe mobility hub 4 Earlham Green Lane - Marriott's Way (via Norwich Road) 5 Marriott's Way to Hellesdon Road 6 Dereham Road / Larkman Lane and Larkman mobility hub 7 Dereham Road / Old Palace Road / Heigham Road 8 Norwich Airport industrial estate link 9 Cromer Road and Aylsham Road (Fifers Lane - Woodcock Road) 10 Cycle and pedestrian crossing of Outer Ring Road (Mile Cross) 11 Sprowston Road (Denmark Road - Outer Ring Road) 12 Sprowston Road (Magdalen Road - Denmark Road) 13 St Williams Way 14 Heartsease Lane | <ul style="list-style-type: none"> 15 Heartsease Fiveways junction 16 Kett's Hill roundabout 17 Thorpe Road (Clarence Road - Carrow Road) 18 Ipswich Road (Daniels Road - St Stephen's Road) 19 Wymondham Rail Station platform access 20 Norfolk & Norwich University Hospital mobility hub 21 Newmarket Road (Eaton Road - Christchurch Road) 22 Grapes Hill Roundabout 23 Connecting the Norwich Lanes (incorporating Eastbound traffic reduction and Wensum Missing Link) 24 Tombland 25 Norwich Rail Station mobility hub 26 King Street 27 Norwich Bus Station mobility hub 28 St Stephen's Road | <p>Medium/long term unfunded</p> <ul style="list-style-type: none"> 29 Green pedalway extension to Easton 30 Helleson (Low Road, Hospital Lane and Middletons Lane) 31 Yellow pedalway extension to Horsford 32 Hurricane Way 33 Mile Cross Road 34 Dolphin Path 35 Growth triangle orbital route (St Faiths to Wroxham Rd) 36 North Walsham Road 37 Wroxham Road 38 Denton Road crossing over Chartwell Road 39 Broadland Way (Wroxham to Rackheath) 40 Broadland Way (Rackheath to Dussingdale) 41 Salhouse Road 42 Growth triangle orbital route (Salhouse Road to Middle Road) 43 Lion Wood | <ul style="list-style-type: none"> 44 Martineau Lane 45 East Norwich Regeneration Area (Martineau Lane to Thorpe) 46 East Norwich Regeneration Area (Carrow to Whittingham) 47 Bracondale 48 Carrow Hill 49 Harford P&R cycle link 50 Hethersett Lane 51 Colney Lane 52 Roundhouse Way - UEA 53 St Stephens Roundabout 54 Edward Street 55 St Georges Street |
|---|--|---|--|

2.6 Public transport context

2.5.1 Trains and buses

The south east of the city towards and beyond Trowse is served by a number of bus services which operate along the Queens Road / Bracondale axis.

The 40A and 41A serve Trowse village directly whilst all other services follow Martineau Lane towards the A146.

There is currently no bus service connecting the east Norwich area with Norwich Railway Station, with no services traversing Carrow Bridge.

The Thorpe Road corridor adjacent to the Utilities Site is well served by local buses. The 14 and 15 routes provides direct and frequent links between the Broadland Business Park and the railway station and city centre.

Norwich Railway Station is one of the city's principal public transport interchanges. Whilst not geographically far away from the East Norwich area, improved connections between the area and the station would significant shorten the journey time - particularly by foot and bicycle - between the two.

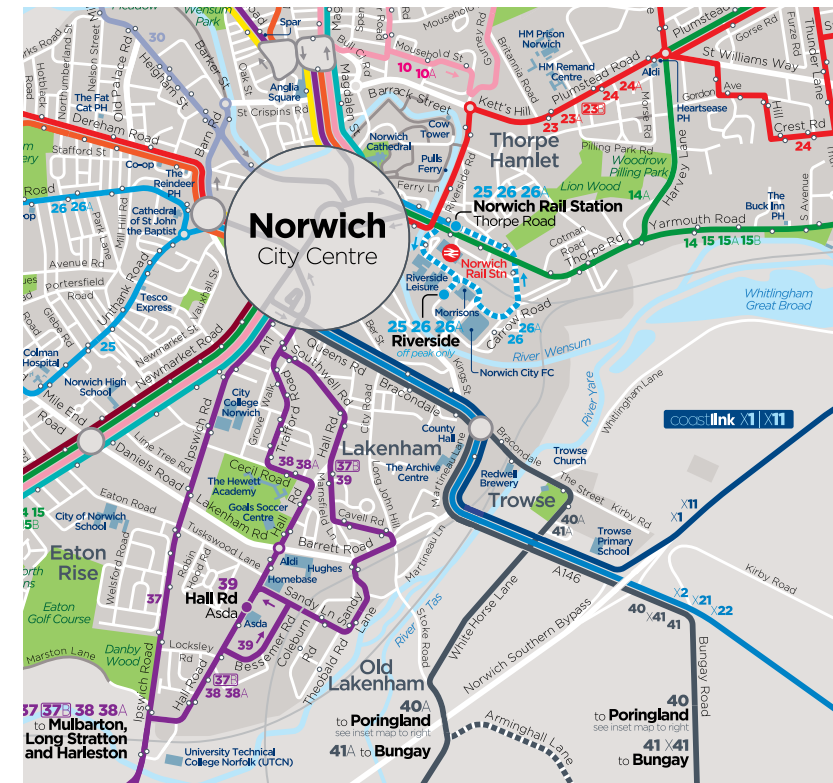


Fig 81 Extract from the local bus network map for services provided by First Eastern Counties

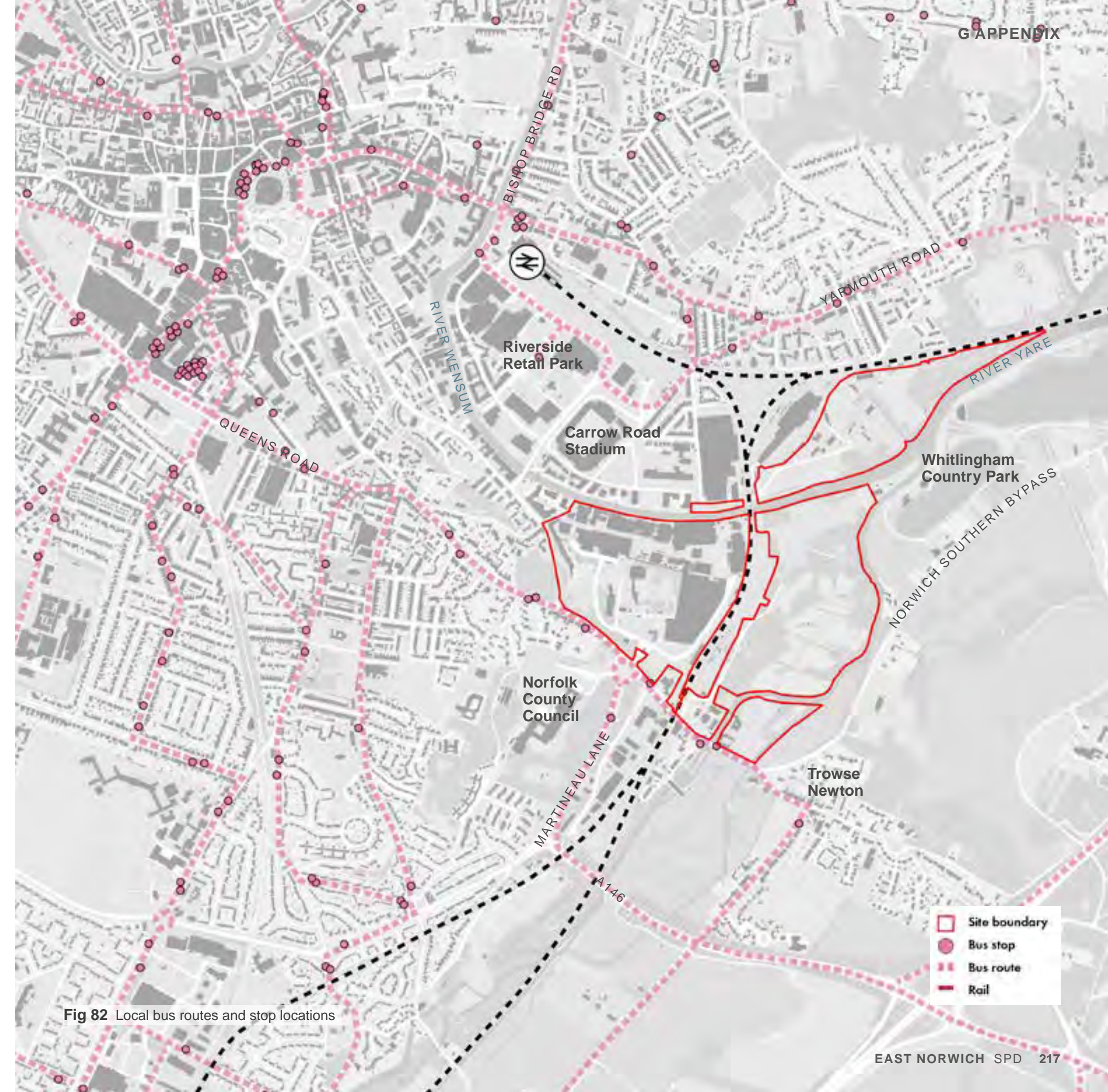


Fig 82 Local bus routes and stop locations

2.7 Road network context

2.6.1 Strategic road network in East Norwich

With the convergence of the Yare and Wensum river corridors and the mainline railway line on its approach into Norwich, the strategic road network of an inner and outer ring road which is otherwise in place around the city is somewhat compromised. These natural and infrastructure elements interrupt the city's outer and inner ring roads.

This results in particular pressure on the Martineau Lane roundabout and the King Street approach to Carrow Bridge.

The ENSRA sits within the heart of this zone between the Carrow Bridge to the west and the Norwich Southern Bypass to the east. The Southern Bypass was successful in removing much traffic from Trowse Village through which all traffic travelling towards the city once passed.

Carrow Works site already benefits from a major junction with the A147 Bracondale. The May Gurney Site has an existing vehicular access, also onto Bracondale.

However, the Deal Ground and the Utilities Sites do not benefit from direct access to the local road network which is a constraint which must be overcome. It should also be noted that vehicular access to the Utilities Site from the west on the north side of the River Wensum is not currently viable as this is privately owned and controlled land.

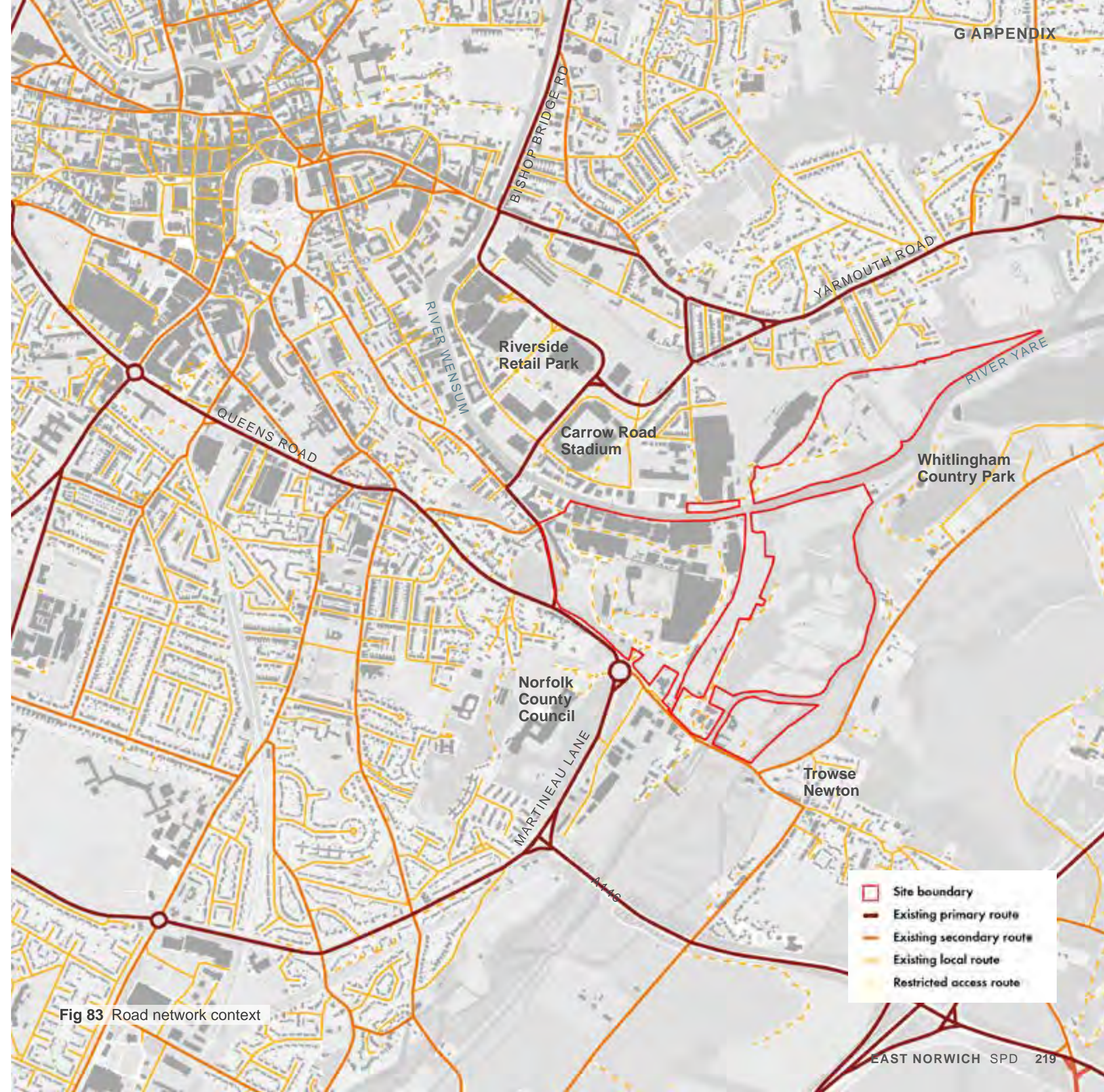


Fig 83 Road network context

2.8 Land ownership

2.7.1 Land owners and key stakeholders

Land ownership (Fig 84) will play a critical role in shaping the future regeneration of these strategic sites. Whilst numerous land owners are involved, given the wide range of complex issues to consider, land ownership is relatively straightforward in east Norwich with the vast majority of the Carrow Works and Deal Ground sites being in respective single ownership and three principal land owners controlling the Utilities Site.

The City Council have recently purchased Carrow House and given the need to better link this site with the rest of the masterplan area, the relationship between Carrow House and Carrow Abbey will be an important issue to consider.

Between the Carrow Works and Deal Ground sites lies Tarmac's Trowse Asphalt Plant. This is an ongoing operation on land leased from Network Rail but the functions undertaken on the sites are strategically important for Norfolk. Whilst there are noise and other environmental issues relevant to this ongoing operation, it is a use which needs to be respected and retained.

Beyond the railway line south of the River Wensum, the Deal Ground and May Gurney sites are owned by

Serruys Property Company. There is currently an extant planning permission for housing-led development on the Deal Ground site and detailed planning permission for a road alignment from Bracondale to the Utilities Site via two proposed bridges across both the River Yare and Wensum.

The Carrow Yacht Club is outside of the ENSRA but has an important historic link with the Colman family, having originally been established by the factory owners for the benefit of those who worked there.

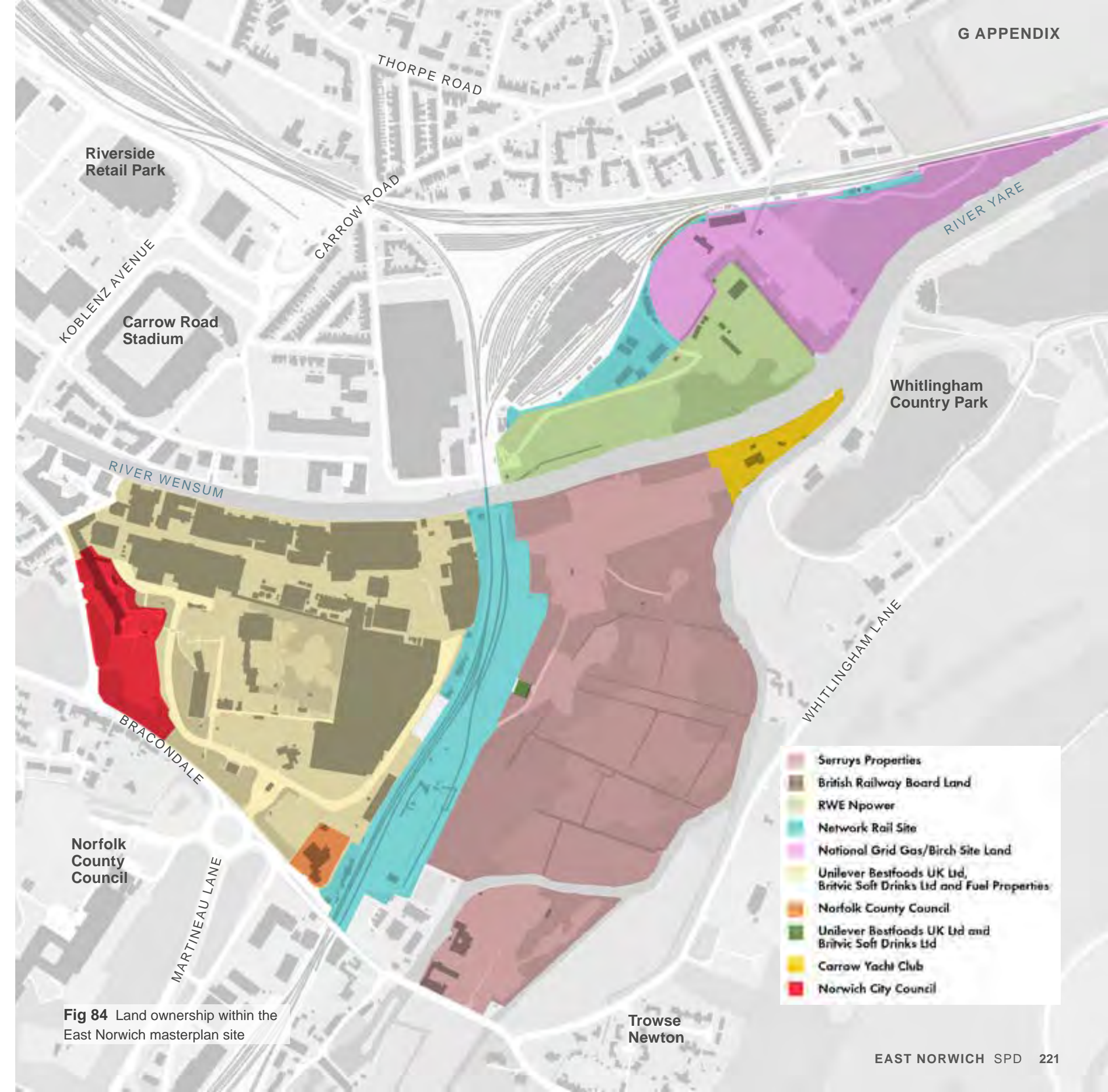


Fig 84 Land ownership within the East Norwich masterplan site



2.9 Flooding

2.8.1 Flood risk mapping

Fig 85 opposite provides an overview of available flood risk data for the east Norwich area.

The north western corner of the Deal Ground is shown as being at 'high risk' and within Flood Zone 3. An area of Flood Zone 3 extends along the northern boundary of the Deal Ground and along the frontage of the River Wensum.

The eastern and south eastern sections of the Deal Ground are shown as being within Flood Zone 3. Large areas of Utilities Site are also shown as being within Flood Zone 2.

Aside from a small area at the north east corner of the site, Carrow Works is shown to be largely unaffected by flood risk.

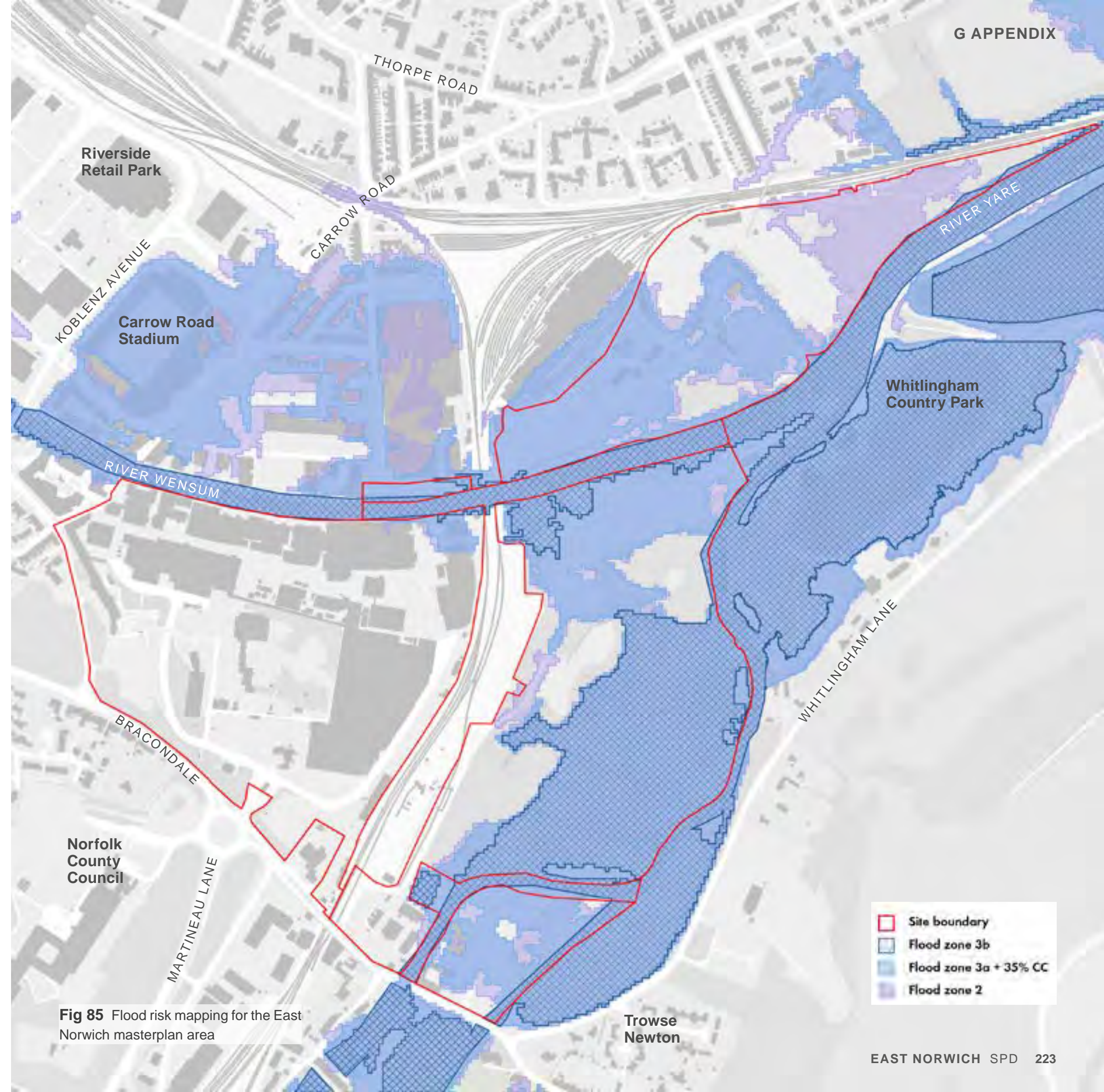


Fig 85 Flood risk mapping for the East Norwich masterplan area

2.10 Environmental analysis

2.9.1 Landscape and ecology designations

The ENSRA is the transition between the urban city centre and the rural Broads.

The Carrow Works site mostly retains an industrial urban character with no greening along the river's edge where many of the warehouses are situated and operations take place. However, at the southern edge of the Carrow Works site, mature planting and trees providing a natural barrier to the A147. Mature planting also provides an attractive setting around the Grade I listed Carrow Abbey, and the Scheduled Monument Carrow Priory ruins.

There are open space designations across East Norwich as shown on Fig 86. The Grade II Crown Point Registered Park and Garden extends up to the eastern side of Whitlingham Lane. The Whitlingham Country Park is designated a Local Nature Reserve.

The County Wildlife Site (CWS) ecological designation covers much of the eastern side of the Deal Ground site. It should be noted that the Desmoulin's whorl snail is present within the CWS.

As a gateway to the Broads, the character of the study

area becomes distinctly rural east of the River Yare with Whitlingham Country Park north of the nearby village of Trowse Newton.

Beyond designated green and open spaces, it should also be noted that brownfield sites are listed as a Priority Habitat in Section 41 of the Natural Environment and Rural Communities Act 2006 (NERC Act), as 'open mosaic habitat on previously developed land'.

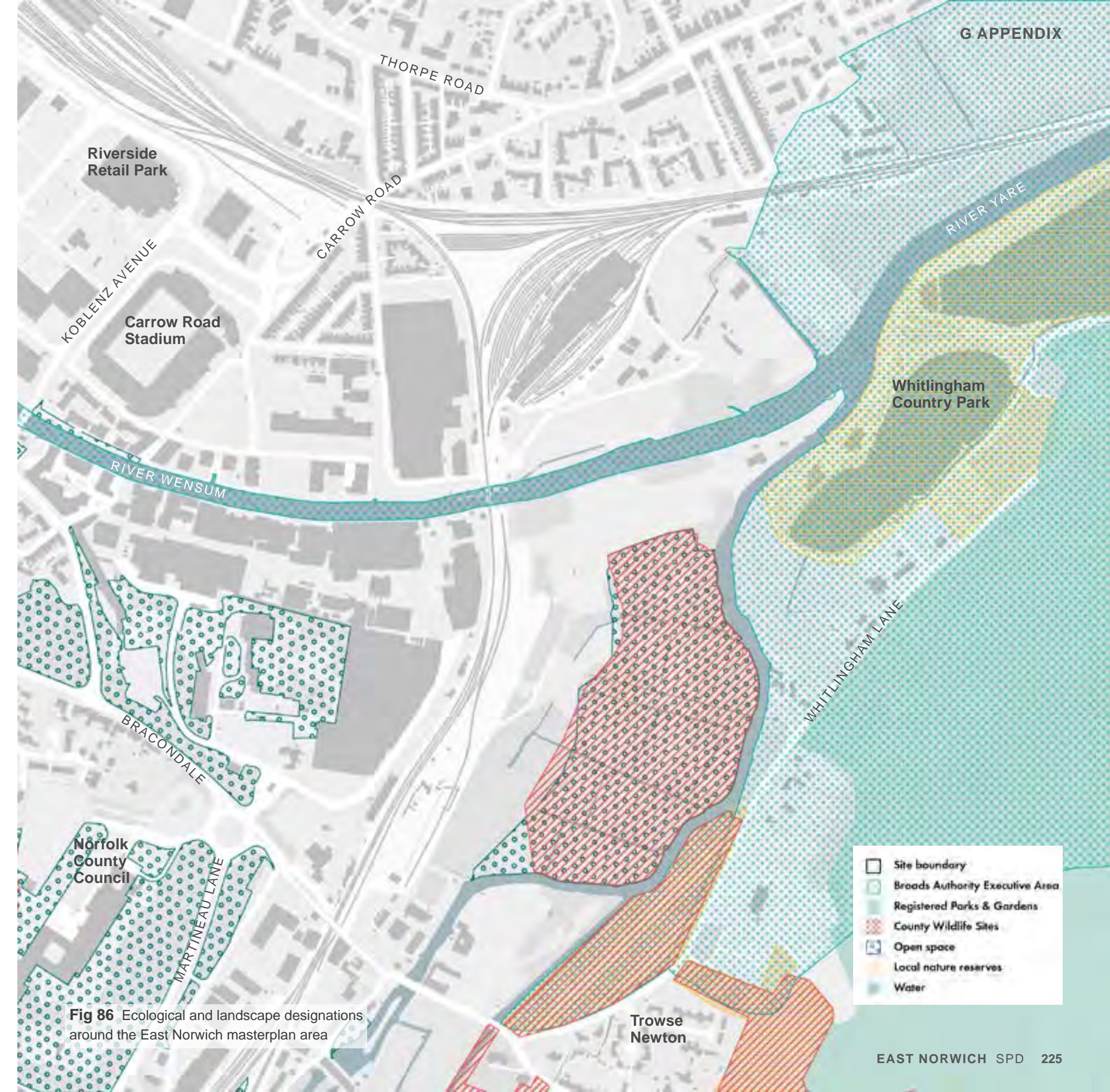


Fig 86 Ecological and landscape designations around the East Norwich masterplan area

2.11 Heritage and landscape

The masterplan area benefits from a wide range of heritage assets - both designated and non-designated.

Fig 87 shows the distribution of built heritage assets together with Registered Parks and Gardens and Tree Preservation Order designations.

The most significant asset on the site is the Scheduled Monument around the site of the former Carrow Priory. This extends across the site of the Grade 1 listed Carrow Abbey.

The site also benefits from four other Grade II* and Grade II listed buildings and numerous buildings and structures which have been included on the City Council's Local List.

The Bracondale Conservation Area covers much of the western side of the masterplan area whilst the Trowse Millgate Conservation Area covers the area nearest Trowse as Bracondale passes over the railway and the River Yare.

The Crown Point Registered Park and Garden is classified Grade II between Trowse Newton village and Whitlingham Great Broad. It is comprised of gardens designed in the mid C19 by William Broderick Thomas and altered at the beginning of the C20 by Edward Boardman, set in a late C18/early C19 park.

In December 2016, the Broads Authority published their comprehensive assessment of landscape character across the Broads. The resultant assessment identifies two different character areas which have a direct relationship with the ENSRA. Landscape Character Area 10 Yare - Whitlingham Lane, and Landscape Character Area 11 Yare - Cary's Meadow to Postwick Grove/Whitlingham Marsh, are shown on the adjacent plan.

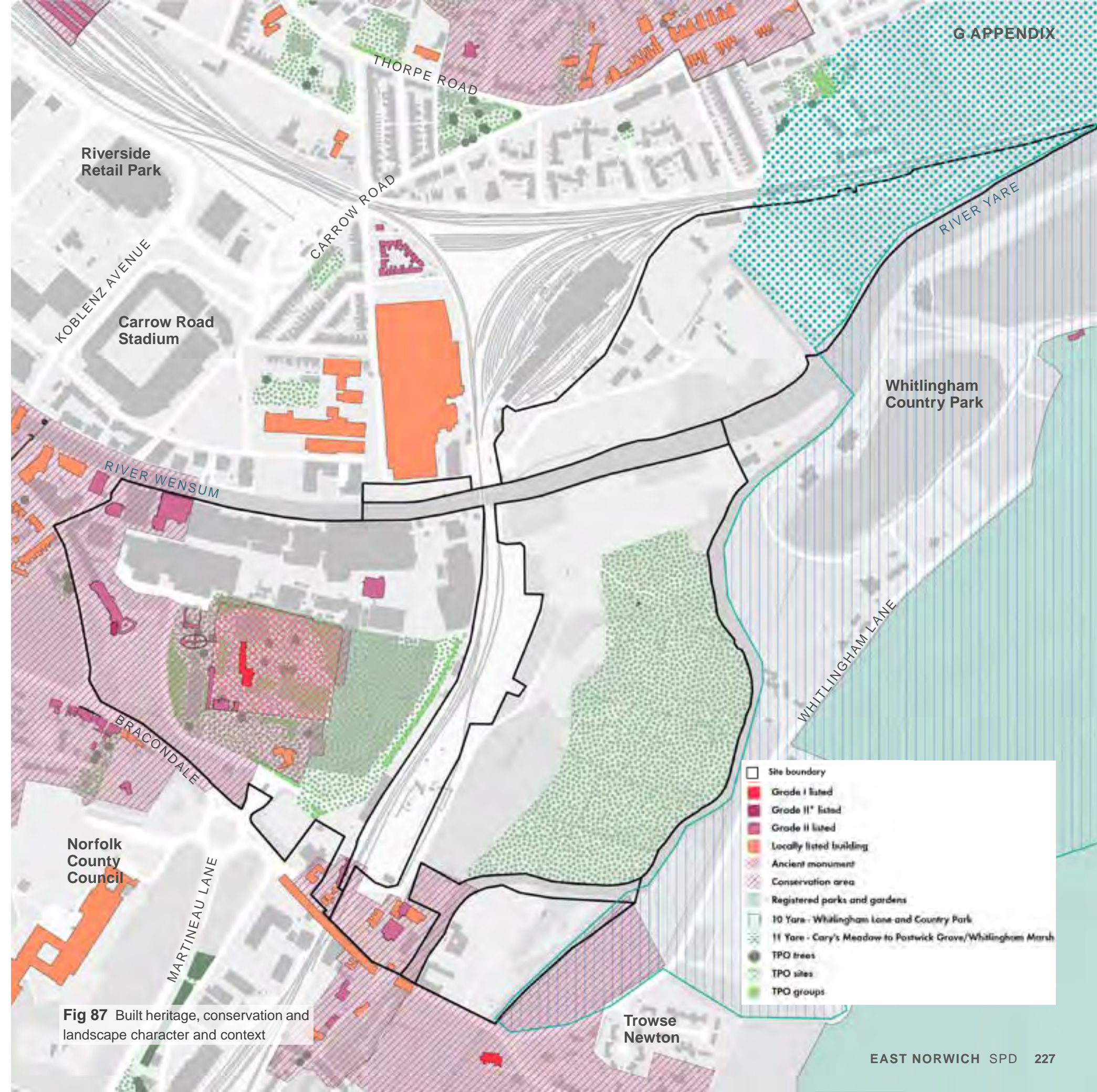


Fig 87 Built heritage, conservation and landscape character and context

2.12 Utilities context

The Utilities Site has in past hosted two power stations (one coal fired and one oil fired), a gasworks and a gas holder - although all have now been demolished. The site is currently used as a depot and offices for National Grid. A section of the north western quadrant of the site also forms part of the much larger Network Rail owned maintenance depot.

In addition, the Thorpe Grid 132kV sub-station and Thorpe 33kV substation are located on the Utilities Site. The relocation of these would be impractical and cost prohibitive. Also located on the Utilities Site is a gas pressure reducing station (intermediate to medium pressure) which connects with gas mains routed below the railway lines.

The Utilities Site is also part occupied and used by the Train Operating Company Greater Anglia in association with their Crown Point depot facility.

These current and former uses of the site present a significant complex legacy and network of underground utilities.

Utilities pass beneath the Carrow Works site generally on alignments associated with service or former railway routes.

High voltage electricity pylons were buried in 2016. These underground utilities now pass beneath and around the Deal Ground site.

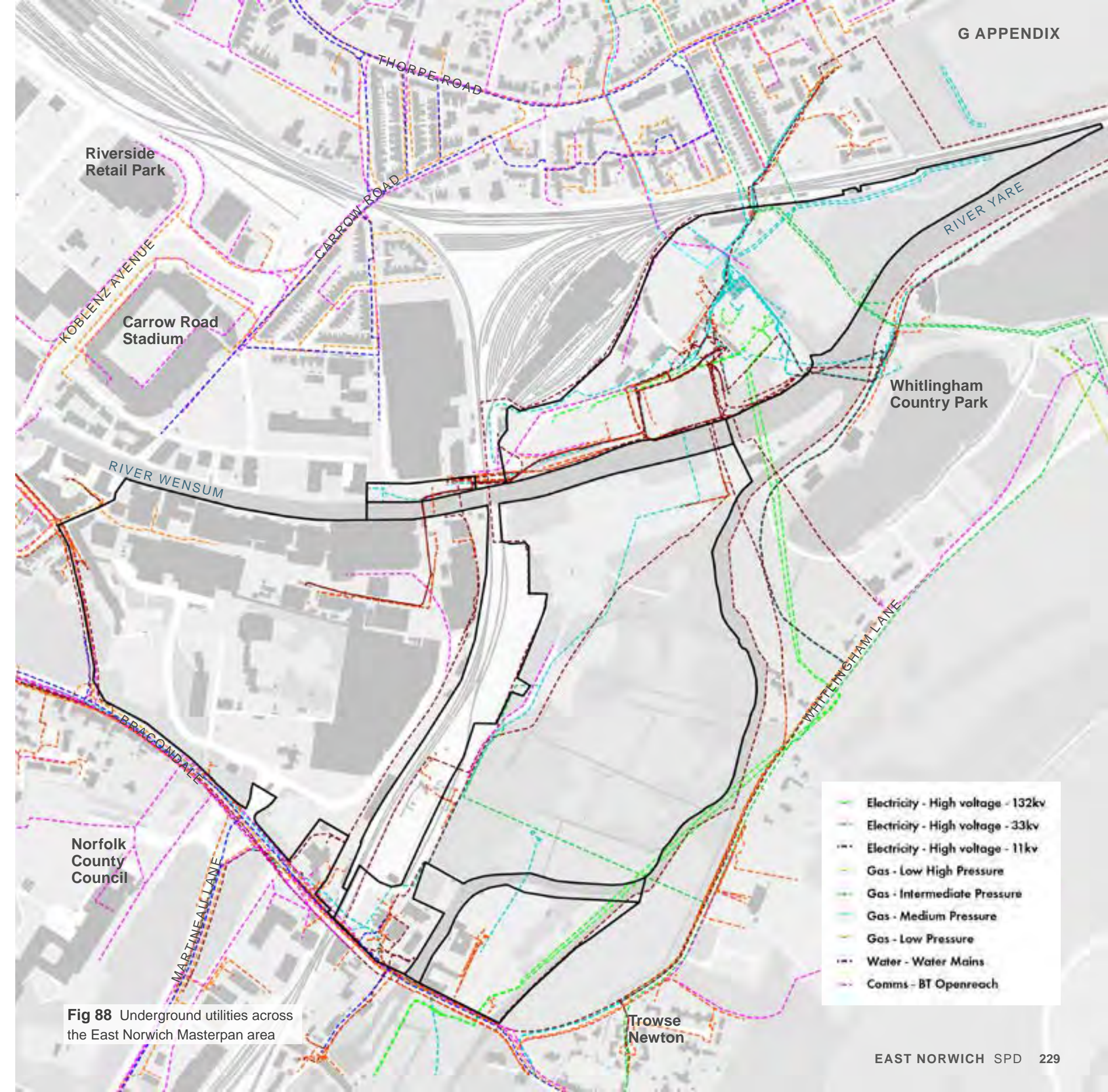


Fig 88 Underground utilities across the East Norwich Masterpan area

3 INFRASTRUCTURE REQUIREMENTS

3.1 Required infrastructure across the East Norwich area

	POLICY (OR OTHER) REQUIREMENT	EAST NORWICH AS A WHOLE	CARROW WORKS	DEAL GROUND	UTILITIES SITE	MEANS OF SECURING
HOUSING	GNLP5 – Homes	33% Affordable Housing (inc 10% local needs) subject to viability on brownfield sites	33% affordable housing	33% affordable housing	33% affordable housing	S106
	GNLP 7.1	Manage and mitigate the impact of vehicular traffic from the site/s on the local highway network including the Martineau Lane roundabout, Bracondale and King Street	Link/access to west via Paper Mill Yard/ King Street (via Carrow House) – by ped/cycles in particular as a priority but also all vehicles Improvements to Bracondale roundabout Improvements to Bracondale/King Street junction			Legal agreement with third parties Planning conditions to secure off-site highway works
MOVEMENT	Site allocation informed by detailed masterplan	Bridges and underpasses	Footbridge over Wensum to Geoffrey Watling Way Improvements to underpass under railway	All modes bridge access over Wensum between Deal Ground and Utilities site Bridge over River Yare to May Gurney site & A147 Improvements to underpass under railway Footbridge over River Yare to Whitlingham Country Park	All modes bridge access over Wensum between Deal Ground and Utilities site Improved access routes to Kerrison Road and Hardy Road over or under railway line north of Trowse swing bridge Improvements to, and potential for adoption of, Cremorne Lane footbridge	By agreement with landowners Potentially supported by CIL or other public sector funding
	Masterplan	Community transport hub (* if required)	Land for community transport hub (*)			Application

	POLICY (OR OTHER) REQUIREMENT	EAST NORWICH AS A WHOLE	CARROW WORKS	DEAL GROUND	UTILITIES SITE	MEANS OF SECURING
MOVEMENT	Masterplan (list of essential infrastructure)	Contribution to bus services	Contribution to bus service through CW site Ensure layout & land ownership suitable to accommodate buses			CIL
	Site allocation	Establish recreational routes	Recreational route to WCP suitable to accommodate NCR1	Recreational route to WCP suitable to accommodate NCR1	Recreational route along eastern margin with potential ped/cycle link to Careys Meadow	Application – accommodate within layout & agreement with others for continuation of provision
	GNLP2 – new & changing technologies	Electric vehicle infrastructure	Layout consideration & electricity supply query	Layout consideration & electricity supply query	Layout consideration & electricity supply query	Application thorough planning conditions
FLOODING	GNLP2	Flood mitigation		Flood mitigation measures TBC Small leisure marina Low level riverside walk along north and south banks of Wensum	Boating marina Low level riverside walk along north and south banks of Wensum	Application
COMMUNITY INFRASTRUCTURE	GNLP2 – safe communities	Social infrastructure	Contribution to additional policing	Contribution to additional policing	Contribution to additional policing	CIL
	GNLP2 & GNLP4 - health care infrastructure Masterplan (list of essential infrastructure)	Appropriate community health facility (to be agreed with CCG)	Land for community health facility (TBA)	Contribution to health care provision	Contribution to health care provision	CIL and/or land
	GNLP4 & Site allocation requires new social infrastructure, informed by detailed masterplan	2FE Primary school	Land for primary school, flexible approach to provision (an urban school perhaps within an existing building)	Contribution to new school/school places	Contribution to new school/school places	CIL and/or land

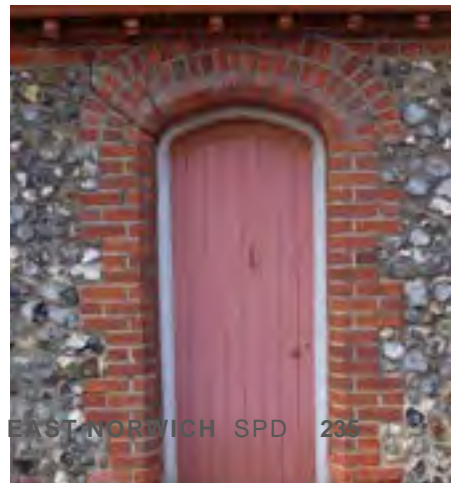
	POLICY (OR OTHER) REQUIREMENT	EAST NORWICH AS A WHOLE	CARROW WORKS	DEAL GROUND	UTILITIES SITE	MEANS OF SECURING
CI	GNLP2 & GNLP4 – water supply & sewage network improvements (Whitlingham WRC)	Demonstrate adequate capacity in wastewater network				Application (engagement with AWS to demonstrate capacity)
	GNLP2 & GNLP3 – provision or enhancement of GI for informal recreational needs	Strategic green and blue infrastructure	Management and maintenance associated with increased visitor pressure/usage of Whitlingham Country Park	Management and maintenance associated with increased visitor pressure/usage of Whitlingham Country Park	Management and maintenance associated with increased visitor pressure/usage of Whitlingham Country Park	S106 / CIL
GREEN AND BLUE INFRASTRUCTURE	GNLP3 – mitigation of protected sites	GI RAMS (Norfolk Green Infrastructure and Recreational impact Avoidance and Mitigation Strategy)	£185.93/dwelling	£185.93/dwelling	£185.93/dwelling	S106
	GNLP2 & GNLP3 – provision or enhancement of GI for informal recreational needs	Min 2 ha/1000 popn (NE Accessible Natural Greenspace Standard)	Informal areas for recreation, dog walking areas, off-lead areas, signage & long-term management & maintenance	Informal areas for recreation, dog walking areas, off-lead areas, signage & long-term management & maintenance	Informal areas for recreation, dog walking areas, off-lead areas, signage & long-term management & maintenance	Application/S106
	Site allocation			Remediation & long-term management of Carrow Abbey CWS		Application & S106
	Norwich Local Plan DM8 – informal publicly accessible open space	Public open space & management	Local public open and child play space as required	Local public open and child play space as required	Local public open and child play space as required	Application & S106
	GNLP3 – at least 10% Biodiversity Net Gain	Enhanced GI & enhancement to biodiversity - Hierarchy – on-site, off-site, credits	Enhanced GI & enhancement to biodiversity - Hierarchy – on-site, off-site, credits	Enhanced GI & enhancement to biodiversity - Hierarchy – on-site, off-site, credits	Enhanced GI & enhancement to biodiversity - Hierarchy – on-site, off-site, credits	Application/S106

	POLICY (OR OTHER) REQUIREMENT	EAST NORWICH AS A WHOLE	CARROW WORKS	DEAL GROUND	UTILITIES SITE	MEANS OF SECURING
HERITAGE	GNLP 7.1 & Site allocation	Protect and enhance sites rich heritage assets	Protection & long-term management of the scheduled monument & listed buildings	Preservation of Grade II bottle kiln (repair & reuse)		Application & S106
			Strategy of heritage interpretation			
EMPLOYMENT	GNLP 7.1	New employment opportunities for 6,000 jobs	Commitment of amount of employment/non-residential floor space provision	Commitment of amount of employment/non-residential floor space provision	Commitment of amount of employment/non-residential floor space provision	Application through planning conditions



4 SITE PHOTOGRAPHS

4.1 Carrow Works Site





4.2 Deal Ground Site



4.3 May Gurney Site and surrounding area





4.4 Utilities Site

