

TECHNICAL NOTE

Job Name: Fews Lane, Longstanton, South Cambridgeshire
Job No: 49304
Note No: TN001
Date: 05 February 2021
Prepared By: S Knowles
Subject: **Sustainable Drainage Non-Technical Standards**

1. Introduction

- 1.1. South Cambridgeshire District Council (SCDC) have raised a query regarding the committee report for the site Fews Lane Longstanton, which outlined how the Non-Statutory Technical Standards for Sustainable Drainage Systems (March 2015) only applies to major developments, and therefore are not relevant to this application given that it was only for 1 dwelling.
- 1.2. The third party, Fews Lane Consortium (FLC), have raised concerns that officers misdirected members because policy CC/8 states:

“Policy CC/8 Sustainable Drainage Systems requires development proposals to incorporate surface water drainage systems (SuDs) appropriate to the nature of the site. Development proposals are required to demonstrate that:

a) Surface water drainage schemes comply with the Sustainable Drainage Systems: Non-statutory technical standards for sustainable drainage systems and the Cambridgeshire Flood and Water Supplementary Planning Document or successor documents”

Therefore, FLC argues that the Non-Statutory Technical Standards should be applied to all schemes as per policy CC/8.

- 1.3. Stantec have been asked to advise on the following: *If the non-statutory technical standards were applicable to the application, were there any elements of the proposal that wouldn't have complied with the standards and therefore would have changed the recommendation?*

2. Review

- 2.1. The Sustainable Drainage Non-Statutory Technical Standards (NSTS) was produced for Major Developments (10 dwelling or more), as detailed in paragraphs 3.2.5 to 3.2.8 of the Stantec Drainage Review report dated 20 August 2020 (hereafter referenced as the report). This is in accordance with the accompanying ministerial statement dated 18 December 2014 and as supported within the NPPF Practice Guide. Therefore, it was not appropriate to address the site of one dwelling against this document when considered in isolation.

DOCUMENT ISSUE RECORD

Technical Note No	Rev	Date	Prepared	Checked	Reviewed (Discipline Lead)	Approved (Project Director)
49304/TN001	-	05/02/21	S Knowles	SCD	SCD	SCD

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TECHNICAL NOTE

2.2. The full definition of local planning policy CC/8 is as follows:

Policy CC/8: Sustainable Drainage Systems Development proposals must incorporate appropriate sustainable surface water drainage systems (SuDS) appropriate to the nature of the site. Development proposals will be required to demonstrate that:

- a) Surface water drainage schemes comply with the Sustainable Drainage Systems: Non-statutory technical standards for sustainable drainage systems and the Cambridgeshire Flood and Water Supplementary Planning Document or successor documents;*
- b) Opportunities have been taken to integrate sustainable drainage with the development, create amenity, enhance biodiversity, and contribute to a network of green (and blue) open space;*
- c) Surface water is managed close to its source and on the surface where it practicable to do so;*
- d) Maximum use has been made of low land take drainage measures, such as rain water recycling, green roofs, permeable surfaces and water butts;*
- e) Appropriate pollution control measures have been incorporated, including multiple component treatment trains; and*
- f) Arrangements have been established for the whole life management and maintenance of surface water drainage systems.*

2.3. Policy CC/8 states drainage schemes should comply with the NSTS and the Cambridgeshire Flood and Water Supplementary Planning Document (SPD). Whether it was the intention of CC/8 to ensure both Minor and Major development accorded with the NSTS is not clear.

2.4. The Cambridgeshire Flood and Water Supplementary document also states as follows regarding the NSTS (in paragraph 2.3.7 of the SPD):

*On 18 December 2014, a ministerial statement was made by the Secretary of State for Communities and Local Government (Mr Eric Pickles). The statement has placed an expectation on local planning policies and decisions on planning applications relating to **major development** to ensure that SuDS are put in place for the management of run-off, unless demonstrated to be inappropriate. The statement made reference to revised planning guidance to support local authorities in implementing the changes and on 23 March 2015, the Department for Environment, Food and Rural Affairs (Defra) published the 'Non-Statutory Technical Standards for Sustainable Drainage Systems'. Further detail on how SuDS can be delivered in the Cambridgeshire context can be found in Chapter 6.*

2.5. **Major development** in accordance with the Town and Country Planning Act, England Order 2015, is classified for residential as **10 dwellings or More**.

2.6. We state in **4.3.7 and 4.3.8** of our report as follows:

"A review of policy CC/8 and CC/9 does not differentiate between the development of a single dwelling and that of major development, as defined within the NPPF. Therefore, the requirements of this policy are applicable to this application. The Chapter 6 of the Cambridge SPD also reinforces this through the statement "this chapter needs to be complied with on all development sites."

*The Fews Lane Consortium makes reference to the Sustainable Drainage Systems: Non-Statutory technical standards for sustainable drainage systems in their reasons for refusal. It should be noted as detailed in paragraph 3.2.6 and as listed within the GOV.uk website, this technical standard is for development of **10 dwellings or more**, therefore this document is not applicable to this site.*

TECHNICAL NOTE

- 2.7. Given the inclusion of the NSTS within policy CC/8 and the absence of any specific caveat on minor or major development under this policy, we tested the principles of the CC/8 requirement which in turn tests the principles of the NSTS, in our report for the assessment of the site drainage.
- 2.8. In summary we present below the points of the NSTS, in a proportionate manner, by cross referencing relevant sections of our report as follows.

Flood risk outside the development

S1 Where the drainage system discharges to a surface water body that can accommodate uncontrolled surface water discharges without any impact on flood risk from that surface water body (e.g. the sea or a large estuary) the peak flow control standards (**S2** and **S3** below) and volume control technical standards (**S4** and **S6** below) need not apply.

- 2.9. This is not applicable to the site as it discharges to a watercourse that cannot accept uncontrolled discharge. **See section 2 of the report.**

Peak flow control

S2 For greenfield developments, the peak runoff rate from the development to any highway drain, sewer or surface water body for the 1 in 1 year rainfall event and the 1 in 100 year rainfall event should never exceed the peak greenfield runoff rate for the same event.

S3 For developments which were previously developed, the peak runoff rate from the development to any drain, sewer or surface water body for the 1 in 1 year rainfall event and the 1 in 100 year rainfall event must be as close as reasonably practicable to the greenfield runoff rate from the development for the same rainfall event, but should never exceed the rate of discharge from the development prior to redevelopment for that event.

- 2.10. The site has been assessed as greenfield development (paragraph **4.3.22**) therefore S2 would apply.
- 2.11. It has been acknowledged in the report (**paragraph 4.3.25**) the development will exceed the existing greenfield runoff calculated for the site. However, a pragmatic approach and understanding on the principles of greenfield runoff rates and development proposals must be applied.
- 2.12. The site is for a single dwelling and therefore the equivalent greenfield runoff rates for such as scheme will always be minimal. To provide attenuation at the greenfield rates estimated (as listed in our report) would require the use of a control feature of such a small size that it would be at a high risk from blockages. This itself would be considered a flood risk.

TECHNICAL NOTE

- 2.13. It is acknowledged within the report that best practice is to ensure proposed development does not exceed existing greenfield runoff rates. However, such a requirement for individual properties is erroneous. The objective is not to increase flood risk. Risk always being the product of probability and consequence. Whilst the increase in run off rate could be said to increase the probability of a given flow occurring if there is little or no consequence then it can be inferred that the overall risk has not increased.
- 2.14. For further information refer to **4.3.22 to 4.3.33** of our report.

Volume control

S4 Where reasonably practicable, for greenfield development, the runoff volume from the development to any highway drain, sewer or surface water body in the 1 in 100 year, 6 hour rainfall event should never exceed the greenfield runoff volume for the same event.

S5 Where reasonably practicable, for developments which have been previously developed, the runoff volume from the development to any highway drain, sewer or surface water body in the 1 in 100 year, 6 hour rainfall event must be constrained to a value as close as is reasonably practicable to the greenfield runoff volume for the same event, but should never exceed the runoff volume from the development site prior to redevelopment for that event.

S6 Where it is not reasonably practicable to constrain the volume of runoff to any drain, sewer or surface water body in accordance with **S4** or **S5** above, the runoff volume must be discharged at a rate that does not adversely affect flood risk.

- 2.15. The principles of this part of the NSTS is acknowledged within paragraphs **4.3.22 to 4.3.33** in regard to the site exceeding calculated greenfield runoff. In paragraphs **4.3.30 and 4.3.31 of our report** we state as follows:

We do however acknowledge the concerns raised by the Few Lane Consortium regarding the flood risk to the local watercourse and in accordance with the SPD a desire for all developments to discharge at greenfield runoff rates. Therefore, we have provided further assessment regarding the potential flood risk associated with a discharge rate of 1l/s from the site. The existing watercourse dimensions are illustrated on the supporting ditch profile drawing Ditch Plan and Section drawing reference 19/0321/101 Rev P3 (Appendix B) and using this information we can confirm the following:

Using Manning's formula, it has been possible to estimate the capacity associated with the existing watercourse and required capacity to accommodate a discharge rate of 1l/s from the site. Refer to Appendix I. Using a worst case and conservative estimate, of 1:1 side slopes (assuming a top of bank width of 2m) and a bankfull depth of 1.24m, a Manning's n value of 0.05 and channel slope of 0.001, as a worst case assumption, it gives a bankfull flow capacity of the watercourse to be 2 m³/s. For a discharge rate of 1l/s (0.001 m³/s) this will only amount to 0.05% capacity of the watercourse to be utilised for the proposed site. Therefore, the site amounts to a negligible impact on levels and flows associated with the existing watercourse.

- 2.16. The proposed discharge from the site, which would exceed the greenfield runoff, is acknowledged and we undertook a review of the capacity of the receiving watercourse and concluded the proposed rate would not adversely affect flood risk given the negligible consequences. Further information is provided in Section 4 of the report on the requirements of Policy CC/8 and its application to the site.

TECHNICAL NOTE

Structural integrity

S10 Components must be designed to ensure structural integrity of the drainage system and any adjacent structures or infrastructure under anticipated loading conditions over the design life of the development taking into account the requirement for reasonable levels of maintenance.

S11 The materials, including products, components, fittings or naturally occurring materials, which are specified by the designer must be of a suitable nature and quality for their intended use.

- 2.17. The designer included below ground construction details and maintenance information. The preliminary design of the drainage was informed based on the constraints of the site and the proposed end use.

Designing for maintenance considerations

S12 Pumping should only be used to facilitate drainage for those parts of the site where it is not reasonably practicable to drain water by gravity.

- 2.18. Pumping is not proposed and therefore not a consideration for the site.

Construction

S13 The mode of construction of any communication with an existing sewer or drainage system must be such that the making of the communication would not be prejudicial to the structural integrity and functionality of the sewerage or drainage system.

S14 Damage to the drainage system resulting from associated construction activities must be minimised and must be rectified before the drainage system is considered to be completed.

- 2.19. The construction of the site and corresponding works will need to be undertaken in accordance with Building Regulations. This should be addressed as part of this works.

3. Conclusion

- 3.1. The Sustainable Drainage Systems Non-Statutory Technical Standards was produced for Major Developments, as detailed in paragraphs **3.2.5 to 3.2.8** of the Stantec report. We therefore feel it is not appropriate for this document to be applied to this site in isolation but note that reference is made to the document under Local Planning Policy CC/8, without definition of minor or major development.
- 3.2. We would recommend legal advice is sought on the application of CC/8 Local Planning Policy regarding the compliance of NSTS for minor development.

TECHNICAL NOTE

- 3.3. We have noted in our report the concerns of the Fews Consortium regarding the proposals and the application of the SuDS NSTS to this site and its use within policy CC/8. We have tested the principles of the CC/8 requirement within our report which in turn tests the principles of the NSTS. In doing so we have had to take a proportionate approach given the limitations of a single dwelling in achieving the necessary controls on peak flow (given the ministerial statement for the NSTS states this document should be applicable to major development only).
- 3.4. The above is clarification only and does not change our original recommendation on this scheme.