EXAMINATION OF THE GREATER NORWICH LOCAL PLAN
STATEMENT ON BEHALF OF TERRA STRATEGIC – ID 24244
LAND OFF BAWBURGH LANE, COSTESSEY

MATTER 4 – SUSTAINABLE COMMUNITIES AND THE ENVIRONMENT

This Statement is made on behalf of Terra Strategic in respect of Land off Bawburgh Lane, Costessey. Terra Strategic control the majority of the site, with the remainder controlled by Norwich City Council, who are supportive of the development proposal and have agreed for Terra Strategic to take the lead with promotion of the Site through the Local Plan process.

The site forms a contingency allocation within the draft GNLP Sites Document as part of Policy GNLP0581/2043. This contingency site allocation is identified on Submission Policies Map – South Norfolk for approximately 800 homes plus other infrastructure including a primary school and sixth form provision.

A Promotional Document is appended to our Matter 2 Statement, which sets out how the site responds to its context, and how it could be developed within the Plan period.

ISSUE 1

Is Policy 2 justified, effective and consistent with national policy?

QUESTIONS

1) Is the modification to Policy 2 suggested by the GNLP (in the Nutrient Neutrality Mitigation Statement of Common Ground with Natural England) justified, effective and consistent with national policy, the Written Ministerial Statement of 16 March 2022, and the evidence?

1.1 The modifications proposed to Policy 2 are outlined in Appendix 1 of the Nutrient Neutrality Evidence Note (January 2023). The amendments, and the SoCG generally, do not appear to confirm that the short-, medium- and long-term mitigation solutions are agreed with Natural England. It is not clear what exactly comprises the Nutrient Mitigation Scheme and how this impacts deliverability of the sites within the GNLP. The WMS (16th March 2022) states:

> **"We will make clear in planning guidance that judgements on deliverability of sites should take account of strategic mitigation schemes and the accelerated timescale for the Natural England's mitigation schemes and immediate benefits on mitigation burdens once legislation requiring water treatment upgrades comes into force."**

1.2 The guidance has not yet been published, which clearly presents some challenges. We are not sure that the modification, and the evidence supporting it, meets the WMS requirement to demonstrate that the deliverability of sites has been considered with the need for strategic mitigation schemes in mind. We set out our thoughts on this below.

2) Is the application of the Policy 2 as suggested to be modified in Q16 likely to affect the viability and deliverability of residential development in the plan area?

1.3 Yes. Policy 2 of the GNLP (as modified) requires that *'relevant permissions will only be granted with necessary nutrient mitigation in place prior to occupation and in compliance with the Habitats Regulations'*. This requirement for housing development to provide nutrient neutrality mitigation measures will incur delays to housing delivery. Such delays are acknowledged by the Partnership for both 'minor' and 'major' sites[1] (at a minimum of 18 months) and referred to on a site specific basis throughout D3.2E – Part 2 'South Norfolk Site Forecasts Commentary'.

1.4 We note that in March 2023, the Partnership published a note to their website[2] which provides clarification to point 1 of the Nutrient Neutrality Evidence Base document (G2.2), that is housing numbers and those impacted ('held up') by NN in the Greater Norwich area. According to the G2.2 document the total number of homes 'held up' by NN issues across Norfolk is 10,956[3]. However, the clarification note states that:

- Latest Housing Trajectory for GNLP a forecast housing supply of 37,651 homes (at 1st April 2022) to be delivered within the plan period to 2038
- Of these 37,651 homes, 23,948 will be impacted/delayed by NN (11,259 in Broadland and 5,690 in South Norfolk)

[1] D3.2D - 'Implications of Nutrient Neutrality for the Delivery of Committed, Allocation and Windfall Sites' (Paragraphs 14 to 24)
[2] Clarification Note received March 2023 - G2.2a_0.pdf (gnlp.org.uk)
[3] Norfolk Nutrient Strategy Mitigation Solutions (G2.2), Page 7, Table 2.1 'Summary of Planned Growth in Norfolk'

1.5 This additional evidence not only demonstrates that overall supply has been reduced (from 41,287 dwellings projected across the entire NN catchment) but that the delays to delivery incurred are likely to be greater than identified within the G2.2 document and further compromise deliverability of residential development within the plan area.

Mitigation Measures

1.6 The nutrient neutrality mitigation measures[4] will incur additional development costs. In the Addendum to the Greater Norwich Local Plan Viability Study[5] (January 2023) Gross Additional Development Costs of between £5,000 and £7,000 per dwelling for nutrient neutrality mitigation measures have been applied.

1.7 According to the GNLPVS (Addendum Jan23 – Page 28) this appears to have been based upon the experience of other Local Planning Authorities (Eastleigh Borough Council, Portsmouth City Council, Winchester City Council and Bodmin for Cornwall Council) who have already adopted various methods of 'nitrate offsetting' and 'phosphorus' retrofitting, at a cost of approximately £5,000 per dwelling. The justification for the larger, £7,000 cost is unclear but appears to relate to *'a scenario based on emerging evidence on the costs of mitigation in Greater Norwich'*.

1.8 It is unclear exactly what the 'mitigation measures' involve exactly as the strategy appears to be evolving. However according to the Nutrient Neutrality Evidence Notes (January 2023) (NNEN), strategies assessed so far are short-term land and nature-based solutions which would be accredited by both Natural England and the Joint Venture (between GNLP and Anglian Water) and available for purchase by developers to unlock planning permissions[6].

1.9 Notwithstanding the above, there are a number of issues we have identified within both the NNEN and GNLPVS addendum, which could result in greater costs and further affect development viability / deliverability:

- A number of assumptions have been made about sites including inter alia; existing land use types, soil types and proposed land use types, based upon estimations, aerial imagery and digital mapping. Assumptions made include land where use type is 'uncertain' being 'general

[4] Norfolk Nutrient Strategy Mitigation Solutions (G2.2) (January 2023)
[5] Appendix 2: Addendum to the Greater Norwich Local Viability Study (Page 12 of NN Evidence Note Jan 2023)
[6] Appendix 1 - Greater Norwich Local Plan Statement of Common Ground with Natural England (Nutrient Neutrality Policy)

arable' and proposed land uses assumed to be 'entirely urban'. Sites which have been considered capable of achieving mitigation may not actually be able to deliver this if assumptions are inaccurate compared with 'on the ground' conditions. The number of deliverable sites may be significantly lower than that tabulated in [D3.2E – Part 1], therefore alternative sites which are available, and are of a scale to accommodate Nutrient Neutrality mitigation with on-site measures, need to be explored. Our site as Costessey is one such site and should be brough forward as a full allocation.

- The mitigation strategy costs £5,000 to £7,000 currently only include 'short term' delivery options. The Norfolk Nutrient Strategy Mitigation Solutions document (NNSMS) states that 'medium and long term delivery timescale options have not been considered' and that this would form the next part of the project. However, if required, the requirement for medium and long term mitigation measures could further increase the cost per dwelling and exacerbate visibility issues.

- With regard to 'nutrient credits' and how these would work to unlock site delivery, the details are unclear and more evidence should be provided to confirm how these will facilitate all sites.

- The claim that £5,000 and £7,000 costs are a 'suitable model' on the basis of existing evidence is not supported by the necessary evidence. These figures are an estimate based on limited existing evidence from LPAs and sites which have different context to sites proposed for allocation in the GNLP. These figures may not cover the total costs incurred as nutrient neutrality implications will be context/site specific.

- The GNLPVS Addendum states that the '*plan will provide for viable housing development in all but one of the notional typologies provided the schemes now showing a deficit are treated as being marginal and that the Nutrient Neutrality mitigation costs applied are a worst-case scenario*'. Notwithstanding that there are actually five typologies with a viability deficit (see below), we are concerned that this approach assumes that the £7,000 is the highest possible cost incurred. We do not consider there is evidence to support this conclusion given the uncertainty surrounding the cost assumptions set out above (points 1 to 4).

- It is noted that the GNLPVS Addendum (Jan23 – point 12) states that the impact on the economy on matters arising from Brexit, Covid-19, conflict between Russia and Ukraine and/or the current economic climate, have not been accounted for. Given the well documented significant inflation costs since the 2020 viability study was carried out, this would clearly

have implications for viability in addition to Nutrient Neutrality mitigation. This needs to be assessed.

- In Point 14 of the NNEN, the Partnership comment on the fact that the performance of wastewater plants (including those operated by Anglian Water) must improve by 2030 (as per amendment proposed to the LURB on 18th November 2022). The GNLP then state that this improvement in efficiency will reduce mitigation requirement for phosphorous by 36% and Nitrogen by 65% after 2030. On this basis, the Council anticipate that *'the cost per dwelling of NN mitigation measures will be reduced post 2030'*. Whilst we do not dispute that this will benefit developers by reducing on-site mitigation costs per dwelling, this reduction would not be seen until 2030. As such, viability implications for the early stages of the plan (up to 2030 at a minimum) would still prevent sites coming forward where a viability deficit has been identified[7].

1.10 We consider that in light of the above will, at the very least, delay delivery, and in some cases where costs become too high, may prevent delivery altogether. Appendix B of the GNLPVS (Addendum Jan23) confirms this. The document sets out that accounting for the 'worst case' £7,000 mitigation costs per dwelling, 5 typologies become classified as having a viability 'deficit'. These include typology 1, 3b, 4a and 4b and 7. This is the same for the 'lesser' £5,000 costs. This is compared with the previous viability assessment (December 2020) where only typology 4 was found to be in a 'viability deficit'. With typologies 1, 3b, 4 and 7 being unviable, this would impact housing delivery and means identified housing need would be more difficult to achieve. This is contrary to PPG Paragraph 002 – Reference ID: 10-002-20190509.

1.11 Given the uncertainty this presents for the trajectory, particularly in the first five years of the Plan, it is imperative to identify additional sites now. Our site at Costessey, currently a contingency site, should be considered for full allocation as the purpose of its status as 'contingency' is to minimise uncertainty and ensure that housing delivery is not delayed. It falls into the 'Urban Fringe' (Typology 10) and would remain viable under the 'worst case' £7,000 costs. We have previously submitted a viability assessment with our Matter 9 statement, which demonstrates a significant viability surplus. We have also set out in an appended Technical Note from M-EC (reference 26700-FLD-0101 Rev A) discussions that have taken place to explore on-site mitigation solutions. Our site is of the scale that could support such measures which would further assist

[7] GNLP NNEN (2022) – Appendix B: GNDP: Impact of Nutrient Neutrality Tariff on Viability at a rate of £5000 per dwelling and £7,000 per dwelling

with deliverability of housing in the early years of the Plan. As such, this site is clearly one which should be prioritised for full allocation for reasons we have previously set out.

Development Costs: (on/off-site infrastructure contributions)

1.12 In the original Viability Assessment (December 2020), total Gross Development Costs have been split into predevelopment and property standards, and construction costs. The 'core build costs' for development were made based on 'current conditions' and assumptions, which appear to be development costs in 2020. As noted above, construction cost inflation since 2020 has been significant and may affect the viability deficit already identified for several of the typologies.

1.13 Even based on 2020 assumptions, the GNLPVS Addendum (Jan23) (point 40) states that the viability deficits identified at typologies 1, 3b, 4b and 7 *'would in practice be value engineered through the design development process'*. Exactly what 'value engineering' involves requires clarification as the report does not define this; it could mean reducing the design quality of schemes. This would be unacceptable in the context of draft GNLP policy aspirations and the weight given to high quality design in the amended NPPF which coins the term 'building beautiful'[8].

1.14 Beyond design, we are concerned that cost saving through development construction may result in shortfalls in other policy areas. For example, one way of 'value engineering' could be to omit provision of affordable housing at policy compliant levels. Currently those typologies identified as 'unviable' would be required to deliver the following percentages:

Typology	Affordable housing %
1	33
3b	28
4b	20
7	28

Table 1 - Percentage of Affordable Housing expected for 'viability deficit' typologies

1.15 Historic under delivery of affordable housing within the GNLP area have already been raised. In our Matter 15 statement for example, the 1,200-home site at Sprowston 'was noted by the promoter in Matter 6 hearing that the site may be unable to meet the 33% affordable housing

[8] NPPF (2021) – Chapter 12 'Achieving well-designed places' (Page 38)

requirement[9]. Similarly, in relation to the East Norwich Strategic Regeneration Area numerous significant constraints and a requirement for 'upfront infrastructure investment'[10] mean that additional cost incurred due to NN mitigation would only exacerbate deliverability challenges. This will affect numerous sites.

3) Is the nutrient neutrality mitigation strategy likely to be successful in facilitating the delivery of the plan?

1.16 As detailed in the response to Q16 above, the current Nutrient Neutrality mitigation strategy is based upon a number of assumptions and also focuses upon short-term mitigation measures with lots of uncertainty surrounding medium- and long-term measures and the impact of current economic climate. What is clear is that even on the basis of the current strategy - £5,000 to £7,000 per dwelling and with viability based on 2020 'snapshot' assumptions, the impact of Nutrient Neutrality mitigation means that a number of sites confirmed for allocation will no longer be viable without 'value engineering' – be that a dilution of design quality and/or reduced affordable housing. We have concerns that this deficit will be even worse when taking into account inflation since 2020, and that there will not be the sufficient premium to incentivise some landowners to sell their land, when taking into account a sufficient contribution to fully comply with policy requirements[11]. The current mitigation strategy will, at the very least lead to delay of housing delivery on most sites in the early stages of the plan and in some cases will prevent delivery all together. Given the objectives of the GNLP include the delivery of sufficient homes to meet the needs of residents and provide sufficient affordable homes, to achieve this, additional sites need to be identified to increase flexibility of supply. Our site at Costessey would be viable, able to effectively mitigate Nutrient Neutrality issues without compromising delivery of good design, affordable housing, or other necessary requirements. It would be available for delivery early in the Plan period and so the site policy should be amended to facilitate this.

[9] Matter 15 Repose – 11th February 2022 – Point 2.12, Page 5
[10] Norwich City Council Report to Cabinet 17th November 2021 (Paragraph 30).
[11] As required by PPG Paragraph: 013 Reference ID: 10-013-20190509

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Long Lane, Costessey
Technical Note: Nutrient Neutrality Mitigation Proposals
Our Ref: 26700-FLD-0101 Rev A
February 2023

Introduction

Mewies Engineering Consultants Ltd (M-EC) has been commissioned by Terra Strategic Ltd (hereafter referred to as 'the Client') to provide drainage advice to support a proposed mixed-use development on Land off Bawburgh Lane, Costessey (hereafter referred to as 'the Site').

A site location plan is shown in **Figure 1** below and an illustrative masterplan is included in **Appendix A**. The development proposals comprise:

- Approximately 800 dwellings
- A new Sixth Form College and 2-form entry Primary School
- A local centre including employment opportunities

Figure 1: Contextual Site Location Plan

This Technical Note will detail how proposed foul water and surface water drainage solutions for this Site will be implemented to overcome concerns raised by Natural England regarding nutrient pollution in the Norfolk area.

The site is currently allocated as part of draft Policy GNLP0581/2043 as a contingency site for a residential led development within the Greater Norwich Local Plan (GNLP) Sites Document.

The GNLP has been in abeyance since a letter was issued by Natural England in March 2022 concerning nutrient pollution in the protected habitats of the River Wensum Special Area of Conservation and the Broads Special Area of Conservation and Ramsar site. The letter advised that new development within the catchment of these habitats comprising overnight accommodation can cause adverse impacts on nutrient pollution.

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New developments, such as this Site, generate additional wastewater flows which raise levels of nutrients (phosphorus and nitrogen) which can speed up the growth of algae in water. This process, called eutrophication, degrades the quality of the water and harms wildlife. As a result, solutions are required to overcome the impacts of foul drainage from development sites.

The large scale nature of this Site, offers the opportunity to implement an on site foul treatment solution along with surface water drainage measures to overcome the concerns of Natural England, enabling development to come forward quickly and within the plan period. On site solutions would overcome reliance on off site measures (via the sale of credits) which are not yet determined. These measures could include the creation of wetland habitats and/or improvements existing Sewage Treatment Works.

The proposed measures for this Site are set out in more detailed below.

Foul Drainage
In order to determine whether an on site foul treatment solution can be provided as part of these development proposals, M-EC have undertaken extensive discussions with Severn Trent Connect (STC). STC are a Statutory Undertaker for wastewater services operating under the Water Services Regulation Authority's (Ofwat) 'New Appointee and Variations' framework (NAV). This allows STC to operate across England and Wales rather than being confined to geographical area.

STC ideally work on developments in excess of 500 dwellings and therefore the proposed development is more than suitable in scale to cater for an on site treatment process. Dealing specifically with the nutrient neutrality, STC have developed a Sewage Treatment Works which utilises a chemical free process which reduces nitrates and phosphates to acceptable levels. The scale of the treatment required is based on the specific requirements of that geographical location and can be adapted accordingly.

The Sewage Treatment Works are odourless, but in accordance with STC recommendations, would be cited 50m from the nearest dwelling. It is therefore likely any facility would be located in the south western corner of the site adjacent to the A47 with dwellings set back accordingly. A proposed location is shown on the masterplan is shown in **Figure 2** below. An example of the proposed facility is shown in **Figure 3**.

Figure 2: Indicative location for Sewage Treatment Works

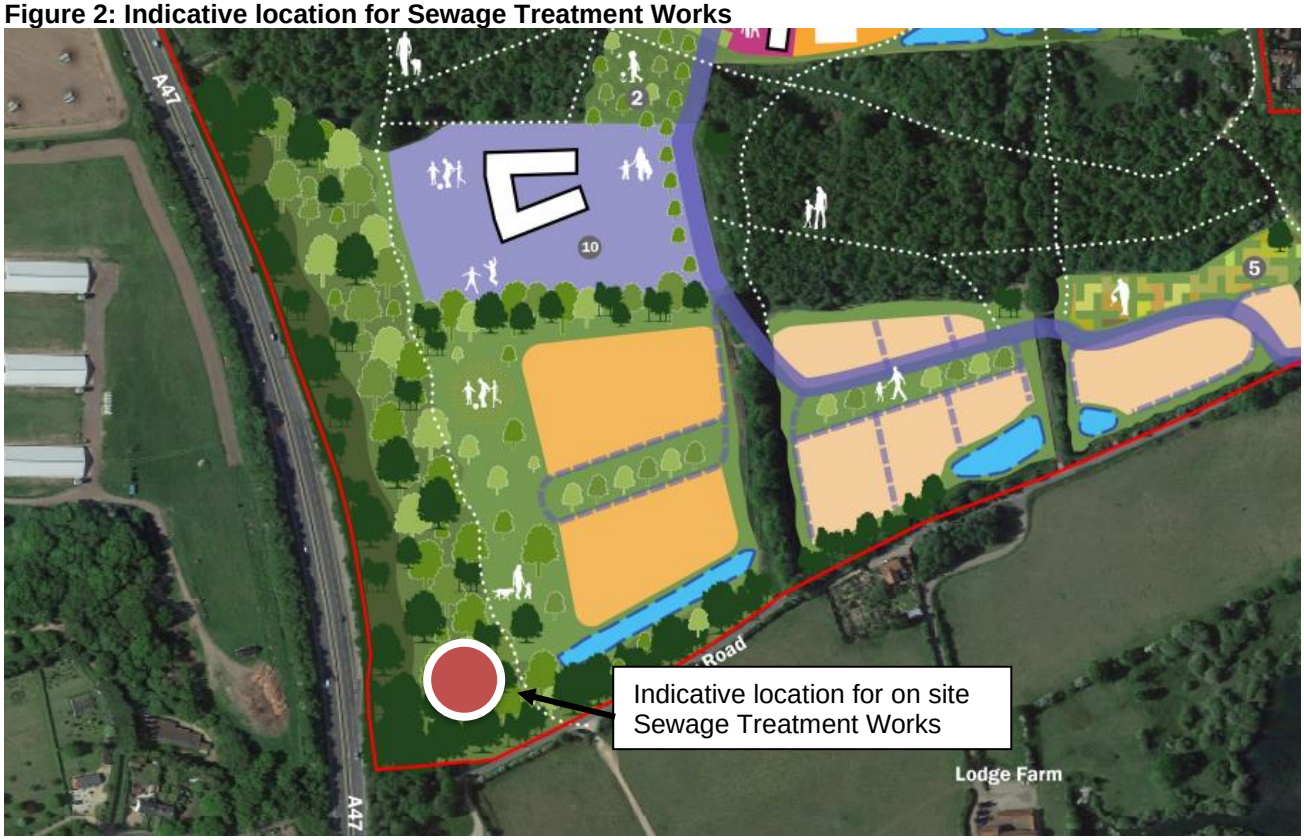

Figure 3: Example of proposed on site Sewage Treatment Works

Foul drainage from this facility would outfall to the River Yare which is located to the south of the Site. A permit from the Environment Agency will be required and water quality monitoring and testing across a 6–12 month period will be undertaken in due course.

Surface Water Drainage

Surface water drainage will be managed on Site in accordance with the SuDS hierarchy. Information published by the British Geological Survey indicates the Site is directly underlain by chalk with superficial deposits of Sands and Gravels. Given the available information, it is assumed that soakaways will be feasible across the Site subject to soakage testing being completed in due course.

Current assessments indicate approximately 25,000m^3 of attenuation will be required across the Site to cater for all events up to the 1 in 100-year return period with a 40% climate change allowance and a 1 in 30 year event within 24 hours to account for half drain down times. Attenuation will be provided across a series of SuDS features which will include basins, swales, permeable paving and rain gardens.

CIRIA document *C753 'The SuDS Manual'* indicates minimum treatment indices appropriate for contributing pollution hazards for different land use classifications to ensure adequate levels of treatment are provided to remove pollution. In addition to this, CIRIA have recently published document *C808F 'Using SuDS to reduce phosphorus in surface water'*, which provides a good practice guide on the correct use of SuDS treatment trains, which will help to reduce the amount of phosphorus in surface water runoff without the requirement for complex and expensive proprietary products.

The surface water drainage proposals for this site will apply the requirements of the above CIRIA documents ensure suitable and appropriate treatment trains are in place to remove pollution and reduce the amount of phosphorus in surface water runoff.

Summary

The Site is located in an area which is currently subject to development restrictions imposed by Natural England due to concerns regarding nutrient pollution on protected habitats in the Norfolk area. As such, solutions are required to reduce pollution impacts and these development proposals, due to the large scale, can deliver the following on site solutions, thereby removing reliance on off site measures:

- Provision of an on site Sewage Treatment Works specifically developed to utilise a chemical free process in order to reduce nitrates and phosphates to acceptable levels. Th facility can be easily be incorporated into the development proposals and sufficiently offset from proposed dwellings. The facility would outfall to the River Yare, a Main River located immediately to the south of the site.

- A SuDS based surface water drainage solution will be delivered through the provision of numerous SuDS features including (but not limited to) basins, swales, permeable paving and rain gardens. Treatment trains in accordance with CIRIA documents C753 and C808F will be provided to ensure suitable and appropriate treatment trains are in place to remove pollution and reduce the amount of phosphorus in surface water runoff.

These measures can provide the required mitigation to overcome the concerns of Natural England and enable this Site to be allocated as part of the Greater Norwich Local Plan.

REGISTRATION OF AMENDMENTS

Date	Rev	Comment	Prepared By
Feb 2022	-	First issue	**Alexander Bennett BSc(Hons) MCIHT MTPS** Director
March 2022		Client comments	**Alexander Bennett BSc(Hons) MCIHT MTPS** Director

Appendices

A. Illustrative Masterplan