LAND AT DEAL GROUND AND MAY GURNEY

Non-Technical Summary (NTS) for Environmental Statement Addendum

Serruys Property Company Limited

CONTENTS

1 INTRODUCTION

1.1 INTRODUCTION

This non-technical summary (NTS) is to assist in providing a synopsis of the recently submitted environmental statement addendum (ESA). The addendum forms part of the following reserved matters application (Norwich City reference 23/00774/RM and South Norfolk 2023/1825):

> *The proposal seeks the approval of the reserved matters for application ref: 12/00875/O and 2011/0152/O in relation to scale, layout, appearance and landscaping pursuant to outline planning application (full details of access) for a mixed development consisting of a maximum of 670 dwellings; a local centre comprising commercial uses (A1/A2/A3): a restaurant/dining quarter and public house (A3/A4); demolition of buildings on the May Gurney site (excluding the former public house); an access bridge over the River Yare; new access road; car parking; flood risk management measures; landscape measures inc. earthworks to form new swales and other biodiversity enhancements including the re-use of the Grade II Listed brick Kiln for use by bats.*

The full ESA is available to view on the Council's website. A hard copy is available for £595 or on a memory stick for £39 directly from the Applicant:

Serruys Property Co Ltd
The Hub
Atlas Works
Lenwade
NR9 5SN

1.2 ESA STRUCTURE AND PROJECT TEAM

Table 1.1 sets out the structure and chapter subjects of the ESA and the consultants involved – Triptych PD acted as overall co-ordinator on all chapters.

Table 1.1 – Chapter and Technical Consultant

Chapter number and name	Consultant
01 – Statement of Competence	Serruys Property Company
02 – Introduction	Triptych PD
03 – Methodology and Limitations	Triptych PD
04 – Site and Surroundings	Triptych PD
05 – Proposed Development	Triptych PD
06 - Alternatives Considered	Triptych PD
07 – Planning Policy Overview	Triptych PD
08 – Landscape and Visual Impact Assessment	IDP
09 – Ecology	Aspect Ecology
10 – Transport	Odyssey

Chapter number and name	Consultant
11 – Air Quality	SLR
12 – Hydrology, Hydrogeology, Flood Risk and Surface Water Drainage	JBA
13 – Socio-economic and Health	CBRE
14 – Built Heritage	HCUK
15 – Climate Change	CBRE
16 – Cumulative	Triptych PD
17 – Summary and Conclusions	Triptych PD

As confirmed in Chapter 01 – Statement of Competence, all consultants are qualified and/or experienced experts within their technical disciplines.

Some sections with this NTS are a replication of what is contained within the ESA. This is where it is considered necessary and/or to provide the complete context e.g. site and surroundings. It is the technical aspects and conclusions that have been summarised.

2 METHODOLOGY AND LIMITATIONS

2.1 INTRODUCTION

Where an EIA is required for a proposed development, information on the likely significant effects of the development must be provided by the applicant in an ES to accompany the planning application. The outline scheme was subject to the EIA process.

Regulation 3 of the EIA Regulations states:

> *The relevant planning authority…must not grant planning permission or subsequent consent for EIA development unless as EIA has been carried out in respect of that development.*

When considering the reserved matters for the outline scheme it is necessary to consider how the EIA Regulations apply to 'subsequent applications' which are defined as meaning (as set out in EIA Regulation 2):

> *An application for approval of a matter where the approval – is required by or under a condition to which a planning permission is subject; and must be obtained before all or part of the development permitted by the planning permission may be begun.*

The EIA Regulations therefore prohibit development consent being granted, including those for subsequent applications, unless there is an assessment of the likely significant effects of the development. The EIA Regulations seek to ensure the determining authority makes its decision in the full knowledge of any likely significant environmental effects.

Since the outline consent was EIA development, it follows that any subsequent applications pursuant to that planning permission will also be ones that relate to EIA development and will thus have to be determined by reference to an ES.

In relation to the outline scheme, it is necessary to consider the EIA Regulations on the basis set out in Regulation 9 for 'subsequent applications' since this applies where an ES has already been submitted. Regulation 9(2) states that where the environmental information (in this instance the previous ES, addendum and associated environmental information) already before the authority is considered adequate, the authority should take this into account in its decision for a subsequent consent. Regulation 9(3) states that where the environmental information is not considered adequate to assess the significant effects of the development on the environment, a notice must be served under Regulation 25. Alternatively, the applicant can submit further environmental information voluntarily – this is the route taken in the provision of the ESA. It should be noted that there are no requirements in the Regulations as to the format and content of an ESA.

2.2 SCOPING

Given the near ten-year passing of time between the outline application and consent in addition to the change is EIA Regulations plus the professional view for the reserved matters application to be robust in terms of the legislation, further scoping requests have been made in line with the 2017 Regulations and

opinions issued that have formed the contents and format of the ESA. The initial scoping request was submitted by Lanpro on 26th September 2022. Opinions were received from from the three local planning authorities (LPAs) (Broads Authority - BA/2022/0350/SCOPE on 2nd November 2022; Norwich City Council (NCC) 22/01225/EIA2 on 23rd November 2022; and South Norfolk - 2022/1847 on 7th December 2022) – the request and opinions are contained within appendix 3.1 of the ESA. An addendum in addition to that already submitted and received was submitted by Triptych PD on 27th February 2023 to specifically scope out the 2017 Regulations subject of risk of major accidents and disasters and agree the viewpoints for the LVIA, which had been scoped in by the Broads Authority (BA/2022/0350). Following various liaison and discussion, opinions were received from NCC on 10th May 2023 (23/01243/EIA) and South Norfolk on 25th May 2023 (2023/0578) – these confirmed that based on the information contained within the request, major risks of accidents and disasters could be scoped out and the LVIA viewpoints and methodology were agreed (appendix 3.2 of the ESA). No direct response was received from the Broads Authority, but it is understood liaison occurred between the three LPAs.

2.3 Methodologies and Limitations

It is on the basis of the two requests and five opinions received that the ESA has progressed as per the structure contained within Table 1.1 of this NTS. Specific technical methodologies and limitations were reported in each chapter of the ESA, as appropriate. It is confirmed that there was no limitation that resulted in robust conclusions not being able to be drawn.

2.3.1 Construction Programme

In terms of the relevant technical assessments, these have been undertaken based on the following programme:

Table 2.1 – Construction Programme/Timetable

Phase	Start Date	End Date
Submission of reserved matters application for all phases	June 2023	June 2023
Determination period for pre-commencement conditions	January 2024	June 2025
Phase 1 construction – May Gurney site	July 2025	September 2029
Phase 2 construction – road infrastructure	October 2029	September 2031
Phase 3 construction – Deal Ground site	October 2030	September 2038

2.4 Methodology

The ESA was prepared in accordance with the statutory guidance and requirements, and the contents of the ESA have been prepared in line with the EIA Regulations 2017. The technical chapters of the ESA address the potentially significant environmental impacts, as determined through site analysis completed to date.

The EIA has addressed the potential environmental impact and effects of the proposed development and, where appropriate, the following categories of effects have been analysed:

- residual and cumulative;
- temporary and permanent (short and long term); and
- beneficial, negligible and adverse.

The ESA provides a description of the baseline environment(s) against which the environmental impacts have been assessed and a description of the proposed development, whilst the detailed methodology utilised was outlined within each of the technical chapters.

The significance criteria used in undertaking the EIA have been described within each technical chapter and are based on relevant standards, criteria, guidance and statutory requirements, where applicable. Where possible, quantitative analysis has been utilised, with qualitative analysis undertaken where this is not possible, in line with professional opinion and judgement. For consistency and where possible within the technical chapters of the ESA, the significance level of quantitative and qualitative impacts references impact criteria as follows and as applicable:

- major;
- moderate;
- minor; and
- negligible.

Each of the technical chapters contained within the ESA has outlined the appropriate mitigation measures which are recommended or required to address, reduce or avoid the significant adverse impacts on the environment.

2.4.1 Cumulative Effects

The ESA has considered the cumulative effects associated with the proposed development. As detailed within EIA guidance, cumulative effects can be considered as:

- The combined effect of individual effects arising as a result of the proposed development: *i.e.* a single receptor experiencing multiple effects as a result of noise, air quality and transport; and
- The combined effects of the proposed development in combination with other development schemes in the locality: *i.e.* effects which on an individual basis are insignificant but in combination with other development scheme would lead to a significant effect.

2.5 COMMITTED DEVELOPMENT

Further to the scoping opinions received and EIA guidance, the following have been taken into consideration where necessary in the relevant technical assessments:

Table 2.2 – Committed Development

App Number:	2019/2318
App Type:	Full
Location :	Phase 2, Land off White Horse Lane, Trowse
Proposal :	Erection of 83 no. dwellings, vehicular access, landscaping, open space and associated infrastructure
Decision	Approved

App Number:	2022/2148
App Type:	Outline
Location :	Land north of Caistor Lane Caistor St Edmund
Proposal :	Hybrid Application: Part 1. Detailed proposals for a 25.5 hectare country park together with associated infrastructure. Part 2. Outline proposals with all matters reserved, except for access, for a residential development of up to 180no. dwellings, serviced site for a new 420 place primary school, serviced site for a new community building, Step 7 FA Standard football pitch and a package of improvements to Caistor Lane.
Decision	Pending consideration

Application Ref	Description	Distance to Site
22/00434/F Anglia Square (Yet to be determined)	Hybrid (Part Full/Part Outline) application for the comprehensive redevelopment of Anglia Square, and car parks fronting Pitt Street and Edward Street for: up to 1,100 dwellings and up to 8,000sqm (NIA) flexible retail, commercial and other non-residential floorspace including Community Hub, up to 450 car parking spaces (at least 95% spaces for class C3 use, and up to 5% for class E/F1/F2/Sui Generis uses), car club spaces and associated works to the highway and public realm areas. Due to the size of this application, all plans and documents can be viewed online at www.norwich.gov.uk/angliasquare.	Approx 2km to north west of the site.
17/01647/VC Land north of Carrow Quay (Phase 4 along the riverside remains to be constructed)	Variation of Condition 1 of previous permission 13/01270/RM to allow revised plans. [Reserved Matters with full details of external appearance, landscape, layout and scale of development, to provide 250 No. residential flats (Class C3), 113sqm offices (Class B1a), 279sqm groundsman's facilities (Class B8), and 401sqm of flexible office space (Class B1a) and community uses (Class D1/D2) with 126 No. parking spaces, associated highways works and provision of a Riverside Walk, consequent to previous outline planning permission	Adjacent site to the north of the River Wensum

	11/02104/O 'Outline application with full details of access for residential-led development of between 200 and 250 No. residential flats (Class C3) and 140 No. car parking spaces with commercial office space (Class B1a), groundsman's facilities (Class B8), community uses (Class D1/D2) and associated works including Riverside Walk and access road'. The proposals include details for approval of Conditions 1(a), 1(b), 2(b), 3, 4(a), 4(b), 4(c), 5, 6, 7, 8(a), 8(b), 12, 20, 22(a), 22(b), 22(c), 22(e), 25, 26, and 30(a) of outline planning permission 11/02104/O applicable to the form of development as proposed in these Reserved Matters.]	
22/00540/EIA2 Carrow Works, King Street	EIA Scoping Opinion Request for mixed use re-development at Carrow Works, Norwich.	Adjacent site to north west of railway line

In addition, the proposals on the adjacent Carrow Works site, which whilst are not submitted/approved, but are reasonably foreseeable have been considered (NCC reference: 22/00540/EIA2).

3 SITE AND SURROUNDINGS

3.1 INTRODUCTION

As an addendum in support of a reserved matters application, it is noted that the site has marginally altered from the outline stage and therefore worth confirming and as defined with the technical assessments, as necessary.

3.2 SITE AND SURROUNDINGS

The site is located in East Norwich, on the edge of Trowse, bordering the Norfolk Broads. It straddles three districts Norwich, South Norfolk and Broadland.

It comprises two parcels of land at Deal Ground and the former May Gurney site. The site is a total of 11.36 hectares.

The site is bordered by rivers to the north and east of the Deal Ground and to the north, east and west of the May Gurney site. To the immediate east of the Deal Ground site lies a County Wildlife Site.

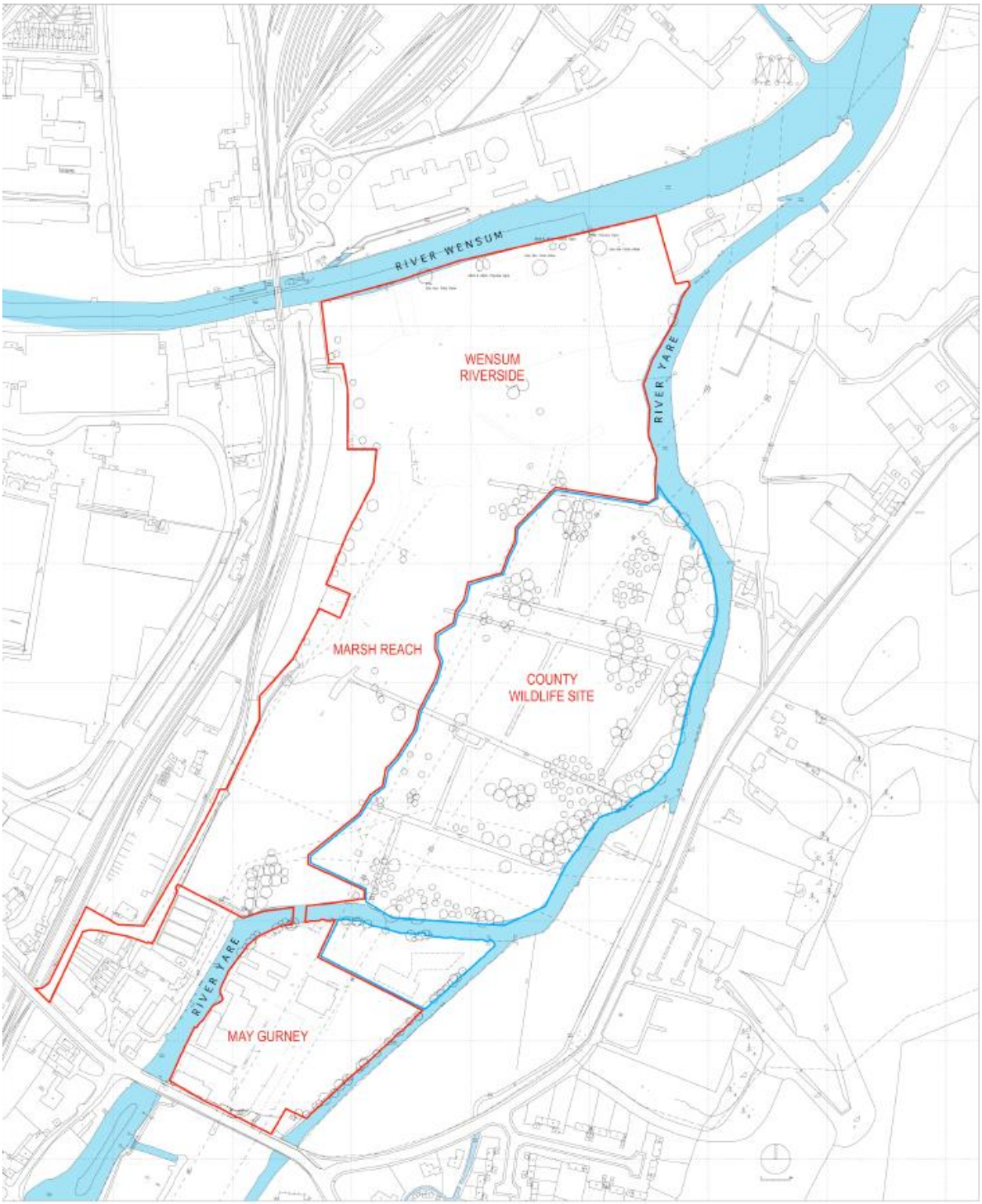
To the north east of the May Gurney site is an area of land, with a lapsed planning consent for a four-storey office building. To the south west of the site lies the 1898 cottages and former Post Office. This is within the site boundary but was removed from the outline proposal and does not comprise part of the 2013 consent.

The site lies within a mile of the City Centre and is 1km from Norwich Railway Station.

Whitlingham Country Park, which is located to the east and north east of the site, offers a range of activities including sailing, windsurfing, kayaking, rafting and canoeing. An artificial ski slope is also located due east of the site.

Cycle routes are currently available along the A1054 and the A1242 as well as along Bracondale into the centre of Trowse.

Figure 3.1 – Site Location and Surrounding Context



NB – do not scale, north to top, red line denotes application site.

4 PROPOSED DEVELOPMENT

As stated in section 1 of this NTS and for completeness, the reserved matters application is for:

> *The proposal seeks the approval of the reserved matters for application ref: 12/00875/O and 2011/0152/O in relation to scale, layout, appearance and landscaping pursuant to outline planning application (full details of access) for a mixed development consisting of a maximum of 670 dwellings; a local centre comprising commercial uses (A1/A2/A3): a restaurant/dining quarter and public house (A3/A4); demolition of buildings on the May Gurney site (excluding the former public house); an access bridge over the River Yare; new access road; car parking; flood risk management measures; landscape measures inc. earthworks to form new swales and other biodiversity enhancements including the re-use of the Grade II Listed brick Kiln for use by bats.*

It is on this basis that the technical assessments within the ESA were undertaken and completed.

5 ALTERNATIVES CONSIDERED

5.1 INTRODUCTION

The parameters of development were set by the 2013 planning approval. Therefore, for the reserved matters application, alternatives were considered within those set parameters and taking account of environmental factors. The design evolution that has culminated in the proposals for this application are clearly and quite appropriately set out in the Design and Access Statement that forms part of the application and prepared by Stolon. Whilst there is no guidance relating to an ES addendum within the Regulations, this section has been included for clarity and robustness to 'bridge the gap' from the previous to the 2017 Regulations. In that respect, Regulation 18(3)(d) requires for an ES to include:

> *…a description of the reasonable alternatives studied by the developer, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the development on the environment.*

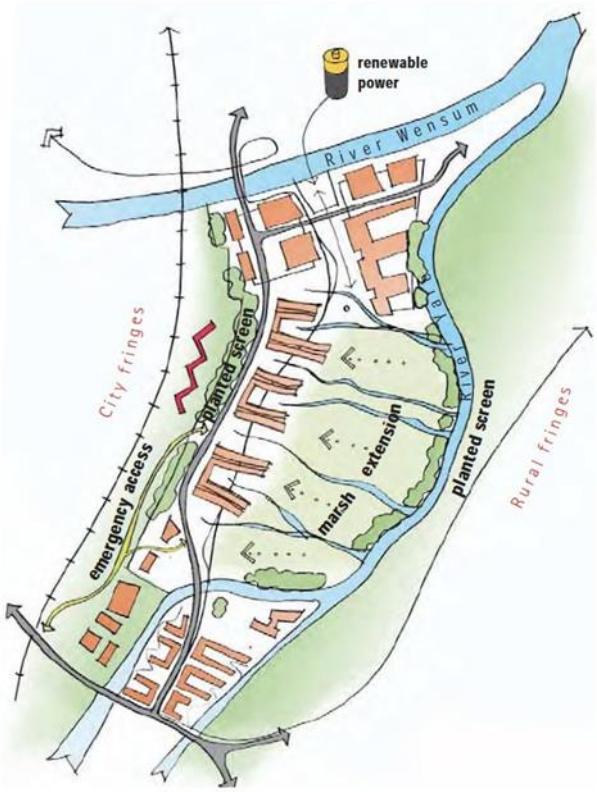
There is no requirement (for an ES) to list all reasonable alternatives.

5.2 DO-NOTHING

The reality and practicality of not progressing with the reserved maters application for an allocated site (R9: The Deal Ground, Trowse (site allocation) (Norwich site specific policies plan) and East Norwich Strategic Regeneration Area (emerging site allocation) (Greater Norwich Local Plan)) would not meet the aims of the relevant plan policies nor the identified housing need.

5.3 Outline Planning Approved Masterplan

Figure 5.1 – Outline Approved Masterplan



The concept set out in the outline planning application was to set development around the marsh, rising from the lowest buildings in the south up to the tallest buildings in the north, onto the River Wensum. It incorporated dense terraces of housing in the May Gurney site, mews type fingers of development extending towards the marsh in the middle and blocks of development in the north. The concept incorporated a flood channel running South to North from the marsh to the River Wensum and to create floodable swales between fingers of development. In developing the reserved matters application, the original concept was revisited and alternative approaches considered.

Since the outline application was consented in 2013 NCC developed the East Norwich Strategic Regeneration Area. This indicated an alternative layout without the need for the flood flow channel and this was tested through flood modelling by the council.

Alternatives were explored with the aim to better integrate the parking, improve the access to the north east of the site and to create a better mix of units and spaces, as well as meet current planning policies.

5.4 Evolution of Alternatives including Environmental Considerations

Alternative plans explored arrangements in which the coach drop off area was reconfigured, the Wensum Edge and The Views were more continuous and the May Gurney site is less dominated by long lines of terraces. In one a secondary road was proposed with housing backing onto the marsh. In another the flood channel was changed to a park and the housing was arranged into clusters to create

home zones. Subsequent flood modelling by JBA indicated that the removal of the flood channel could increase flood levels off site and therefore needed to be reinstated. The LPA also asked that the development be more closely aligned with the Development Areas indicated in the Outline Consent. Therefore, a third alternative, which forms the basis of this reserved matters application, included a blue/ green corridor connecting the Marsh and River Wensum. The May Gurney site is reconfigured as are the Views and Wensum to meet the stated aims and to create an attractive high quality and sustainable development.

Figure 5.2 – Third Alternative

The reserved matters application has been developed closely in coordination with a comprehensive expert team, in liaison with the local authority and the statutory consultees. Factors considered (but not limited to) included:

- Use;
- Access;
- Highways including parking;
- Character and design;
- Flooding and sustainable urban drainage;
- Materials;
- Landscaping; and
- Ecology.

5.5 FINALISED MASTERPLAN

The extensive design and consultation process taking into account technical assessments and solutions has resulted in the masterplan that forms this reserved matters application as shown in Figure 5.3.

Figure 5.3 – Finalised Masterplan

NB Not to scale

6 PLANNING POLICY OVERVIEW

6.1 INTRODUCTION

Each technical chapter within the ESA contains a section specifically identifying the applicable planning (and other relevant guidance) policies to that subject. In addition, the Planning Statement prepared by Maddox Associates is the appropriate document for assessing the proposals against the planning policy context.

6.2 PLANNING POLICY OVERVIEW

Table 6.1 identifies the main policies relevant in the determination of this application and has been included in the ESA for completeness in addition to those within the chapters.

Table 6.1 – Planning Policy Overview

Document	Policy number	Policy title
Norwich Site Allocations and site-specific policies plan	R9	The Deal Ground – residential led mixed use development
Norwich Development Management Policies Local Plan	DM1	Achieving and delivering sustainable development
Norwich Development Management Policies Local Plan	DM2	Amenity
Norwich Development Management Policies Local Plan	DM3	Design Principles
Norwich Development Management Policies Local Plan	DM4	Renewable energy
Norwich Development Management Policies Local Plan	DM5	Flooding
Norwich Development Management Policies Local Plan	DM6	Natural environmental assets
Norwich Development Management Policies Local Plan	DM7	Trees and development
Norwich Development Management Policies Local Plan	DM8	Open space
Norwich Development Management Policies Local Plan	DM9	The historic environment and heritage assets
Norwich Development Management Policies Local Plan	DM11	Environmental Hazards
Norwich Development Management Policies Local Plan	DM12	Principles for all residential development

Document	Policy number	Policy title
Norwich Development Management Policies Local Plan	DM16	Employment and business development
Norwich Development Management Policies Local Plan	DM28	Encouraging sustainable travel
Norwich Development Management Policies Local Plan	DM31	Car parking and servicing
Norwich Development Management Policies Local Plan	DM32	Car free and low car housing
Joint Core Strategy for Broadland, Norwich and South Norfolk	Policy 1	Addressing climate change and protecting environmental assets
Joint Core Strategy for Broadland, Norwich and South Norfolk	Policy 2	Promoting good design
Joint Core Strategy for Broadland, Norwich and South Norfolk	Policy 3	Energy and water
Joint Core Strategy for Broadland, Norwich and South Norfolk	Policy 4	Housing delivery
Joint Core Strategy for Broadland, Norwich and South Norfolk	Policy 5	The economy
Joint Core Strategy for Broadland, Norwich and South Norfolk	Policy 6	Access and transportation
South Norfolk Development Management Policies DPD	DM 1.1	Ensuring development management contributes to achieving sustainable development in South Norfolk
South Norfolk Development Management Policies DPD	DM 1.4	Environmental quality and local distinctiveness
South Norfolk Development Management Policies DPD	DM 1.5	Existing commitments
South Norfolk Development Management Policies DPD	DM 2.1	Employment and business development
South Norfolk Development Management Policies DPD	DM 3.1	Meeting housing requirements and needs
South Norfolk Development Management Policies DPD	DM.3.8	Design Principles
South Norfolk Development Management Policies DPD	DM 3.10	Promotion of sustainable transport
South Norfolk Development Management Policies DPD	DM 3.12	Provision of vehicle parking

Document	Policy number	Policy title
South Norfolk Development Management Policies DPD	DM 3.13	Amenity, noise, and quality of life
South Norfolk Development Management Policies DPD	DM 3.14	Pollution, health, and safety
South Norfolk Development Management Policies DPD	DM 4.1	Renewable Energy
South Norfolk Development Management Policies DPD	DM 4.2	Sustainable drainage and water management
South Norfolk Development Management Policies DPD	DM 4.3	Facilities for the collection of recycling and waste
South Norfolk Development Management Policies DPD	DM 4.8	Protection of Trees and Hedgerows
South Norfolk Development Management Policies DPD	DM 4.9	Incorporating landscape into design
South Norfolk Development Management Policies DPD	DM 4.10	Heritage Assets
Emerging Greater Norwich Local Plan	Policy 1	The sustainable growth strategy
Emerging Greater Norwich Local Plan	Policy 2	Sustainable communities
Emerging Greater Norwich Local Plan	Policy 3	Environmental protection and enhancement
Emerging Greater Norwich Local Plan	Policy 5	Homes
Emerging Greater Norwich Local Plan	Policy 6	The economy

7 SUMMARY OF IMPACTS

The following tables provide the summarised and professional conclusions in terms of the impacts of the proposed development for that specific technical discipline. Mitigation measures have been included where relevant and necessary and the final impact assessment with these in place have been confirmed including residual impacts.

7.1 LANDSCAPE AND VISUAL IMPACT ASSESSMENT

Table 7.1 - Construction Phase Visual Effects

ESA Viewpoint	Equivalent ES View	Sensitivity	Description of Construction Effects	Magnitude of change	Significance of Effect
VP1	VP20	Medium - High	View from Bracondale bridge over River Yare looking across to the western edge of May Gurney site. Some of the construction plant will be visible, although enclosed by hoarding to the riverside. Activities will be temporary and short to medium-term, with other impacts experienced along Bracondale through construction traffic and the highway works.	Medium	Moderate Adverse
VP2	VP19	Medium	View from Bracondale opposite the May Gurney site at the new entrance point to the site. No.1886 Bracondale to the left will be retained, but the construction works will dominate this view and be disruptive to its character, but only in the short-term.	High	Moderate Adverse
VP3	VP10	Medium - High	Views from Whittingham Lane junction with Bracondale adjacent to St Andrew's church. Some plant and construction activity will be partially visible, partly screened by the local vegetation.	Medium	Moderate Adverse
VP4	VP12	High	Located on Whittingham Lane looking west through gaps in the trees with glimpsed view towards the May Gurney site. Some plant and construction activity will be visible through the trees against the backdrop of the existing urban fringe development.	Medium	Moderate Adverse

ESA Viewpoint	Equivalent ES View	Sensitivity	Description of Construction Effects	Magnitude of change	Significance of Effect
VP5	none	High	Views from Trowse common were not considered as part of the ES, but the village centre is in close proximity to the development and receptors have a high sensitivity to change. Some plant associated with the taller elements of the development may be perceptible in the winter months mainly, albeit short-term.	Low	Moderate-Minor Adverse
VP6	none	High	Views to the south of Bracondale were not considered as part of the ES. A footpath runs along the route of the river with views north towards the site. Some plant associated with the taller elements of the development may be perceptible in the winter months largely, albeit short-term.	Low	Minor Adverse
VP7	none	High	Views from Whitlingham Lane towards the Deal Ground site are available. Some plant and construction activity will be visible on the Deal Ground site against the backdrop of the existing treescape and urban development beyond. Disruption would be perceptible but short-term.	Medium	Moderate Adverse
VP8 & 10	VP18	Very High	Views from Wherryman's Way LDR within the country park and Broads National Park. Some taller construction plant may be visible above the skyline, particularly in the winter months.	Low	Moderate Adverse
VP9	VP4	Very High	Views from Whitlingham Country Park to edge of River Yare. The removal of some trees and the presence of construction plant will be visible behind the existing tree belt, partially obscured by vegetation.	Medium	Moderate Adverse
VP11	none	Very High	View from Great Broad in Whitlingham Country Park not considered in the ES. Some taller construction plant may be visible in the winter months but unlikely to break the skyline.	Low to No Change	Negligible
VP12 & 13	VP5 & 2	Very High	Views from the River Yare on hire boat representing Broads users within the National Park. The removal of some trees and the presence of construction plant will be visible behind the existing tree belt in the short-term but will not form a dominant feature.	Low	Minor Adverse
VP14 & 15	VP1 & 9	Very High	View from the River Wensum on a hire boat close to the northern boundary of the site, representing only water-	High	Major Adverse

ESA Viewpoint	Equivalent ES View	Sensitivity	Description of Construction Effects	Magnitude of change	Significance of Effect
			based viewers. The removal of some trees and the presence of construction plant will be a conspicuous feature locally.		
VP16	VP8	Medium	View eastwards on the River Wensum adjacent to the Colman works with the main line railway bridge in the foreground. The removal of some trees and the presence of construction plant will be a conspicuous feature locally.	Medium	Moderate-Minor Adverse
VP17	VP22	Medium	View from residential area at Glendenning Road/ Thorpe Hamlet. Some of the large construction plant, such as cranes will be partially visible beyond the railway line and the buildings. The removal of some of the trees will be visible.	Medium	Moderate-Minor Adverse
VP18	none	Medium	View from Heathside Road/ Cotman Road to the north, not considered in the ES. Some taller construction plant may be visible in the winter months but unlikely to be a prominent feature in the wide panorama over the city.	Low	Minor Adverse
VP19	none	Medium	View from Carrow Hill to the west of the site was not considered in the ES. This area now heavily developed would largely obscure any construction activities that may be seen.	Low to No Change	Negligible
VP20	Additional view	High	View from Norwich Castle	Low to No Change	Negligible

Table 7.2 - Operational Phase Visual Effects

ESA Viewpoint	Equivalent ES View	Sensitivity	Description of Operational Effects	Magnitude of change	Significance of Effect	Mitigation	Residual effect
VP1 (AVR)	VP20	Medium - High	View from Bracondale bridge over River Yare looking across to the western edge of May Gurney site. No.1886 Bracondale offsite will be retained, and new residential buildings will replace existing commercial development beyond. New buildings are set back from river and orientated to allow space between. Buffer provided to	Medium	Moderate Adverse	Native planting to landscape buffer	Moderate-Minor Adverse

ESA Viewpoint	Equivalent ES View	Sensitivity	Description of Operational Effects	Magnitude of change	Significance of Effect	Mitigation	Residual effect
			River Yare to allow regeneration of bankside vegetation and new planting.				
VP2	VP19	Medium	View from Bracondale opposite the May Gurney site at the new entrance point to the site. No.1886 Bracondale to the left will be retained, and new buildings will front the road to the right, with a view north along the new road corridor.	High	Moderate Adverse	None	Moderate Adverse
VP3	VP10	Medium - High	Views from Whittingham Lane junction with Bracondale adjacent to St Andrew's church. New residential development will form a visible extension to the existing roadside built form in the distance, partially screened by the intervening vegetation around the grass meadows to the right of the view. Buffer provided to riverside to allow regeneration of bankside vegetation and new planting.	Medium	Moderate Adverse	Native planting to landscape buffer	Moderate Adverse
VP4	VP12	High	Located on Whittingham Lane looking west through gaps in the trees with glimpsed view towards the May Gurney site. New residential development will be located behind a landscape buffer in the distance, seen in the context of the existing semi-industrial backdrop of the Tarmac works adjacent to the railway. Buffer provided to river frontage to allow regeneration of bankside vegetation and new planting.	Medium	Moderate Adverse	Native planting to landscape buffer	Moderate Adverse
VP5 (AVR)	none	High	Views from Trowse common were not considered as part of the ES, but the village centre is in close proximity to the development and receptors have a high sensitivity to change. The proposed residential buildings will replace the existing commercial development which is glimpsed in the view, of a similar scale and located on the road frontage, thereby causing a negligible degree of change in the winter months. The AVR demonstrates that there will not be any operational visual effects in the summer months given the low-set development well below the tree-line.	Low	Moderate-Minor Adverse	None	Moderate-Minor Adverse
VP6	none	High	Views to the south of Bracondale were not considered as part of the ES. A footpath runs along the route of the river with views north towards the proposed development fronting Bracondale. The new buildings would be no more	Low	Minor Adverse	None	Minor Adverse

ESA Viewpoint	Equivalent ES View	Sensitivity	Description of Operational Effects	Magnitude of change	Significance of Effect	Mitigation	Residual effect
			than three storeys in height and likely to sit behind the intervening vegetation and only be glimpsed in the winter months. Given the presence of other built form in the view, the degree of change to the visual environment will be minimal.				
VP7	none	High	Views from Wherryman's Way LDR further north along Whitlingham Lane were not considered in ES. Views are available towards the Deal Ground site where the proposed buildings would form additional elements of built form across the view. The CWS is located adjacent to the River Yare and screens the May Gurney site to the south from this view. Buffer provided to river frontage to allow regeneration of bankside vegetation and new planting.	Medium	Moderate Adverse	Native planting to landscape buffer	Moderate Adverse
VP8 & 10 (AVR)	VP18	Very High	Views from Wherryman's Way LDR within the country park and Broads National Park were under-represented in the ES. The LDR continues to follow the River Yare east into the Broads, with a range of recreational uses (such as the canoe club) and receptors likely to experience some degree of change through the development. Vegetation in the country park forms an enclosing element with only glimpsed views in and out. Proposed buffer is provided to river frontage to allow regeneration of bankside vegetation and new planting. AVR demonstrates that there will be a low degree of change given the low-set development below the existing tree-line.	Low	Moderate Adverse	Native planting to landscape buffer	Moderate Adverse
VP9 (AVR)	VP4	Very High	Views from footpath loop within Whitlingham Country Park to the edge of the River Yare close to its confluence with the River Wensum. The character of this view is consistent with the area, with views of recreational activity and associated built form close to the edge of Norwich. As demonstrated by the AVR, the new buildings will be visible as a new element in the landscape, although at a lower elevation than the existing Poplars and partially screened by retained vegetation.	Medium	Moderate Adverse	None	Moderate Adverse

ESA Viewpoint	Equivalent ES View	Sensitivity	Description of Operational Effects	Magnitude of change	Significance of Effect	Mitigation	Residual effect
VP11	none	Very High	View from the banks of Great Broad in Whitlingham Country Park towards the site in the distance approx. 700m away. Vegetation in the country park forms an enclosing element with limited views out. The new buildings are unlikely to be visible in the landscape, at a lower elevation than the existing trees and largely screened by retained vegetation.	Low to No Change	Negligible	None	Negligible
VP12 & 13 (AVR)	VP5 & 2	Very High	Views from the River Yare on a hire boat representing Broads users within the National Park. The meandering river, bank height and bankside vegetation create enclosure and glimpsed views, resulting in the Deal Ground site being a more recessive element in the landscape except at close proximity. As demonstrated by the AVR, the ridges of new buildings will be visible as a new element in the landscape, although at a lower elevation than the existing trees in the view.	Low	Minor Adverse	None	Minor Adverse
VP14 & 15 (AVR)	VP1 & 9	Very High	View from the River Wensum on a hire boat close to the northern boundary of the site, representing only water-based viewers. There will be a significant change in the character of the site, as new buildings will occupy the brownfield site and some trees will need to be removed. The built form will be set back from the river frontage with space for landscaping and riverside walks, as well as the pedestrian bridge across the Wensum. This development will create a prominent gateway to the city as demonstrated by the proposed AVR.	High	Major Adverse	New landscape treatment to river frontage and sense of place.	Moderate Adverse
VP16	VP8	Medium	View eastwards on the River Wensum adjacent to the Colman works with the main line railway bridge in the foreground. Access to the area is only possible by boat. Here the character changes dramatically as industrial buildings and former works close to the river's edge dominate the scene and create strong enclosure and a utilitarian character. New modern development at Carrow stadium is beginning to transform this character. Proposed development will result in a significant change to the	Medium	Moderate-Minor Adverse	New landscape treatment to river frontage and sense of place.	Minor Adverse

ESA Viewpoint	Equivalent ES View	Sensitivity	Description of Operational Effects	Magnitude of change	Significance of Effect	Mitigation	Residual effect
			character of the site. The trees on the site are visible as a landscape feature.				
VP17 (AVR)	VP22	Medium	View from the residential estate around Glendenning Road/ Thorpe Hamlet. At this lower elevation, visibility to the site is more obscured by intervening buildings. The mature trees on the northern edge of the Deal Ground are partially visible as indicators of the development location. The railway sidings in the mid-ground creates a detracting element, although the large gasometer has been removed since the ES. As demonstrated by the AVR, new development proposed on the site will be visible, obscuring some of the landscape beyond, but with a broken roof line to allow some glimpsed views through.	Medium	Moderate-Minor Adverse	None	Moderate-Minor Adverse
VP18	none	Medium	View from Heathside Road/ Cotman Road to the north is located on rising land with glimpsed views from the residential area towards the site. The new development would introduce a minor new element into the panoramic views that are experienced within the existing urban edge of Norwich.	Low	Minor Adverse	None	Minor Adverse
VP19	none	Medium	View from Carrow Hill to the west of the site was not considered in the ES. This represents receptors within this housing area and close to the ancient city walls and towers enclosed by woodland. This area is now heavily developed with high-rise apartments, office blocks, and the existing Carrow works dominating the mid-ground. Views toward the site are obscured and would only view the upper levels of the highest buildings proposed.	Low to No Change	Negligible	None	Negligible
VP20	Additional view	High	View from Norwich Castle from the ramparts of the eastern edge, with a wide panorama of the city. Existing elements such as the football ground, St Anne's Quarter and the dry ski slope some 2.25km away are visible. The upper levels of the highest (Height??) buildings proposed would be visible as part of this ensemble of development, which would be barely perceptible from this location.	Low to No Change	Negligible	None	Negligible

7.2 ECOLOGY

Table 7.3 – Summary of Effects on Ecological Receptors

Potential effect	Nature of effect	Significance	Mitigation measures	Residual effects
Construction Phase				
Ecological Designations				
Carrow Abbey Marsh CWS	Slight, adverse and medium-term	Significant adverse at county level (uncertain)	Protection of habitats and pollution control measures, set out within Construction Method Statement, and Construction and Environmental Management Plan	Non-significant (probable)
Whitlingham LNR, Trowse Meadows CWS, Trowse Wood CWS	Slight, adverse and short-term	Significant at county level (uncertain)		Non-significant (probable)
Other ecological designations	Negligible	Non-significant (near certain)	No mitigation required	Non-significant (near certain)
Habitats and Ecological Features				
Eutrophic floodplain fen	Slight, adverse and medium-term	Significant at county level (uncertain)	Protection of habitats and pollution control measures, set out within Construction Method Statement, and Construction and Environmental Management Plan	Non-significant (probable)
Wet woodland	Slight, adverse and medium-term	Significant at local level (uncertain)		Non-significant (probable)
River Yare	Slight, adverse and short-term	Significant at local to county level (uncertain)		Non-significant (probable)
Invasive plant species	Moderate, adverse and long-term	Significant at local level (probable)	Control and eradication programme	Non-significant (probable)
Faunal Species				
Bats – roosting	Slight to moderate, adverse and medium-term	Significant at local level (uncertain)	Demolition / felling safeguards and disturbance control measures	Non-significant (probable)
Bats – foraging and commuting	Slight, adverse and medium-term	Significant at local level (uncertain)	Habitat protection and disturbance control measures	Non-significant (probable)
Water Vole	Slight, adverse and medium-term	Significant at local level (uncertain)	Protection of habitats	Non-significant (probable)

Potential effect	Nature of effect	Significance	Mitigation measures	Residual effects
Otter	Slight, adverse and medium-term	Significant at local level (uncertain)	Protection of habitats	Non-significant (probable)
Other mammals	Slight, adverse and medium-term	Significant at local level (uncertain)	Vegetation clearance safeguards	Non-significant (probable)
Reptiles	Moderate, adverse and medium-term	Significant at local level (probable)	Translocation exercise	Non-significant (probable)
Birds	Moderate, adverse and short-term	Significant at local level (probable)	Vegetation clearance safeguards, disturbance controls	Non-significant (probable)
Fish	Moderate, adverse and short-term	Significant at local level (uncertain)	Disturbance and pollution controls	Non-significant (probable)
Desmoulin's Whorl Snail	Slight, adverse and medium-term	Significant at county level (uncertain)	Habitat protection and disturbance control measures	Non-significant (probable)
Other invertebrates	Slight, adverse and medium-term	Significant at county level (uncertain)	Habitat protection and disturbance control measures	Non-significant (probable)
Operational Phase				
Ecological Designations				
The Broads SAC and Broadland Ramsar site	Slight, adverse and long-term	Significant at international level (uncertain)	Nutrient neutrality strategy	Non-significant (probable)
Whitlingham LNR, Trowse Meadows CWS, Trowse Wood CWS	Negligible to slight, adverse and long-term	Non-significant (probable)	No mitigation required, albeit design of on-site green space will absorb recreational pressure	Non-significant (probable)
Carrow Abbey Marsh CWS	Slight, adverse and long-term	Significant at county level (uncertain)	Fen translocation, fen restoration and management (see NCMP)	Significant beneficial (probable)
Habitats and Ecological Features				
Eutrophic floodplain fen	Slight, adverse and long-term	Significant at county level (uncertain)	Fen translocation, swale creation, fen restoration and management (see NCMP),	Significant beneficial (probable)

Potential effect	Nature of effect	Significance	Mitigation measures	Residual effects
			access barriers, drainage scheme	
Wet woodland	Slight, adverse and long-term	Significant at local level (uncertain)	Woodland management (see NCMP), access barriers, drainage scheme	Non-significant (probable)
River Yare	Slight, adverse and long-term	Significant at local level (uncertain)	Riverbank management (see NCMP)	Non-significant (probable)
Nationally Scarce plants	Slight, adverse and long-term	Significant at local level (probable)	Translocation exercise	Non-significant (probable)
Invasive plant species	Negligible	Non-significant (probable)	Control and eradication programme	Significant beneficial (probable)
Faunal Species				
Bats – roosting	Slight, adverse and long-term	Significant at local level (uncertain)	Sensitive lighting, bat boxes, Kiln enhancement	Significant beneficial (probable)
Bats – foraging and commuting	Slight, adverse and long-term	Significant at local level (uncertain)	Sensitive lighting, management of retained habitats, new habitat provision	Non-significant (probable)
Water Vole	Negligible	Non-significant (probable)	No mitigation required	Non-significant (probable)
Otter	Negligible	Non-significant (probable)	No mitigation required, but artificial holt proposed	Significant beneficial (uncertain)
Other mammals	Slight, adverse and long-term	Significant at local level (uncertain)	Fen management, habitat creation	Non-significant (probable)
Reptiles	Slight to moderate, adverse and long-term	Significant at local level (probable)	Fen management, creation of habitat piles, habitat creation	Significant beneficial (probable)
Birds	Slight to moderate, adverse and long-term	Significant at local level (probable)	Bird nesting opportunities, fen management	Significant beneficial (probable)
Fish	Negligible to slight, adverse and long-term	Non-significant (probable)	SuDS scheme	Non-significant (probable)

Potential effect	Nature of effect	Significance	Mitigation measures	Residual effects
Desmoulin's Whorl Snail	Slight, adverse and long-term	Significant at county level (uncertain)	Fen translocation, habitat creation including swales, fen restoration and management (see NCMP), drainage scheme	Non-significant (probable)
Other invertebrates	Slight, adverse and long-term	Significant at local level (uncertain)		Non-significant (probable)
Cumulative Effects				
Norfolk SACs, SPAs and Ramsar sites	Slight, adverse and long-term	Significant at international level (uncertain)	Contribution to regional GIRAMS, provision of open space	Non-significant (probable)

7.3 TRANSPORT

Table 7.4 - Summary of the Transport Effects, Mitigation and Residual Effects

Receptor/ Affected Group	Significance (value) of Receptor	Effect	Embedded Mitigation Measures	Magnitude/ Spatial Extent/Duration/ Likelihood of Occurrence	Significance of Effect	Additional Mitigation	Residual Magnitude of Impact	Significance of Residual Effect
Construction Effects								
Severance: For pedestrians using Bracondale	High	Change in severance experienced by pedestrians using Bracondale due to change in traffic flow associated with the introduction of construction traffic	Implementation of the Construction Method Statement (Condition 42)	Negligible Local Temporary Near-Certain	Slight Adverse	None	Negligible	Slight Adverse
Severance: For pedestrians of Martineau Roundabout and further afield	High	No change in severance for users of Martineau Roundabout and further afield	Implementation of the Construction Method Statement (Condition 42)	No Change Local Temporary Near-Certain	Neutral	None	No Change	Neutral
Pedestrian Delay and	High	Minimal change to	Implementation of the	Negligible Local	Slight Adverse	None	Negligible	Slight Adverse

Receptor/ Affected Group	Significance (value) of Receptor	Effect	Embedded Mitigation Measures	Magnitude/ Spatial Extent/Duration/ Likelihood of Occurrence	Significance of Effect	Additional Mitigation	Residual Magnitude of Impact	Significance of Residual Effect
Amenity: For pedestrians using Bracondale		the delay and amenity experienced by pedestrians due to change in traffic flow along Bracondale	Construction Method Statement (Condition 42)	Temporary Near-Certain				
Pedestrian Delay and Amenity: For pedestrians of Martineau Roundabout and further afield	High	Minimal to no change to the delay and amenity experienced by pedestrian users of Martineau Roundabout and further afield	Implementation of the Construction Method Statement (Condition 42)	No Change to minimal Local Temporary Near-Certain	Neutral	None	No Change	Neutral
Driver Delay: For drivers using Bracondale and Martineau Roundabout	Medium	Minimal increase in traffic flows on Bracondale and at Martineau Roundabout	Implementation of the Construction Method Statement (Condition 42)	Small Local Temporary Near-Certain	Slight Adverse	None	Small	Slight Adverse
Fear and Intimidation:	High	Minimal increase in	Implementation of the	Small Local	Slight Adverse	None	Small	Slight Adverse

Receptor/ Affected Group	Significance (value) of Receptor	Effect	Embedded Mitigation Measures	Magnitude/ Spatial Extent/Duration/ Likelihood of Occurrence	Significance of Effect	Additional Mitigation	Residual Magnitude of Impact	Significance of Residual Effect
for pedestrians and cyclists using Bracondale		traffic flows and negligible increase in HGVs along local road network experienced by pedestrians and cyclists using Bracondale	Construction Method Statement (Condition 42)	Temporary Near-Certain				
Fear and Intimidation: For pedestrians and cyclists using of Martineau Roundabout and further afield	High	No noticeable change to the level or composition of traffic on the Martineua Lane or further afield	Implementation of the Construction Method Statement (Condition 42)	No Change Local Temporary Near-Certain	Neutral	None	No Change	Neutral
Accidents and Safety: For pusers of Bracondale	High	Negligible change to accidents and safety due to construction related traffic	Implementation of the Construction Method Statement (Condition 42)	No Change Local Temporary Near-Certain	Slight Adverse	None	No Change	Slight Adverse
Accidents and Safety: For	High	Negligible change to	Implementation of the	No Change Local	Neutral	None	No Change	Neutral

Receptor/ Affected Group	Significance (value) of Receptor	Effect	Embedded Mitigation Measures	Magnitude/ Spatial Extent/Duration/ Likelihood of Occurrence	Significance of Effect	Additional Mitigation	Residual Magnitude of Impact	Significance of Residual Effect
users of Martineau Roundabout and further afield		accidents and safety due to construction related traffic	Construction Method Statement (Condition 42)	Temporary Near-Certain				
Operational Effects								
Severance: For pedestrians using Bracondale	High	Moderate increase in traffic flows	Implementation of Travel Plan as per conditions 25 and 26	Small Local Permanent Near-Certain	Slight Adverse	None	Small	Slight Adverse
Severance: For users of Martineau Roundabout and further afield	High	Minimal increase in traffic flows	Implementation of Travel Plan as per conditions 25 and 26	No Change Local Permanent Near-Certain	Neutral	None	Small	Neutral
Pedestrian Delay and Amenity: For pedestrians using Bracondale	High	Minimal increase in traffic flows	Implementation of Travel Plan as per conditions 25 and 26	Small Local Permanent Near-Certain	Slight Adverse	None	Small	Slight Adverse
Pedestrian Amenity: For pedestrians using Bracondale	High	Moderate increase in traffic flows	Implementation of Travel Plan as per conditions 25 and 26	Medium Local Permanent Near-Certain	Moderate Adverse	None	Medium	Moderate Adverse
	High			small	Slight Adverse	None	Small	

Receptor/ Affected Group	Significance (value) of Receptor	Effect	Embedded Mitigation Measures	Magnitude/ Spatial Extent/Duration/ Likelihood of Occurrence	Significance of Effect	Additional Mitigation	Residual Magnitude of Impact	Significance of Residual Effect
Pedestrian Amenity: For users of Martineau Roundabout and further afield		Minimal increase in traffic flows	Implementation of Travel Plan as per conditions 25 and 26	Local Permanent Near-Certain				Slight Adverse
Driver Delay: For drivers driving using Bracondale	Medium	Moderate increase in traffic flows	Implementation of Travel Plan as per conditions 25 and 26	Small Local Permanent Near-Certain	Slight Adverse	None	Small	Slight Adverse
Fear and Intimidation: For pedestrians and cyclists using Bracondale	High	Moderate increase in traffic flows	Implementation of Travel Plan as per conditions 25 and 26	Small Local Permanent Near-Certain	Slight Adverse	None	Small	Slight Adverse
Fear and Intimidation: For pedestrians and cyclists using Martineau Roundabout and further afield	High	Minimal increase in traffic flows	Implementation of Travel Plan as per conditions 25 and 26	No Change Local Permanent Near-Certain	Neutral	None	No Change	Neutral
Accidents and Safety: For	High		Implementation of Travel Plan as	Negligible Local	Slight Adverse	None	Negligible	Slight Adverse

Receptor/ Affected Group	Significance (value) of Receptor	Effect	Embedded Mitigation Measures	Magnitude/ Spatial Extent/Duration/ Likelihood of Occurrence	Significance of Effect	Additional Mitigation	Residual Magnitude of Impact	Significance of Residual Effect
pedestrians walking along and crossing Bracondale		Moderate increase in traffic flows	per conditions 25 and 26	Permanent Near-Certain				
Accidents and Safety: For pedestrians walking along and using Bracondale, Martineau Roundabout or further afield	High	Minimal increase in traffic flows	Implementation of Travel Plan as per conditions 25 and 26	No Change	Neutral	None	No Change	Neutral

7.4 AIR QUALITY

Due to the very technical nature of the air quality assessment and criteria, a summary table is not possible or appropriate for a non-technical summary. However, the conclusion of the air quality technical assessment is that any effects will be **not significant** in both the construction and operation phases with the incorporation of the following mitigation measures during the construction phase.

Table 7.5 – Construction Dust Mitigation Measures

Site Application	Mitigation Measures
Highly Recommended	
Communications	Develop and implement a stakeholder communications plan that includes community engagement before work commences on site.
	Display the name and contact details of person(s) accountable for air quality and dust issues on the site boundary. This may be the environment manager/engineer or the site manager.
	Display the head or regional office contact information.
	Develop and implement a Dust Management Plan (DMP), which may include measures to control other emissions, approved by the Local Authority. The level of detail will depend on the risk, and should include as a minimum the highly recommended measures in this document. The desirable measures should be included as appropriate for the site.
Construction	Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place.
Demolition	Ensure effective water suppression is used during demolition operations. Handheld sprays are more effective than hoses attached to equipment as the water can be directed to where it is needed. In addition, high volume water suppression systems, manually controlled, can produce fine water droplets that effectively bring the dust particles to the ground.
	Avoid explosive blasting, using appropriate manual or mechanical alternatives.
	Bag and remove any biological debris or damp down such material before demolition.
Monitoring	Undertake daily on-site and off-site inspection, where receptors (including roads) are nearby, to monitor dust, record inspection results, and make the log available to the local authority when asked. This should include regular dust soiling checks of surfaces such as street furniture, cars and window sills within 100m of site boundary, with cleaning to be provided if necessary.
	Carry out regular site inspections to monitor compliance with the DMP, record inspection results, and make an inspection log available to the local authority when asked.
	Increase the frequency of site inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions.
	Agree dust deposition, dust flux, or real-time PM_{10} continuous monitoring locations with the Local Authority. Where possible commence baseline monitoring at least

Site Application	Mitigation Measures
	three months before work commences on site or, if it a large site, before work on a phase commences. Further guidance is provided by IAQM on monitoring during demolition, earthworks and construction.
Operating Vehicle / Machinery and Sustainable Travel	Ensure all vehicles switch off engines when stationary - no idling vehicles.
	Avoid the use of diesel- or petrol-powered generators and use mains electricity or battery powered equipment where practicable.
	Produce a Construction Logistics Plan to manage the sustainable delivery of goods and materials.
	Implement a Travel Plan that supports and encourages sustainable travel (public transport, cycling, walking, and car-sharing).
Operations	Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems.
	Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate.
	Use enclosed chutes and conveyors and covered skips.
	Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate.
	Ensure equipment is readily available on site to clean any dry spillages and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.
Preparing and Maintaining the Site	Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible.
	Erect solid screens or barriers around dusty activities or the site boundary that are at least as high as any stockpiles on site.
	Fully enclose site or specific operations where there is a high potential for dust production and the site is active for an extensive period.
	Avoid site runoff of water or mud.
	Keep site fencing, barriers and scaffolding clean using wet methods.
	Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on-site cover as described below.
	Cover, seed or fence stockpiles to prevent wind whipping.
Site Management	Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken.
	Make the complaints log available to the local authority when asked.
	Record any exceptional incidents that cause dust and/or air emissions, either on- or offsite, and the action taken to resolve the situation in the logbook.

Site Application	Mitigation Measures
	Hold regular liaison meetings with other high risk construction sites within 500m of the site boundary, to ensure plans are co-ordinated and dust and particulate matter emissions are minimised. It is important to understand the interactions of the off-site transport deliveries which might be using the same strategic road network routes.
	Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site. This may require the sweeper being continuously in use.
	Avoid dry sweeping of large areas.
	Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport.
	Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable.
	Record all inspections of haul routes and any subsequent action in a site logbook.
	Install hard surfaced haul routes, which are regularly damped down with fixed or mobile sprinkler systems, or mobile water bowsers and regularly cleaned.
	Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable).
	Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits.
Trackout	Access gates to be located at least 10m from receptors where possible.
Waste Management	Avoid bonfires and burning of waste materials.
Desirable	
	Avoid scabbling (roughening of concrete surfaces) if possible.
	Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery.
Construction	For smaller supplies of fine power materials ensure bags are sealed after use and stored appropriately to prevent dust.
Demolition	Soft strip inside buildings before demolition (retaining walls and windows in the rest of the building where possible, to provide a screen against dust).
	Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable.
	Use Hessian, mulches or tackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as practicable
Earthworks	Only remove the cover in small areas during work and not all at once.

7.5 HYDROLOGY, HYDROGEOLOGY, FLOOD RISK AND SURFACE WATER DRAINAGE

Table 7.6 - Summary of Effects

Effect	Nature of Effect	Mitigation	Residual Effect
Construction			
Impact upon flood storage and flood flows/flood routing leading to increased flood risk	Temporary, Direct	Implementation of measures set out in the CEMP	Negligible and Not Significant
Impact upon surface water drainage regime and increased surface water run-off	Temporary, Direct	Implementation of measures set out in the CEMP	Negligible and Not Significant
Contamination of surface water and increased silt loading in watercourses	Temporary, Direct	Implementation of measures set out in the CEMP	Negligible and Not Significant
Impact upon groundwater flows and reduced aquifer recharge	Permanent, Direct	None required	Negligible and Not Significant
Contamination of groundwater aquifers	Temporary, Direct	Implementation of measures set out in the CEMP	Negligible and Not Significant
Operation			
Impact upon flood storage and flood flows/flood routing leading to increased flood risk	Permanent, Direct	Implementation of floodplain storage compensation as set out in the FRA	Negligible and Not Significant
Impact upon surface water drainage regime and increased surface water run-off	Permanent, Direct	Implementation of surface water drainage strategy as set out in the FRA	Negligible and Not Significant
Contamination of surface water	Permanent, Direct	Implementation of surface water drainage strategy and pollution control measures as set out in the FRA	Negligible and Not Significant
Impact upon groundwater flows and reduced aquifer recharge	Permanent, Direct	None required	Negligible and Not Significant

Effect	Nature of Effect	Mitigation	Residual Effect
Contamination of groundwater aquifers	Permanent, Direct	None required	Negligible and Not Significant

7.6 SOCIO-ECONOMICS AND HEALTH

Table 7.7 - Summary of Effects

Receptor	Description of the Residual Effect	Receptor Sensitivity	Additional Mitigation (if required)	Residual Effect					
				Significance	ADV/ BEN	ST/M T/LT	D/ IND	P/ T	R/ IRR
Construction									
Employment	Creation of a monthly average of FTE jobs over the construction program	Low	None Required	Minor to Moderate (not significant)	BEN	ST	D	T	IRR
Operational									
Housing	Provision of residential units contributing to policy targets	High	None Required	Moderate (significant)	BEN	LT	D	P	IRR
Education	Demand placed on primary education facilities	Low	Developer contribution to schools through Section 106	Negligible (not significant)	N/A	LT	D	P	IRR
Education	Demand placed on primary education facilities	Low	Developer contribution to schools through Section 106	Negligible (not significant)	N/A	LT	D	P	IRR
Healthcare	Demand placed on primary healthcare facilities	Low	Developer contribution to GP capacity through Section 106	Negligible (not significant)	N/A	LT	D	P	IRR
Community Services	Demand for community amenity space	Medium	None Required	Negligible (not significant)	N/A	LT	D	P	IRR
Open space and Play space	Demand for play space onsite	Medium	None Required	Minor (not significant)	BEN	LT	D	P	IRR
Employment	Provision of floorspace likely to accommodate jobs	Low	None Required	Moderate (significant)	BEN	LT	D	P	IRR
Health: Air	Impact on Air Quality	Medium	None Required	Negligible (not significant)	N/A	LT	D	P	IRR
Health: Noise	Impact on Noise	Low	None Required	Minor (not significant)	ADV	LT	D	P	IRR
Tourism	Additional tourist visitation	Medium	None Required	Negligible (not significant)	N/A	LT	D	P	IRR
Crime	Level of Crime	Medium	None Required	Minor	BEN	LT	D	P	IRR

Receptor	Description of the Residual Effect	Receptor Sensitivity	Additional Mitigation (if required)	Residual Effect					
				Significance	ADV/ BEN	ST/M T/LT	D/ IND	P/ T	R/ IRR
				(not significant)					

Key: ADV/BEN= Adverse/Beneficial; ST/MT/LT = Short-term/Medium-term/Long-term; D/IND = Direct/Indirect; P/T = Permanent/Temporary; R/IRR = Reversible/Irreversible

7.7 BUILT HERITAGE

Table 7.8 - Summary of Effects

Potential effect	Sensitivity/pre-mitigation impact	Mitigation measure	Significance of residual impacts
Construction Phase			
Effects on the setting and significance of the Timber-drying bottle kiln	Medium/Minor adverse	Designed into the scheme as a bat shelter bringing ecological and heritage benefits. Green buffer around the structure.	Minor/Negligible
Effects on the setting and significance of the late 19th and early 20th century engine houses at Trowse Sewage pumping station	Medium /Negligible	None	Negligible
Effects on the setting and significance of the Trowse Railway Station	Medium/Negligible	None	Negligible
Effects on the setting and significance of the Trowse Millgate Conservation Area	Medium/Negligible	None	Negligible
Effects on the setting and significance of the Carrow Priory group	Contains both high and medium sensitivity assets. High/minor adverse Medium/Negligible	None	Minor adverse (high sensitivity assets) Negligible (medium sensitivity)
Effects on the setting and significance of the Trowse with	Medium/Negligible	None	Negligible

Potential effect	Sensitivity/pre-mitigation impact	Mitigation measure	Significance of residual impacts
Newton Conservation Area			
Effects on the setting and significance of the Church of St Andrew	High/Minor adverse	None	Minor adverse
Effects on the setting and significance of the Former Mustard Seed Drying Shed	Medium/Negligible	None	Negligible

7.8 CLIMATE CHANGE

The Climate Change chapter of the ESA is incredibly technical and far-reaching in terms of its scope. Therefore, the final residual predicted effects are contained in the NTS as this is considered appropriate and 'non-technical'.

Table 7.9 – Residual Effects Summary

Receptor	Residual Effect	Residual Effect Scale & Significance
Resilience & Adaptation		
Temporary site office and welfare facilities	Resilience / adaptation to climate change (changes in frequency of extreme heat and cold events and storms)	Negligible (not significant)
Construction workers (human health)	Resilience / adaptation to climate change (changes in frequency of extreme heat and cold events and storms)	Negligible (not significant)
Retained and proposed planting	Resilience / adaptation to climate change (wetter winters and drier summers)	Minor Adverse (not significant)
Proposed permanent buildings	Resilience / adaptation to climate change (more frequent extreme weather events)	Negligible (not significant)
Proposed drainage infrastructure	Resilience / adaptation to climate change (drier summers increasing erosion of soils / substrates drying out allowing the tilizingon of more debris)	Minor Adverse (not significant)
Utilities infrastructure services	Resilience / adaptation to climate change (wetter winters increasing surface water flooding)	Minor Adverse (not significant)
Residents and other future site users	Resilience / adaptation to climate change (wetter winters affecting flood risk)	Minor Adverse (not significant)
Residents and other future users of the proposed buildings	Resilience / adaptation to climate change (hotter summers affecting overheating)	Negligible (not significant)
In-combination Climate Change Effects		
All effects reported in the technical ESA chapters (Chapters 8 to 14) are expected to remain **unchanged**.		
GHG Emissions Effects		
The global atmosphere	Greenhouse gas emissions from the proposed development during the before use, in use and end of life stages.	Minor Adverse (not significant)

7.9 SUMMARY OF RESIDUAL EFFECTS

Table 7.10 summarises the extent of the residual impacts (taking account of mitigation, where necessary) for each technical discipline.

Table 7.10 – Technical Discipline and Extent of Residual Impact

Technical Discipline	Extent of Residual Impact
Landscape and visual impact	Negligible to moderate adverse
Ecology	Non-significant to significant beneficial
Transport	No change to moderate adverse
Air quality	Non-significant
Hydrology, hydrogeology, flood risk and surface water drainage	Negligible
Socio-economic and health	Negligible to moderate beneficial
Built heritage	Negligible to minor adverse
Climate change	Negligible to minor adverse

8 CONCLUSION

8.1 INTRODUCTION

This ESA has been completed to provide further environmental assessment to that of the ES and addendums provided as part of the July 2013 outline consent. The contents have been duly scoped with the LPAs and written in a format to accord with the spirit of the 2017 Regulations albeit there is no guidance within the legislation in terms of format or content of an ESA. Therefore, professional judgement has been employed particularly given the differing requirements of the Regulations and therefore, the format of the ESA does not closely follow the structure and format of the original but rather accord with the current Regulations. This NTS provides a more understandable summary of the technical work undertaken for the ESA.

8.2 SUMMARY

Section 7.9 considers the cumulative effects of the committed developments also taking account of existing baseline conditions and tilizing agreed scopes with consultees. There are no elements that with mitigation will result in likely significant impacts as a result of this development including taking account of the committed developments. 'Significant' being the test in terms of EIA.

8.3 CONCLUSIONS

The proposed development has been assessed for potential environmental effects through the process of undertaking of an Environmental Impact Assessment, the results of which are presented within the ESA and the technical assessments contained within. In accordance with the EIA Regulations, the proposed development has been assessed for potential effects during both the construction and operational phases of the development, whilst effects have been analysed in terms of residual and cumulative; temporary and permanent (short and long term); and beneficial, negligible and adverse, where applicable.

The conclusion reached by the ESA and replicated within this NTS is that there are adequate mitigation measures available to ensure that the proposed development could proceed without giving rise to unacceptable environmental effects. The mitigation measures proposed would not have any significant adverse residual effect on the existing environment or local amenity.

Triptych PD/August 2023