6 Land and Water Resources

Policy Context

International

6.1 **European Nitrates Directive** (1991): Identifies nitrate vulnerability zones and puts in place measures to reduce water pollution caused by the introduction of nitrates.

6.2 **European Urban Waste Water Directive** (1991): Protects the environment from the adverse effects of urban waste water collection, treatment and discharge, and discharge from certain industrial sectors.

6.3 **European Drinking Water Directive** (1998): Protects human health from the adverse effects of any contamination of water intended for human consumption by ensuring that it is wholesome and clean.

6.4 **European Landfill Directive** (1999): Prevents and reduces the negative effects on the environment from the landfilling of waste by introducing stringent technical requirements for waste and landfills.

6.5 **European Water Framework Directive** (2000): Protects inland surface waters, transitional waters, coastal waters and groundwater, and requires all member states to achieve 'good ecological status' or 'good ecological potential' by 2027, and for no waterbodies to experience deterioration in status. Under the obligations of this Directive, River Basin Management Plans (RBMPs) are prepared.

6.6 **European Waste Framework Directive** (2008): Sets out the waste hierarchy requiring the reduction of waste production and its harmfulness, the recovery of waste by means of recycling, re-use or reclamation and final disposal that does not harm the environment, including human health.

6.7 **European Industrial Emission Directive** (2010): Lays down rules on integrated prevention and control of pollution arising from industrial activities. It also lays down rules designed to prevent or, where that is not practicable, to reduce emissions into air, water and land and to prevent the generation of waste, in order to achieve a high level of protection of the environment taken as a whole.

National

6.8 National Planning Policy Framework (NPPF)[148] sets out the following:

- The planning system should protect and enhance soils in a manner commensurate with their statutory status or quality identified in the development plan.

[148] Department for Communities and Local Government (2019) National Planning Policy Framework [online] Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/779764/NPPF_Feb_2019_web.pdf

- New and existing development should be prevented from contributing to, being put at an unacceptable risk from, or being adversely affected by, soil, air, water or noise pollution or land instability.
- Despoiled, degraded, derelict, contaminated and unstable land should be remediated and mitigated where appropriate.
- The reuse of previously developed land is encouraged where suitable opportunities exist.
- Plans should take a proactive approach to mitigating and adapting to climate change and ensuring resilience to climate change impacts, and new development should avoid increased vulnerability to the impacts of climate change.

6.9 **National Planning Practice Guidance (PPG)**[149]: Requires local planning authorities to demonstrate every effort has been made to prioritise the use of poorer quality agricultural land for development were it has been demonstrated that significant development is required on agricultural land. It also requires that plan making considers, among other issues: identifying suitable sites for new or enhanced water infrastructure; assessing whether new development is appropriate near to sites used for water infrastructure; and the phasing of new development so that such infrastructure will be in place when and where needed. The impact of water infrastructure on sites designated for biodiversity should also be considered.

6.10 **Waste Management Plan for England**[150]: Provides an analysis on the current waste management situation in England, and evaluates how it will support implementation of the objectives and provisions of the revised Water Framework Directive.

6.11 **National Planning Policy for Waste (NPPW)**[151]: Identifies key planning objectives, requiring planning authorities to:

- Help deliver sustainable development through driving waste management up the waste hierarchy.
- Ensure waste management is considered alongside other spatial planning concerns
- Provide a framework in which communities take more responsibility for their own waste

[149] Department for Communities and Local Government (2016) National Planning Practice Guidance [online] Available at: https://www.gov.uk/government/collections/planning-practice-guidance

[150] Department for Environment, Food and Rural Affairs (2013) Waste management plan for England [online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/265810/pb14100-waste-management-plan-20131213.pdf

[151] Department for Communities and Local Government (2014) National Planning Policy for Waste [online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/364759/141015_National_Planning_Policy_for_Waste.pdf

- Help secure the recovery or disposal of waste without endangering human health and without harming the environment.
- Ensure the design and layout of new development supports sustainable waste management.

6.12 **Safeguarding our Soils – A Strategy for England**[152]: Sets out how England's soils will be managed sustainably. It highlights those areas which Defra will prioritise and focus attention in tackling degradation threats, including: better protection for agricultural soils; protecting and enhancing stores of soil carbon; building the resilience of soils to a changing climate; preventing soil pollution; effective soil protection during construction and; dealing with contaminated land.

6.13 **Water White Paper**[153]: Sets out the Government's vision for the water sector including proposals on protecting water resources and reforming the water supply industry. It states outlines the measures that will be taken to tackle issues such as poorly performing ecosystem, and the combined impacts of climate change and population growth on stressed water resources.

6.14 **Water for Life White Paper**[154]: Sets out how to build resilience in the water sector. Objectives of the White Paper are to:

- Paint a clear vision of the future and create the conditions which enable the water sector and water users to prepare for it.
- Deliver benefits across society through an ambitious agenda for improving water quality, working with local communities to make early improvements in the health of our rivers by reducing pollution and tackling unsustainable abstraction.
- Keep short and longer term affordability for customers at the centre of decision making in the water sector.
- Protect the interest of taxpayers in the policy decisions that we take.
- Ensure a stable framework for the water sector which remains attractive to investors.
- Stimulate cultural change in the water sector by removing barriers to competition, fostering innovation and efficiency, and encouraging new entrants to the market to help improve the range and quality of services offered to customers and cut business costs.

[152] Department for Environment, Food and Rural Affairs (2009) Safeguarding our Soils: A Strategy for England [online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69261/pb13297-soil-strategy-090910.pdf

[153] Department for Environment, Food and Rural Affairs (2012) The Water White Paper [online] Available at: https://publications.parliament.uk/pa/cm201213/cmselect/cmenvfru/374/374.pdf

[154] Department for Environment, Food and Rural Affairs (2011) Water for life [online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/228861/8230.pdf

- Work with water companies, regulators and other stakeholders to build understanding of the impact personal choices have on the water environment, water resources and costs.
- Set out roles and responsibilities – including where Government will take a stronger role in strategic direction setting and assessing resilience to future challenges, as well as clear expectations on the regulators.

6.15 **Future Water: The Government's Water Strategy for England**[155]: Sets out how the Government wants the water sector to look by 2030, providing an outline of steps which need to be taken to get there. These steps include: improving the supply of water; agreeing on important new infrastructure such as reservoirs; proposals to time limit abstraction licences; and reducing leakage. The document also states that pollution to rivers will be tackled, whilst discharge from sewers will be reduced.

Sub-national

6.16 **Cambridge City Council and South Cambridgeshire District Council Infrastructure Delivery Study 2015**[156]**:** Assessed the infrastructure requirements, costs and known funding related to planned growth, particularly the strategic sites, and identified any phasing issues that might have affected the proposed growth and advise on the future delivery of infrastructure needed to support the planned growth.

6.17 **South Cambridgeshire Contaminated Land Strategy (2001)**[157]**:** Sets out South Cambridgeshire District Council's strategy on how it proposes to identify contaminated land within its boundaries. It supports the following objectives:

- Maintaining, improving and developing sympathetically the character, environment, economy and social fabric of our villages.
- Promoting a healthier environment to enable our communities to lead healthier lives, by its own actions and active partnership with others.
- Working towards a more sustainable future for everyone living and working in South Cambridgeshire, balancing the needs of the present and future generations.

6.18 **Cambridge City Council Contaminated Land Strategy (2009)**[158]**:** Builds upon the City Council's Medium Term Objectives which include:

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[155] HM Government (2008) Future Water: The Government's water strategy for England [online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69346/pb13562-future-water-080204.pdf

[156] Peter Brett Associates (2015) Infrastructure Delivery Study 2015 [online] Available at: https://files.cambridge.gov.uk/public/ldf/coredocs/rd-mc-080.pdf

[157] South Cambridgeshire District Council (2001) Contaminated Land Strategy [online] Available at: https://www.scambs.gov.uk/media/7919/contaminatedlandstrategy-2001-final-version.pdf

[158] Cambridge City Council (2009) Contaminated Land Strategy [online] Available at: https://www.cambridge.gov.uk/media/3025/contaminated-land-strategy.pdf

- To promote Cambridge as a sustainable city, in particular by reducing carbon dioxide emissions and the amount of waste going into landfill in the City and sub-region.
- Ensure that residents and other service users have an entirely positive experience of dealing with the Council.
- Maintain a healthy, safe and enjoyable city for all, with thriving and viable neighbourhood.
- Lead the growth of Cambridge to achieve attractive, sustainable new neighbourhoods, including affordable housing, close to a good range of facilities, and supported by transport networks so that people can opt not to use the car.

6.19 **Cambridgeshire Green Infrastructure Strategy (2011)**[159]**:** Highlights the issue of air quality in particular and how this can be addressed through Green Infrastructure (GI) provision. It also notes that water is an important element of GI and that management of GI assets can be conducive to improving or maintaining good water quality.

6.20 **South Cambridgeshire Recreation and Open Space Study (2013)**[160]**:** Aims to provide an audit of the quantity and quality of existing provision in the district, assess the need for future provision.

6.21 **Cambridge Open Space and Recreation Strategy (2011)**[161] **:** Discusses the findings of the Open Space and Recreation Assessment. It breaks the information down by ward and provides data on the deficits in each ward and the ward's strengths and weaknesses in terms of open space provision. It also discusses the level of provision proposed in the urban extensions to the City, which have not been assessed in this Strategy as they have not yet been delivered on site.

6.22 **Cambridgeshire and Peterborough Minerals and Waste Development Plan (2011)**[162]**:** Sets out key areas which will help shape the future of minerals activities. The plan includes a vision and strategic objectives for both sustainable minerals and waste development, spatial strategies for both waste and minerals, 10 core policies to achieve the strategic objectives for minerals and waste development, 16 development control policies to ensure no unacceptable harm to the environment, economy or communities of the region. Currently, Cambridgeshire County Council and Peterborough City Council are in the process of reviewing their joint Minerals and Waste Development Plan. The consultation on the Further Draft

[159] Cambridgeshire Green Infrastructure Forum (2011) Green Infrastructure Strategy [online] Available at: https://www.cambridge.gov.uk/media/2557/green-infrastructure-strategy.pdf

[160] South Cambridgeshire District Council (2013) Recreation and Open Space Study [online] Available at: https://www.scambs.gov.uk/media/10290/recreation-open-space-study-2013.pdf

[161] Cambridge City Council (2011) Open Space and Recreation Strategy [online] Available at: https://www.cambridge.gov.uk/media/2467/open-space-and-recreation-strategy-2011.pdf

[162] Cambridgeshire County Council and Peterborough City Council (2011) Cambridgeshire and Peterborough Minerals and Waste Development Plan [online] Available at: https://ccc-live.storage.googleapis.com/upload/www.cambridgeshire.gov.uk/business/planning-and-development/Core_Strategy_Adopted_19July_2011.pdf?inline=true

Cambridgeshire and Peterborough Minerals and Waste Plan ran from 15 March to 9 May 2019. Once adopted it will replace the current Minerals and Waste Local Plan.

6.23 **Anglian River Basin District Flood Risk Management Plan (2016)**[163]**:** Explains the risk of flooding from various sources and how risk management authorities will work with communities to manage it over a period of 6 years.

6.24 **Anglian River Basin Management Plan (2015)**[164] **:** Provides a framework for protecting and enhancing the benefits provided by the water environment. To achieve this, and because water and land resources are closely linked, it also informs decisions on land-use planning.

6.25 **Cambridge Area Water Cycle Strategy - Phase 1 (2008)**[165] **and Phase 2 (2011)**[166] **:** Provides an evidence base concerning the required water services infrastructure for planned development in the Cambridge Sub-Region (CSR). The Phase 1 study identified no insurmountable technical constraints to the proposed level of growth, but identified a number of important issues including the need for a Surface Water Management Plan, a detailed analysis of increased flood risk at the Swavesy Drain, and the need to investigate the viability of achieving 'water neutrality'[167]. Phase 2 goes further and supports a more aspirational vision for water management, including aspirations to water neutrality, improving biodiversity and sustainable surface water management. In addition, a further dedicated Water Cycle Strategy (WCS) was developed in 2014 for the allocated strategic development site at Denny St Francis, north of the existing town of Waterbeach.[168] This is the most up-to-date strategy that is currently available, however any forthcoming strategies will be drawn on when released.

[163] Environment Agency (2016) Anglian River Basin District Flood Management Plan [online] Available at: https://www.gov.uk/government/publications/anglian-river-basin-district-flood-risk-management-plan

[164] Environment Agency, DEFRA (2015) Anglian River Basin Management Plan [online] Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/718327/Anglian_RBD_Part_1_river_basin_management_plan.pdf

[165] Cambridgeshire Horizons (2008) Water Cycle Strategy up to 2031, Major Growth Areas in and around Cambridge, Phase 1 – Outline Strategy [Online]. Available at: https://www.scambs.gov.uk/media/7595/cambridgeshire-water-cycle-strategy-phase-1-2008.pdf

[166] Cambridgeshire Horizons (2011) Detailed Water Cycle Strategy up to 2031, Major Growth Areas in and around Cambridge, Phase 2 – Detailed Strategy [Online]. Available at: https://www.scambs.gov.uk/media/7596/cambridgeshire-water-cycle-strategy-phase-2-2011.pdf

[167] The concept that the total water used after a new development is no more than the total water used before the development in a given wider area. This requires meeting the new demand through improving the efficiency of use of the existing water resources.

[168] RLW Estates (2014) Denny St Francis Water Cycle Study [Online]. Available at: https://www.scambs.gov.uk/media/1380/328331_denny_st_francis_water_cycle_study_-_detailed_report_revd.pdf

6.26 **Cambridge Water Water Resources Management Plan (WRMP) 2019**[169]**:** describes how Cambridge Water aims to meet the demand for water in the Cambridge region, including consideration of climate change, population growth and the need to protect the environment. The WRMP recognises the increased demand for water due to a growing population, the potential for adverse environmental impacts of extraction and the need to reduce water wastage.

6.27 **Affinity Water (draft) and Anglian Water WRMPs**[170]**:** To be taken into consideration as neighbouring suppliers, given that WRMPs do not operate in isolation and abstraction by one can significantly affect the environment of another.

6.28 **Citywide Tree Strategy 2016-2026**[171]**:** Aims to sustainable manage the Council's own trees and those it manages by agreement, to foster a resilient tree population that responds to the impacts of climate change and urban expansion, to raise awareness of trees being a vital community asset, through promoting continued research, through education via the provision of advice and through partnership working and to make efficient and strategic use of the Council's regulatory powers for the protection of trees of current and future value.

6.29 **Anglian Water's Long Term Water Recycling Plan (WRLTP)**[172]**:** A plan to prioritise investment across the wider region to help balance supply and demand for water recycling services, considering risks from growth, climate change, severe drought, and customer behaviours.

6.30 **Catchment Abstraction Management Plans**[173]**:** Used by the Environment Agency to manage water resources in England, which test the availability of water at four different levels of 'flow'. The most relevant strategies for the plan area are:

- Cam and Ely Ouse Catchment: This strategy covers the largest part of the plan area, particularly in the east and including Cambridge. It highlights that at the three lowest 'flows', water is largely 'not available', and at the highest flow level water is 'restricted'.

[169] Cambridge Water Company (2019) Water Resources Management Plan [online] Available at: https://www.cambridge-water.co.uk/media/2546/revised-draft-wrmp-2019-cambridge-water-v2.pdf

[170] Affinity Water (2019) [online] Available at: https://www.affinitywater.co.uk/docs/corporate/plans/water-resources/latest/Draft_Final_Water_Resources_Management_Plan_2019_Published_June_2019.pdf ; Anglian Water (2015) [online] Available at: https://www.anglianwater.co.uk/siteassets/household/about-us/wrmp-2015.pdf

[171] Cambridge City Council (2016) Citywide Tree Strategy 2016-2026 [online] Available at: https://www.cambridge.gov.uk/media/3260/tree-strategy-2016-part-1.pdf

[172] Anglian Water (2018) Water Recycling Long Term Plan [online] Available at: https://www.anglianwater.co.uk/siteassets/household/in-the-community/water-recycling-long-term-plan.pdf

[173] HM Government (n.d) Abstraction licensing strategies (CAMS process) [online] Available at: https://www.gov.uk/government/collections/water-abstraction-licensing-strategies-cams-process

- Upper and Bedford Ouse Catchment: This strategy covers a small part of the west of the plan area. At the two lower 'flows' tested, water was 'not available' and was restricted at the third lowest 'flow'.
- Essex Catchment: the strategy highlights that water is 'not available' across large parts of the catchment area, however this only affects a small part of the south of the plan area for Greater Cambridge.

Current Baseline

6.31 Rather than addressing issues such as soil, geology and water as isolated topics, it is important than an integrated view is adopted based on the 'natural capital' concept – often defined as the world's stock of natural assets (including geology, soil, air water and all living things), from which humans derive a wide range of 'ecosystem services'. It is important that the approach to the issues below in any development plan is done in a holistic, integrated way.

Geology and minerals

6.32 A variety of mineral resources are found in the Greater Cambridge Local Plan area: sand, gravel, limestone, chalk, chalk marl and clay. There are extensive deposits often occurring under high quality agricultural land or in areas valued for their biodiversity and landscapes, e.g. river valleys.[174] As shown in **Figure 6.1**, there are currently three Minerals Safeguarding Areas (MSAs) within the City of Cambridge and three within South Cambridgeshire. There are also seven Mineral Consultation Areas (MCAs) within Greater Cambridge. There are also a small number of minerals site allocations, which are extensions to existing minerals sites. The mineral resource of primary interest for Cambridgeshire & Peterborough is sand and gravel and crushed rock aggregate (limestone). Sand and gravel resources occur mainly within superficial or 'drift' deposits, subdivided into river sand and gravel, glacial deposits, head deposits and bedrock sand. There are sand and gravel deposits around Cambridge City, particularly to the north but also stretching out into the southern part of the plan area. There are also deposits of chalk in the southern and eastern parts Greater Cambridge.[175]

6.33 Cambridgeshire and Peterborough has limited resources of rock suitable for crushed rock aggregate. The Lincolnshire Limestone Formation (inferior oolite) crops out in the north-west of the Plan area, west and north-west of Peterborough. None of the limestone is worked for building stone within the Plan area. Owing to its relatively low strength and its poor resistance to frost it is generally used as constructional fill or as sub-base roadstone material. To the south of the Plan area

[174] Cambridgeshire County Council and Peterborough City Council (2011) Cambridgeshire and Peterborough Minerals and Waste Development Plan [online] Available at: https://ccc-live.storage.googleapis.com/upload/www.cambridgeshire.gov.uk/business/planning-and-development/Core_Strategy_Adopted_19July_2011.pdf?inline=true

[175] Cambridgeshire County Council and Peterborough City Council (2011) Cambridgeshire and Peterborough Minerals and Waste Development Plan [online] Available at: https://ccc-live.storage.googleapis.com/upload/www.cambridgeshire.gov.uk/business/planning-and-development/Core_Strategy_Adopted_19July_2011.pdf?inline=true

closer to Cambridge the Upware Limestone is quarried on a small scale for use as an agricultural lime and asphalt filler.[176]

Soils

6.34 Cambridgeshire has one of the largest areas of high-grade agricultural land in the UK, as shown in **Figure 6.2**. Approximately 85% of the land is arable farmland or managed grassland, 5% is wooded and the remaining 10% is made up of the urban areas.[177] The underlying soils give rise to a mix of classified agricultural land, the majority being of Grades 1, 2 and 3, with small areas designated as urban and non-agricultural, almost entirely the City of Cambridge. Grade 1 and Grade 2 agricultural land represent the best and most versatile land for farming, along with Grade 3a agricultural land (the national maps of agricultural land classification do not distinguish between Grade 3a and Grade 3b agricultural land).

6.35 Within DEFRA's 25 Year Environment Plan, a Strategy for the restoration of peatland areas in England was outlined as a priority action. Pilot projects will be undertaken including the East Anglian Fens Peat Pilot which will work with internal drainage boards to look at water flows on and around the fens. It will also bring in long-term sustainability of peat management opportunities which will assist with the creation of the Lowland Agricultural Peat Taskforce. The Cambridgeshire Fens include a significant proportion of the East Anglian Fen peat and the pilot project will work with internal drainage boards to look at water flows on and around the fens. England's remaining lowland peat provides a crucial tool in helping to mitigate climate change and achievement of the government's aim to reach net zero emissions by 2050.[178]

Contaminated Land

6.36 For a site to meet the definition of contaminated land, a pollutant linkage must be established. A pollutant linkage consists of three parts: a source of contamination in, on or under the ground, a pathway by which the contaminant is causing significant harm or harm, (or which presents a significant possibility of such harm being caused) and a receptor of a type specified in the regulations.[179] Two entries were added to the South Cambridgeshire District Council's Contaminated Land Register

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[176] Cambridgeshire County Council (2016) Aggregate and Waste Monitoring Report 2011-2016 [online] Available at:https://ccc-live.storage.googleapis.com/upload/www.cambridgeshire.gov.uk/business/planning-and-development/2018%2005%20Cambs%20Annual%20MR.pdf?inline=true

[177] Cambridgeshire County Council and Peterborough City Council (2011) Cambridgeshire and Peterborough Minerals and Waste Development Plan [online] Available at: https://ccc-live.storage.googleapis.com/upload/www.cambridgeshire.gov.uk/business/planning-and-development/Core_Strategy_Adopted_19July_2011.pdf?inline=true

[178] Natural England (2019) Peat pilots set to revive England peatlands [online] Available at: https://naturalengland.blog.gov.uk/2019/08/12/peat-pilots-set-to-revive-english-peatlands/

[179] Cambridge City Council (2009) Contaminated Land Strategy [online] Available at: https://www.cambridge.gov.uk/media/3025/contaminated-land-strategy.pdf

in 2003 and 2010. However, both have now been remediated.[180] There is currently one entry on the register for Cambridge City that consists of four addresses. All of these addresses have now been fully remediated.[181]

Water

6.37 **Figure 6.3** shows the location of water courses and Source Protections Zones (SPZs) within Greater Cambridge. The River Cam runs through the City of Cambridge through to South Cambridgeshire from the south west to the north east. The two principal tributaries of the Cam, the Granta and the Rhee, flow through South Cambridgeshire. Greater Cambridge lies within the River Basin Management Plan for the Anglian River Basin District. Land within the plan area falls across the Broadland Rivers catchment, Cam and Ely Ouse catchment, Combined Essex catchment, East Suffolk catchment, Nene catchment, North Norfolk catchment, North West Norfolk catchment, Old Bedford including the Middle Level catchment, Upper and Bedford Ouse catchment, Welland catchment and the Witham catchment. These areas extend beyond the boundaries of the plan area to include land to the north, east and west.[182]

6.38 Priority issues for the Cam and Ely Ouse, Upper and Bedford Ouse and Old Bedford catchment areas include diffuse pollution, biological impacts of low flow rates and over abstraction and nutrient loading, the physical modification of water courses, invasive non-native plant and animal species, and pollution. Some of the water bodies in these catchments have been identified by the Environment Agency as having 'bad' or 'poor' ecological status, but none have been identified as having 'bad' chemical status.[183] There are also Source Protection Zones scattered throughout Greater Cambridge. Over-abstraction of water is a key issue, and Cambridge Water Company's WRMP shows that beyond 2035, without additional resources or greater efficiency, the need for water to serve development will be greater than the current available supply. However, the WRMP sets out measures to ensure that Cambridge Water will be able to balance supply and demand in the region up to and beyond 2045. In August 2019 the Chair of Natural England raised concerns over the levels of stress on the River Cam in particular, which is said to be under threat from low rainfall and abstraction of groundwater for public supply. Given the prospect of increased demand from development locally, the Chair of Natural England suggested that major new reservoirs may be required in future to counter the stress.[184] It is recognised that water abstraction and conveyance issues

[180] South Cambridgeshire District Council (2015) Contaminated Land Register [online] Available at: https://www.scambs.gov.uk/media/10502/scdc-contaminted-land-register_0.pdf

[181] Pers. Comm. from council officers

[182] Environment Agency, DEFRA (2015) Anglian River Basin Management Plan [online] Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/718327/Anglian_RBD_Part_1_river_basin_management_plan.pdf

[183] Environment Agency, DEFRA (2015) Anglian River Basin Management Plan [online] Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/718327/Anglian_RBD_Part_1_river_basin_management_plan.pdf

[184] Pickstone, S (August 2019) River Cam crisis: Tony Juniper suggests 'major new reservoirs' *ENDS Report* [Online] Available at:

operate at a regional scale and do not follow either local authority or water company boundaries, raising the need to enact the 'duty to cooperate' across these boundaries.

6.39 It should be recognised that there is a close relationship between the availability of water resources and water quality in a region like Greater Cambridge, given that lower dilution in the watercourses can lead to the need to treat wastewater to a higher standard. There are existing proposals for a new and relocated wastewater treatment works for Cambridge, however plans must take into account any potential short or long-term shortfalls in capacity, given projected growth in the area.

6.40 Given the scarcity of water in the catchments serving Greater Cambridge, protecting water resources from pollution and contamination will be important. In some cases, development can be part of the solution to remediating both land and water affected by a legacy of pollution. However, in some cases the contamination will be particularly acute and may require proactive planning solutions.

6.41 The Cambridge Water Cycle Study Phase 2 analysed the potential impacts posed by development on European designated sites. The European sites identified as potentially relevant are Breckland Special Area of Conservation (SAC) and Special Protection Area (SPA), Ouse Washes SAC, SPA and Ramsar site and Wicked Fen SAC and Ramsar site as they are potentially vulnerable to local changes in runoff, drainage and changes in water quality and quality. Each of these sites were screened out of further assessment. However, it is noted in relation to Ouse Washes SAC and Ramsar site that implementation of the Northstowe development as planned is subject to approval of the proposed consent revision at Uttons Drove sewage treatment works and therefore an HRA may be required dependent upon the outcome of consenting process / details and appropriate implementation and management of SuDS.[185]

6.42 A further breakdown of the number of water courses which have achieved various ecological and chemical classifications is provided in **Table 6.1**. For Greater Cambridge, the reasons for not achieving good status and reasons for deterioration in water quality were mainly agriculture and rural land management or related to the water industry.[186]

https://www.endsreport.com/article/1594857/river-cam-crisis-tony-juniper-suggests-major-new-reservoirs

[185] Cambridgeshire Horizons (2011) Detailed Water Cycle Strategy up to 2031, Major Growth Areas in and around Cambridge, Phase 2 – Detailed Strategy [Online]. Available at: https://www.scambs.gov.uk/media/7596/cambridgeshire-water-cycle-strategy-phase-2-2011.pdf

[186] Environment Agency (2019) Catchment Data Explorer [online] Available at: https://environment.data.gov.uk/catchment-planning/RiverBasinDistrict/5/Summary

Table 6.1 Ecological and Chemical Classification for surface waters in the Anglian River Basin District

	Ecological status or potential					Chemical status	
Number of water bodies	Bad	Poor	Moderate	Good	High	Fail	Good
603	15	114	421	53	0	5	598

Table 6.2 Key Sustainability issues for Greater Cambridge and likely evolution without the Local Plan

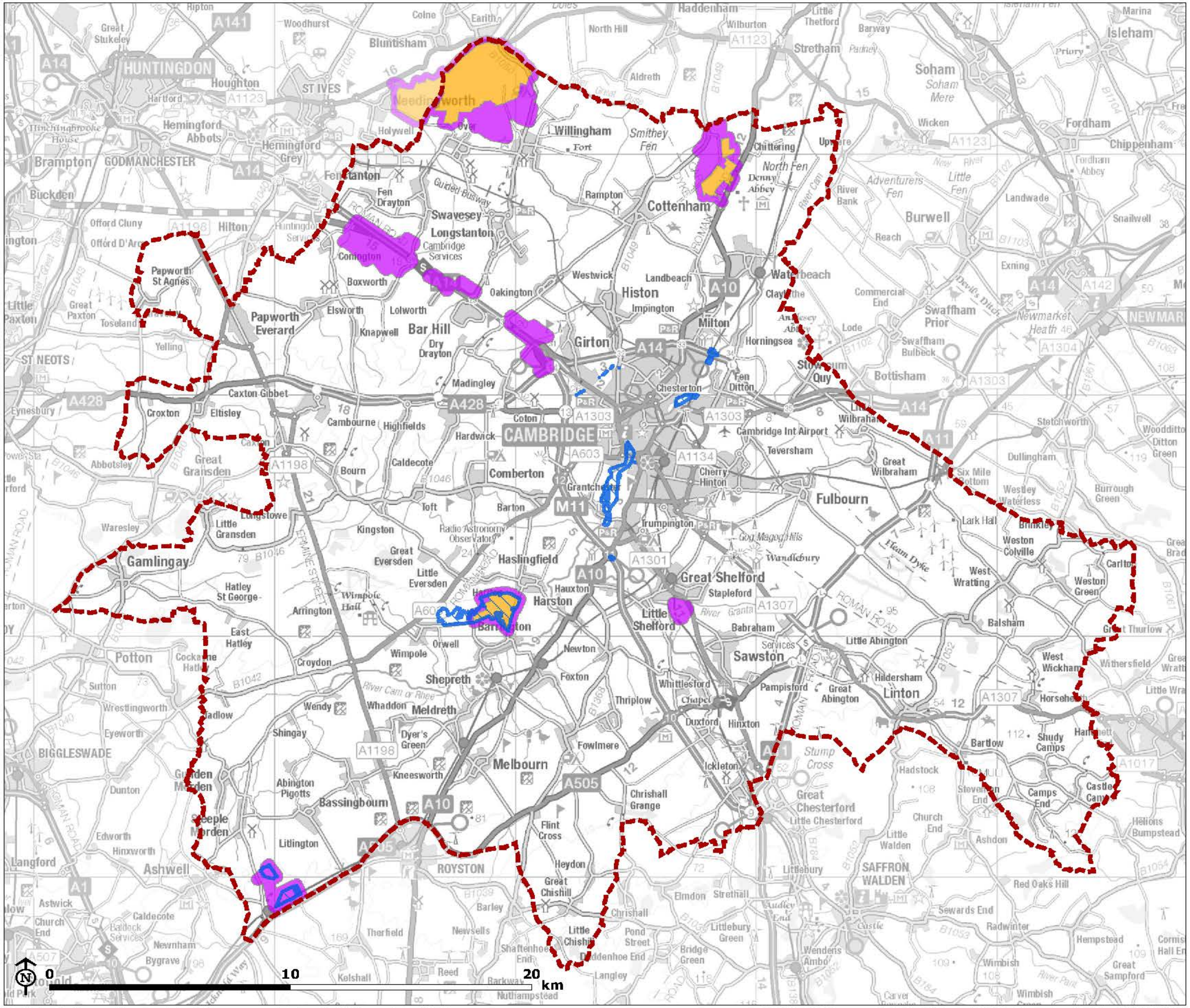
Key sustainability issues for Greater Cambridge	Likely evolution without the Local Plan	Relevant SA objective
The majority of Greater Cambridge contains best and most versatile agricultural land with a mix of classified agricultural land, Grades 1, 2 and 3.. New development should, where possible, be delivered as to avoid the loss of higher grades of agricultural land.	The Cambridge Local Plan seeks to safeguard the best and most versatile agricultural land within and on the edge of the City through Policy 8 and Policy NH/3 of the South Cambridgeshire Local Plan ensures no development will be granted if it leads to the irreversible loss of Grade 1, 2 and 3a agricultural land. Furthermore the NPPF supports the re-use of brownfield land and states that planning policies and decisions should contribute to and enhance the natural and local environment by “recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land”. The Local Plan provides an opportunity to strengthen the approach and ensure these natural assets are not lost or compromised. This may involve the prioritisation of use of brownfield sites and lower quality agricultural land for development.	SA objective 8

Key sustainability issues for Greater Cambridge	Likely evolution without the Local Plan	Relevant SA objective
The Greater Cambridge contains safeguarded mineral resources which, where possible, should not be lost or compromised by future growth.	Without the Local Plan it is possible that development could result in unnecessary sterilisation of mineral resources which would mean they are not available for future generations to use. Policy CS26 of the Cambridgeshire and Peterborough Minerals and Waste Core Strategy addresses Proposals for non-mineral development within the Minerals Safeguarded Areas.	SA objective 9
Some of the water bodies which flow through Greater Cambridge have been identified by the Environment Agency as having 'bad' or 'poor' ecological status. There are also areas in Greater Cambridge which are covered by a Source Protection Zone.	Without the Local Plan it is possible that un-planned development could be located in areas that will exacerbate existing water quality issues, although existing safeguards, such as the EU Water Framework Directive, would provide some protection. Development which occurs within Source Protection Zones presents the risk of contamination from any activities that might cause pollution in the area. Policy 7 of the Cambridge Local Plan aims to raise the water quality and enhance the natural resources of the River Cam. Policy CC/7 of the South Cambridgeshire Local Plan aims to ensure that sufficient capacity in the existing local infrastructure is provided to meet the additional requirements arising from new development, that the quality of water bodies will not be harmed and the delivery of mitigation which would help to prevent water quality issues emerging. The Local Plan will provide the opportunity to ensure that development is located and designed to take into account the sensitivity of the water environment. It will also provide further certainty in terms of planning for adequate wastewater	SA objective 10

Key sustainability issues for Greater Cambridge	Likely evolution without the Local Plan	Relevant SA objective
	infrastructure to address development requirements over the plan period.	
Over-abstraction of water in this region is a key issue and action is required now to ensure the availability of water for future uses, including potable water supply and food production, without having a detrimental impact on the environment, as low rainfall and over abstraction in rivers is causing serious concern. This is likely to be exacerbated by the effects of climate change, and it should be noted that there is significant cross-over between water resource availability and water quality.	Without the Local Plan it is possible that un-planned development could be located in areas that will exacerbate the water stress issue within the sub-region, although Cambridge Water's WRMP sets out measure to ensure that supply and demand in the region can be balanced over the next 25 years and beyond. Policy 28 of the Cambridge Local Plan requires all new development to meet the minimum standards of water efficiency to address the severe water stress within the area and has set a target for water consumption of 110 litres per person per day. Policy CC/4 of the South Cambridgeshire Local Plan requires all new residential development to achieve a minimum water efficiency equal to 110 litres per person per day. The Local Plan has the potential to secure long term sustainable development, which will be essential in ensuring that all new development implement water efficiency standards, and that the phasing of new development is in line with any implementation timescales for any new strategic schemes that water companies might require. It will also be better placed to take an up-to-take approach to climate change adaptation, based on up to date evidence.	SA objective 10

Greater Cambridge SA

Figure 6.1: Mineral Sites within Greater Cambridge



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CB:CB EB:Stenson_K LUC FIG6_1_10824_Minerals_r0_A4L 28/11/2019

Greater Cambridge

Mineral Consultation Area

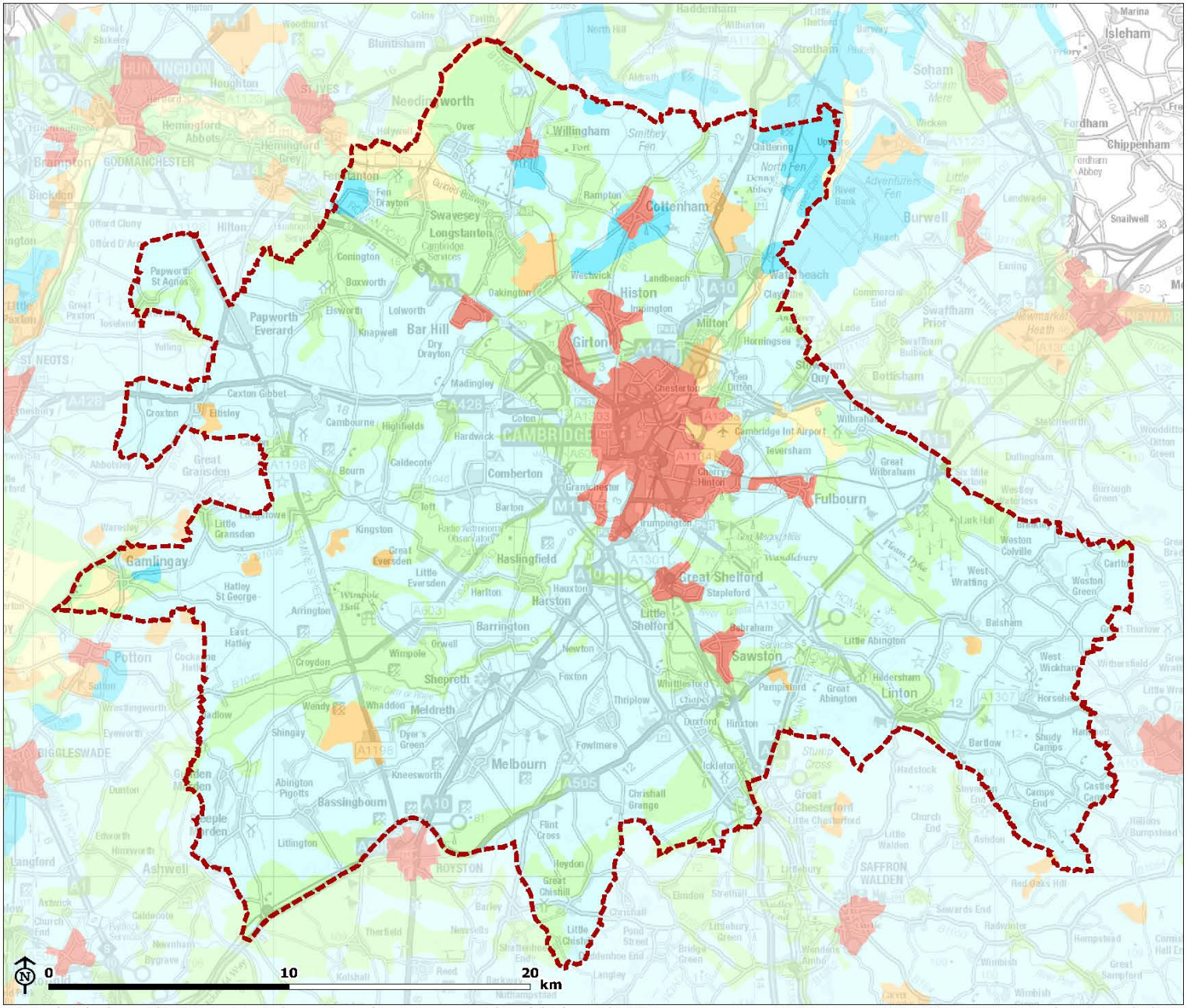
Existing Mineral Site

Mineral Safeguarding Area

Source: CCC, SCDC

Map Scale @ A4: 1:225,000

LUC



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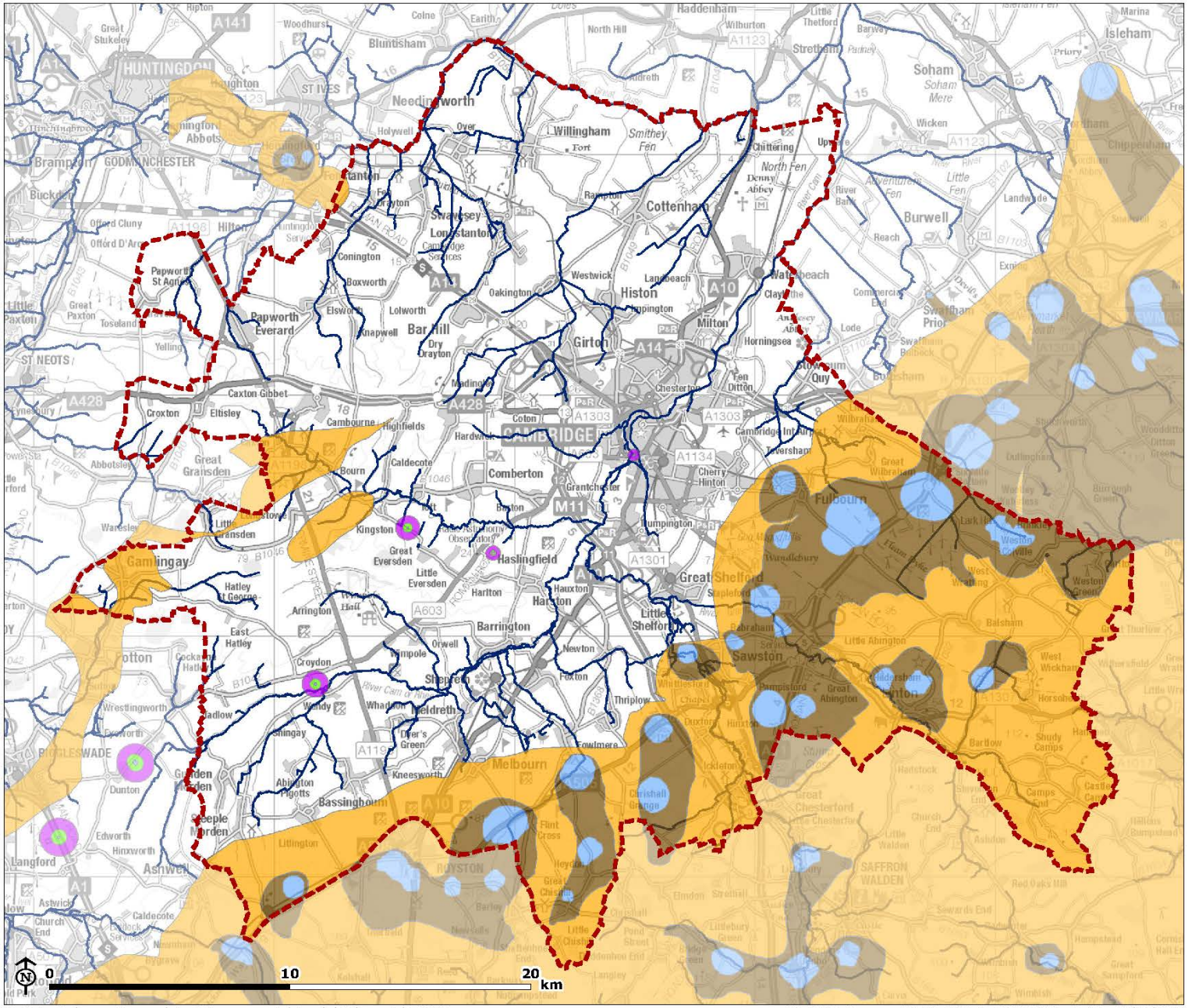
Greater Cambridge SA
Figure 6.3: Watercourses and Source Protection Zone within Greater Cambridge
Greater Cambridge
Watercourse
Source Protection Zone
1
1c
2
2c
3
Source: EA, OS
Map Scale @ A4: 1:225,000
0
10
20
km
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