

Network Rail (Cambridge South Infrastructure Enhancement) Order

Appendices to Proof of Evidence of Charlotte Burton

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On behalf of Cambridge City Council (OBJ-23)

Relating to Statement of Matters (211027) items 3. (i) The effect of the proposal on biodiversity including biodiversity net gain; 4. Impact on Hobson's Park Nine Wells Local Nature Reserve; 7. The adequacy of the Environmental Statement: the impacts on trees; and 10. The conditions proposed to be attached to the deemed planning permission for the scheme.

07 January 2022

Appendices

Appendix A – Comments on draft planning conditions

Appendix B – Letter from Council to applicant dated 07 December 2021

Appendix C – Response from applicant to Council dated 10 December 2021

Appendix D - Cambridge City Council Air Quality Action Plan (2018)

Appendix A - Comments on draft planning conditions

No.	Subject	Proposed Wording	Council comments
1	Time for commencement	<p>The development hereby permitted must commence before the expiration of 5 years from the date on which the Order comes into force.</p> <p>Reason: To ensure that the development is commenced within a reasonable period of time.</p>	Support.
2	Accordance with drawings	<p>The development must be carried out in accordance with the planning drawings.</p> <p>Reason: To ensure compliance with the approved plans and for the avoidance of doubt.</p>	<p>Support subject to:</p> <p>Insertion of 'development hereby approved'.</p> <p>Insertion of 'approved planning drawings'.</p>
3	Accordance with Design Principles	<p>The development must be carried out in accordance with the Design Principles scheduled in approved Cambridge South Design Principles (Appendix A of the Design and Access Statement 158454-ARC-ZZ-ZZZ-REP-EAR-0000.</p>	<p>Support subject to:</p> <p>Insertion of 'development hereby approved'.</p> <p>Insertion of 'Reason: To ensure that the design achieves a high quality and contextually appropriate station and associated public realm'.</p>

4	Phasing Plan	<p>No development shall commence (including demolition) until a Phasing Plan for the development hereby permitted has been submitted to and approved in writing by the local planning authority. The Phasing Plan must include a proposed sequence for the proposed works including the following elements:</p> <ul style="list-style-type: none"> (i) Enabling works e.g archaeology and site investigations (ii) Cambridge South station; (iii) Alterations to Webster's Footbridge; (iv) Accommodation bridge over Hobson's Brook; (v) Railway Systems Compound; (vi) Landscaping; and (vii) Any other building/structure or alteration to an existing building/structure for which details of scale and external appearance were not provided as part of the request for the planning direction. <p>The phasing plan shall identify:</p> <ul style="list-style-type: none"> a) any phases of development to which planning conditions 6, 7, 8, 10, 11, 12, [BNG condition number], 13, 26, 29 or [AMS & TPP condition number] will not apply, and in each of those conditions a 'Specified Phase' means any phase of the development for which the approved Phasing Plan specifies that the relevant condition will not apply. b) Indicative duration of works for each area including when areas of open space used temporarily for construction can be made available to the public. <p>The development shall only be carried out in accordance with the approved details submitted.</p> <p>Reason: To clarify how the works are to be phased to assist with the determination of discharge of conditions</p>	<p>Support subject to: Checking condition numbering on final version. Amendment 'The development shall only be carried out in accordance with the approved details submitted'.</p>
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5	Submission of preliminary contamination assessment	<p>Prior to the commencement of each phase of the development (other than a Specified Phase) a site investigation strategy for that phase setting out the location and details of the site investigations to be carried out to effectively determine the nature and extent of any contamination, including soil, gas and/or water to inform the remediation strategy shall be submitted to and approved in writing by the local planning authority.</p> <p>The site investigation strategy will be based on the information identified in the desk study undertaken to support Chapter 12 of the Environmental Statement (doc NR16).</p> <p>The site investigations shall be undertaken in accordance with the site investigation strategy approved in writing by the relevant planning authority.</p> <p>Reason: To mitigate anticipated construction impacts arising from the development and to ensure that the development does not adversely affect human health or the environment during and following construction.</p>	Support.
6	Submission of site investigation report and remediation strategy	<p>Prior to undertaking any excavations with the exception of works agreed under conditions 6 (site investigations) and 11 (Archaeology) or phases identified under condition 5 the following shall be submitted to and approved in writing by the local planning authority:</p> <p>(a) A site investigation report detailing the findings of the site investigations carried out under Condition 6 to determine the nature and extent of any contamination, including the results of the soil, gas and/or water analysis and subsequent risk assessment to any receptors.</p> <p>(b) A proposed remediation strategy detailing the works required in order to address unacceptable risks from the identified contamination given the proposed end use of the site and surrounding environment including any controlled waters.</p> <p>The strategy shall include a schedule of the proposed remedial works setting out a timetable for all remedial</p>	Support subject to: Checking condition numbering on the final list.

		<p>measures that will be implemented</p> <p>The works shall be undertaken in accordance with the approved Remediation Strategy approved in writing by the relevant planning authority.</p> <p>Reason: To mitigate anticipated construction impacts arising from the development and to ensure that the development does not adversely affect humans or the environment during and following construction</p>	
7	<p>Implementation and completion of remediation strategy works</p>	<p>Prior to the first occupation of land under any phase of the development (other than a Specified Phase) the following shall be submitted to and approved in writing by the local planning authority:</p> <p>(a) a completion report demonstrating that the approved remediation scheme as required by condition 7 has been undertaken and that the land has been remediated to a standard appropriate for the end use; and</p> <p>(b) details of any post-remedial sampling and analysis (as defined in the approved Material Management Plan submitted under the Code of Construction Practice Part B) shall be included in the completion report along with all information concerning materials brought onto, used in, and removed from the development.</p> <p>The information provided must demonstrate that the site has met the required clean-up criteria set out in the remediation strategy.</p> <p>Reason: To mitigate anticipated construction impacts arising from the development and to ensure that the development does not adversely affect humans or the environment during and following construction.</p>	<p>Support subject to: Checking condition numbering on the final list.</p>

8	Unexpected contamination	<p>If unexpected contamination is encountered whilst undertaking the development which has not previously been identified, works shall immediately cease in the contaminated area until the local planning authority has been notified and a remediation strategy including details of any further site investigations required to address unexpected contamination the has been approved following steps (a) and (b) of condition 7 above.</p> <p>The approved remediation shall then be fully implemented under condition 7.</p> <p>Reason: To mitigate anticipated construction impacts arising from the development and to ensure that the development does not adversely affect humans or the environment during and following construction.</p>	<p>Support subject to: Checking condition numbering on the final list.</p>
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9	Code of Construction Practice	<p>(a) The development must be carried out in accordance with the provisions of the Code of Construction Practice (Part A) contained in the Environmental Statement (Volume 3: Appendix 2.4) unless amended through the CoCP Part B.</p> <p>(b) Other than in relation to a Specified Phase no development or phase thereof is to commence until a Code of Construction Practice (Part B) has been submitted to and approved by the local planning authority for that phase of work.</p> <p>The Code of Construction Practice (Part B) shall include the following documents other than in relation to a Specified Phase:</p> <ol style="list-style-type: none"> 1) Flood Emergency Response Plan 2) Emergency and Incident Response Plan 3) Dust management Plan 4) Construction Logistics Plan 5) Construction Travel Plan 6) Construction Traffic Management Plan 7) Site Waste Management Plan 8) Materials Management Plan (Includes storage of excavated material) 9) Lighting Management Plan 10) Pollution Control Plan 11) Carbon Efficiency Plan 12) Noise and Vibration Management Plan <p>Reason: To mitigate anticipated construction impacts arising from the development and to protect local and residential amenity.</p>	<p>Support subject to: Insertion of 'The development shall only be carried out in accordance with the approved details submitted.'</p>
10	Archaeological mitigation, investigation and evaluation	<p>No development except for site investigations, works to trees or any Specified Phase shall commence until the implementation of a programme of archaeological investigations [for that phase] has been undertaken in accordance with a written scheme of investigation which has been submitted to and approved by the local planning authority. The approved scheme shall be implemented in full including any post development requirements, e.g.</p>	<p>Further discussions required to ensure the timing for the trigger of the condition protects the history environment in accordance with Local Plan policy 61:</p> <p>The applicant's Planning Manager explained at meeting on 14 December that Historic England have advised on the wording of the condition which</p>

		<p>archiving and submission of final reports. Reason: To ensure that the archaeological investigation is initiated at an appropriate point in development procedure.</p>	<p>required further amendments. The Council requests opportunity to review the amended wording.</p>
11	Construction Ecological Method Statement (EMS)	<p>No development [or phase thereof] other than a Specified Phase shall commence until an Ecological Method Statement (EMS) [for that phase] addressing protection, enhancement, mitigation and compensation during construction has been submitted and approved in writing by the local planning authority. The EMS shall include the following:</p> <ul style="list-style-type: none"> (a) Review of site potential and constraints, based on species surveys and operational limitations of the site. (b) Detailed design(s) and/or working method(s) to achieve stated objectives, including: <ul style="list-style-type: none"> i. Risk assessment of potentially damaging construction activities. ii. Identification of “biodiversity protection zones”. iii. Practical measures (both physical measures and sensitive working practices) to avoid or reduce impacts during construction (may be provided as a set of method statements). iv. The location and timings of sensitive works to avoid harm to biodiversity features. v. The times during construction when specialist ecologists need to be present on site to oversee works. vi. Responsible persons and lines of communication. vii. The role and responsibilities on site of an ecological clerk of works (ECoW) or similarly competent person. viii. Use of protective fences, exclusion barriers and warning signs if applicable (Excluding Trees). (c) Extent and location/area of proposed works on appropriate scale maps and plans. (d) Details of monitoring and remedial measures, including timetable for submission to local planning authority. <p>The strategy shall also set out (where the results from monitoring show that conservation aims and objectives of</p>	<p>Support subject to: Amendment: ‘The EMS shall be implemented and maintained in accordance with the approved details.’ The development shall only be carried out in accordance with the EMS approved in writing by the local planning authority.’</p>

		<p>the EMS are not being met) contingencies and/or remedial action will be identified, agreed and implemented so that the development still delivers the fully functioning biodiversity objectives of the originally approved development. The EMS shall be implemented and maintained in accordance with the approved details.</p> <p>Reason: To ensure that the development does not adversely affect the natural wildlife and ecology of the area.</p>	
12	Biodiversity Net gain	<p>No development or phase thereof (other than a Specified Phase) shall commence until a Biodiversity Net Gain (BNG) report, demonstrating BNG best practice and minimum 10% BNG (to include DEFRA metric V2 calculations and assumptions made) has been submitted to and approved in writing by the local planning authority.</p>	<p>Further discussions required to ensure the condition secures appropriate biodiversity mitigation and enhancement in accordance with Local Plan policies 67, 69 and 70, the NPPF and the NPPG: The mechanism to secure the delivery of any offsite BNG mitigation such as Section 106 Agreement.</p> <p>Insert Reason for the condition.</p>
13	Surface water drainage Strategy - Construction	<p>No development (or phase thereof) except for site investigations, works to trees, demolition or works under any Specified Phase shall commence until details of measures indicating how additional surface water run-off from the site will be avoided during the construction works have been submitted to and approved in writing by the Local Planning Authority.</p> <p>The applicant may be required to provide collection, balancing and/or settlement systems for these flows. This should include the maintenance proposals during construction. The approved measures and systems shall be brought into operation before any works to create buildings or hard surfaces commence.</p> <p>The scheme shall subsequently be implemented in accordance with the approved details prior to the occupation of the respective phase of the development or in accordance with the implementation programme agreed in writing with the local planning authority.</p>	<p>Further discussions required to ensure the condition secures appropriate surface water drainage in accordance with the development plan: Clarity between conditions 13, 14, 15 covering constriction and operational drainage, and how these conditions work together.</p>

		Reason: To ensure appropriate surface water drainage and to prevent the increased risk of flooding.	
14	Surface water drainage Strategy operation	<p>No development (or phase thereof) except for site investigations, works to trees, demolition or works under any Specified Phase shall commence until a surface water drainage scheme (for that phase), based on sustainable drainage principles and principles within the Flood Risk Assessment, has been submitted to and approved in writing by the local planning authority. The scheme shall include where appropriate:</p> <p>(a) Full calculations detailing the existing surface water runoff rates for the QBAR, 3.3% Annual Exceedance Probability (AEP) (1 in 30) and 1% AEP (1 in 100) storm events.</p> <p>(b) Full results of the proposed drainage system modelling in the above-referenced storm events (as well as 1% AEP plus climate change) , inclusive of all collection, conveyance, storage, flow control and disposal elements and including an allowance for urban creep, together with an assessment of system performance.</p> <p>(c) Site Investigation and test results to confirm infiltration rates.</p> <p>(d) Details of overland flood flow routes in the event of system exceedance, with demonstration that such flows can be appropriately managed on site without increasing flood risk to occupants.</p> <p>(e) Details of the maintenance/adoption of the surface water drainage system.</p>	As above.

		<p>The scheme shall subsequently be implemented in accordance with the approved details prior to the occupation of the respective phase of the development or in accordance with the implementation programme agreed in writing with the local planning authority.</p> <p>Reason: To ensure appropriate surface water drainage and to prevent the increased risk of flooding.</p>	
15	Surface water drainage scheme	<p>No development (or phase thereof) except for site investigations, works to trees, demolition or works under any Specified Phase shall commence until a surface water drainage scheme (for that phase), based on the surface water drainage strategy, has been submitted to and approved in writing by the local planning authority. The scheme shall include where appropriate:</p> <ul style="list-style-type: none"> (a) Detailed drawings of the entire proposed surface water drainage system, including levels, gradients, dimensions and pipe reference numbers. (b) Details of the proposed attenuation and flow control measures. (c) Measures taken to prevent pollution of the receiving groundwater and/or surface water. (d) Full details of culvert extension appropriately sized to convey the existing channel modelled flow. <p>The scheme shall subsequently be implemented in accordance with the approved details prior to the occupation</p>	As above.

		<p>of the respective phase of the development or in accordance with the implementation programme agreed in writing with the local planning authority.</p> <p>Reason: To ensure appropriate surface water drainage and to prevent the increased risk of flooding.</p>	
16	Detailed design approval: Cambridge South station	<p>No development relating to the construction of Cambridge South station shall commence until full details of the scale, massing and external appearance, including details of floor plans, biodiverse roof, elevations, and long sections of the development has been submitted to, and approved by, the local planning authority.</p> <p>This must be in accordance with the parameter plans, and shall be submitted with a Design Compliance Statement demonstrating compliance with the relevant Cambridge South Design Principles (Appendix A of the Design and Access Statement 158454-ARC-ZZ-ZZZ-REP-EAR-00000). The submitted scale details must include plans at a minimum scale of 1:250, and elevations at a minimum scale of 1:100.</p> <p>Reason: To enable reasonable and proper control to be exercised over these aspects of the development</p>	<p>Support subject to:</p> <p>Insertion of 'approved parameter plans'.</p> <p>Amend 'relevant approved Cambridge South Design Principles'.</p> <p>Amend 'including details of floor and roof plans, biodiverse roof'.</p> <p>Insertion of 'The development shall be only be carried out in accordance with the approved details.'</p> <p>Amend 'Reason: To enable reasonable and proper control to be exercised over these aspects of the development, and to ensure high quality development which responds appropriately to the site context.'</p>
17	External Materials: Cambridge South Station	<p>No construction of any part of Cambridge South station that is intended to be externally visible on completion of the development shall commence until the following has been submitted to and approved in writing by the local planning authority. Development shall be carried out in accordance with the approved details.</p> <p>a) details of all the materials for the external surfaces of buildings to be used in the construction of the development</p> <p>b) a sample panel for relevant materials (including external</p>	<p>Support subject to:</p> <p>Amendment: 'No construction of any part of Cambridge South station that is intended to be externally visible on completion of the development shall commence until the following has been submitted to and approved in writing by the local planning authority. No development relating to the construction of any part of Cambridge South station that is intended to be externally visible</p>

		<p>brickwork) shall be submitted to and approved in writing by the local planning authority. The approved sample panel is to be retained on site for the duration of the works for comparative purposes, and works will take place only in accordance with approved details.</p> <p>Reason: To ensure that the external appearance of the development does not detract from the character and appearance of the area (Cambridge Local Plan 2018 policies 55 and 57).</p>	<p>on completion external surfaces of the development shall commence until the following has been submitted to and approved in writing by the local planning authority’.</p> <p>Insertion: ‘b) a sample panel for relevant materials (including external brickwork) to include details of fixings, finishes and junctions between materials shall be erected on site to a minimum size of 2 metres by 2 metres, and details submitted to and approved in writing by the local planning authority.</p>
18	Roof Top Plant: Cambridge South Station	<p>Any roof mounted plant/equipment shall not be installed until details of the plant/equipment have been submitted to and approved in writing by the local planning authority. The details shall include the type, dimensions, materials, location, and means of fixing. The development shall be carried out in accordance with the approved details.</p> <p>Reason: To ensure that the external appearance of the development does not detract from the character and appearance of the area (Cambridge Local Plan 2018 policies 55 and 57).</p>	<p>Support subject to: Amendment: ‘Any No roof mounted plant/equipment shall not be installed until details of the plant/equipment have been submitted to and approved in writing by the local planning authority. The details shall include the type, dimensions, materials, location, and means of fixing. The development shall only be carried out in accordance with the approved details.’</p>
19	Public Art: Cambridge South Station	<p>No development relating to the construction of Cambridge South station shall commence until a Public Art Delivery Plan (PADP) has been submitted to and approved in writing by the local planning authority. The PADP must include the following:</p> <ul style="list-style-type: none"> (a) Details of the public art and artist commission; (b) Details of how the public art will be delivered, including a timetable for delivery; (c) Details of the location of the proposed public art on the application site; (d) The proposed consultation to be undertaken; (e) Details of how the public art will be maintained; (f) How the public art would be decommissioned if not permanent; (g) How repairs would be carried out; and (h) How the public art would be replaced in the event that it is destroyed. 	<p>Further discussions are required to ensure the condition(s) require submission of an appropriate public art strategy and delivery plan, in accordance with Local Plan policy 56 and the Public Art SPD (2010).</p>

		<p>The approved PADP shall be fully implemented in accordance with the approved details and timetabling. Once in place, the public art shall not be moved or removed otherwise than in accordance with the approved maintenance arrangements</p> <p>Reason: To provide public art as a means of enhancing the development (Cambridge Local Plan policies 55 and 56 and the Cambridge City Council Public Art SPD (2010)).</p>	
20	Waste: Cambridge South Station	<p>No development relating to the construction of Cambridge South station shall commence until a scheme for the on-site storage facilities for commercial waste, including waste for recycling has been submitted to and approved in writing by the local planning authority. The approved scheme shall be carried out before the use is commenced and shall be retained as such.</p> <p>Reason: To ensure that the need for refuse and recycling is successfully integrated into the development.</p>	Support.
21	Cycle Parking: Cambridge South Station	<p>Cambridge South station shall not be brought into use until cycle parking for station users has been installed and made operational in accordance with details that have been submitted to and approved in writing by the local planning authority. The number of cycle parking shall be agreed by the local highways authority. The details shall include the type of stands, location and means of enclosure, and shall include a cycle parking management plan. The cycle parking shall be provided and maintained in accordance with the approved details.</p> <p>Reason: To ensure appropriate provision for the secure storage of bicycles (Cambridge Local Plan 2018 Policy 82).</p>	<p>Support subject to:</p> <p>Insertion of: 'The Cambridge South station shall not be brought into use until cycle parking for station staff and users has been installed and made operational in accordance with details that have been submitted to and approved in writing by the local planning authority prior to installation.'</p>
22	BREEAM Pre-Assessment: Station Building	<p>No development relating to the station building shall commence until a BREEAM preassessment prepared by an accredited BREEAM Assessor has been submitted to, and approved by, the local planning authority indicating that the building is capable of achieving the applicable 'excellent' rating as a minimum, with maximum credits achieved for Wat 01.</p>	Support

		Reason: In the interests of reducing carbon dioxide emissions, ensuring efficient use of water and promoting principles of sustainable construction and efficient use of buildings (Cambridge Local Plan 2018 Policy 28 and the Greater Cambridge Sustainable Design and Construction SPD 2020).	
23	BREEAM Design Stage Certification	<p>Within 6 months of commencement of development or Specified Phase, a BRE issued Design Stage Certificate shall be submitted to and approved in writing by the local planning authority demonstrating that BREEAM 'excellent' as a minimum will be met, with maximum credits for Wat 01 (water consumption). Where the Design Stage certificate shows a shortfall in credits for BREEAM 'excellent', a statement shall also be submitted identifying how the shortfall will be addressed. If such a rating is replaced by a comparable national measure of sustainability for building design, the equivalent level of measure shall be applicable to the development.</p> <p>Reason: In the interests of reducing carbon dioxide emissions and promoting principles of sustainable construction and efficient use of buildings (Cambridge Local Plan 2018 Policy 28 and the Greater Cambridge Sustainable Design and Construction SPD 2020).</p>	Support
24	BREEAM Post Construction Certification	<p>Within 6 months of occupation of Cambridge South station, a BRE issued post Construction Certificate shall be submitted to and approved in writing by the local planning authority, indicating that the approved BREEAM rating has been met. If such a rating is replaced by a comparable national measure of sustainability for building design, the equivalent level of measure shall be applicable to the proposed development.</p> <p>Reason: In the interests of reducing carbon dioxide emissions and promoting principles of sustainable construction and efficient use of buildings (Cambridge Local Plan 2018 Policy 28 and the Greater Cambridge Sustainable Design and Construction SPD 2020).</p>	Support

25	Detailed design approval: Other elements of the proposed development	<p>No development relating to the following elements of the development shall commence (or phase thereof) until full details of the scale and external appearance of the development concerned has been submitted to, and approved by, the local planning authority.</p> <p>(a) Alterations to Webster's Footbridge. (b) Accommodation bridge over Hobson's Brook. (c) Railway Systems Compound Buildings and Structures. (d) Any other building/structure or alteration to an existing building/structure for which details of scale and external appearance were not provided as part of the request for the planning direction. Design details must be in accordance with the parameter plans.</p> <p>The submitted scale details must include plans at a minimum scale of 1:250, and elevations at a minimum scale of 1:100 and details of external appearance shall include samples of materials to be used externally.</p> <p>Reason: To enable reasonable and proper control to be exercised over these aspects of the development.</p>	<p>Support subject to: Amendment '(c) Railway Systems Compound Buildings and Structures and boundaries'</p> <p>Amendment: 'Design details must be in accordance with the parameter plans. This must be in accordance with the approved parameter plans, and shall be submitted with a Design Compliance Statement demonstrating compliance with the relevant Cambridge South Design Principles (Appendix A of the Design and Access Statement 158454-ARC-ZZ-ZZZ-REP-EAR-00000). The submitted scale details must include plans at a minimum scale of 1:250, and elevations at a minimum scale of 1:100, and details of external appearance shall include samples of materials to be used externally. The development shall be only be carried out in accordance with the approved details.'</p>
26	Lighting Scheme	<p>No permanent artificial lighting shall be installed until a detailed artificial lighting scheme has been submitted to and approved in writing by the local planning authority. The lighting scheme shall meet the Obtrusive Light Limitations for Exterior Lighting Installations contained within the Institute of Lighting Professionals (ILP) 'Guidance Notes for the Reduction of Obtrusive Light - GN01/20 (2020)(or as superseded)'. Development shall be carried out only in accordance with the approved details. Reason: To protect the amenity of nearby residential properties (Cambridge Local Plan 2018 policy 34).</p>	<p>Further discussions required to ensure the condition secures appropriate protections for the amenity of nearby residential properties in accordance with Local Plan policy 34:</p> <p>Is it possible to include a monitoring mechanism?</p> <p>Amendment: Reason: To protect the amenity of nearby residential properties and to minimise light pollution, and to protect species'</p>
27	Soil Management Plan	<p>No development except for works to trees or any Specified Phase shall commence until until a Soils Management Plan detailing protection of ground to be reinstated to open space, sustainable drainage or general landscape, methodology of soil stripping, storage, handling, haul routes, formation level decompaction measures, soil re-spreading and decompaction as well as soil/spoil disposal (if necessary).</p>	<p>Support subject to: Amend trigger: No development except for approved works to trees...'</p>

		<p>Development must be carried out in accordance with the approved details and in accordance with the recognised 'Construction Code of Practice for the Sustainable Use of Soils on Construction Sites' produced by DEFRA and Protecting and Enhancing Soils Policy Position Statement produced by Chartered Institute of Water and Environmental Management (CIWEM).</p> <p>Reason: To ensure that the details of the groundworks are acceptable (Cambridge Local Plan 2018; Policies 55, 57 and 59).</p>	
28	Hard and Soft Landscape	<p>No development except for those phases identified under condition 5 shall commence until details of a hard and soft landscape scheme have been submitted to and approved in writing by the local planning authority. This scheme must be in accordance with Parameter Plan 158454-ARC-ZZ-ZZ-DRG-LEP-000101, and shall be submitted with a Design Compliance Statement demonstrating compliance with the relevant Cambridge South Design Principles (Appendix A of the Design and Access Statement 158454-ARC-ZZ-ZZZ-REP-EAR-00000) . Details of the scheme must include:</p> <p>(a) proposed finished levels or contours including proposed grading and mounding of land areas including sections through the areas to show the proposed make-up of the mounding, the levels and contours to be formed and showing the relationship of proposed mounding to existing vegetation and surrounding landform and</p> <p>(b) details of post formation soil decompaction.</p> <p>(c) car parking layouts, other vehicle and pedestrian access and circulation areas; hard surfacing materials; tree pits, including those in planters, hard paving and soft landscaped areas, minor artefacts and structures (e.g. Street furniture, location of artwork, refuse or other storage units, signs, lighting, CCTV installations and water features); proposed (underground elements need to be coordinated with the landscape plans prior to be being installed) and existing functional services above and below ground (e.g. drainage, power, communications cables, pipelines indicating lines, manholes, supports);</p> <p>(d) planting plans: written specifications (including cultivation</p>	<p>Support subject to:</p> <p>Insertion: 'with approved Parameter Plan 158454-ARC-ZZ-ZZ-DRG-LEP-000101'</p> <p>Insertion: The development shall only be carried out in accordance with the approved details.</p>

		<p>and other operations associated with plant and grass establishment); schedules of plants, noting species, plant sizes and proposed numbers/densities where appropriate and an implementation programme;</p> <p>(e) boundary treatments indicating the type, positions, design, and materials of boundary treatments to be erected; and</p> <p>(f) a landscape maintenance and management plan for proposed landscaped areas and green biodiverse roof, including long term design objectives, management responsibilities and maintenance schedules/programme for all landscape areas.</p> <p>(g) if within a period of five years from the date of the planting, or replacement planting, any tree or plant (except through an act of god or vandalism) is removed, uprooted or destroyed or dies, another tree or plant of the same species and size as that originally planted shall be planted at the same place as soon as is reasonably practicable, unless the local planning authority gives its written consent to any variation;</p> <p>Reason: In the interests of visual amenity and to ensure that suitable hard and soft landscape is provided as part of the development (Cambridge Local Plan 2018; Policies 55, 57 and 59).</p>	
29	Plant/machinery/equipment (station building)	<p>No operational plant, machinery or equipment both internal and external shall be installed until a noise assessment demonstrating that the collective rating level (in accordance with BS4142:2014) from all plant, equipment and vents etc associated with the development (or phase there of) is less than or equal to the existing background sound level at the receptors reported in Chapter 5 of the Environmental Statement.</p> <p>Development shall be carried out and maintained only in accordance with the approved details.</p> <p>Reason: To protect the amenity of nearby properties (Cambridge Local Plan 2018 policy 35)</p>	<p>Support subject to: Insertion of: 'No operational plant, machinery or equipment both internal and external shall be installed until a noise assessment demonstrating that the collective rating level (in accordance with BS4142:2014+A1:2019 – “Methods for rating and assessing industrial and commercial sound”).'</p>

30	Platform Announcement Sound System	<p>No station and platform Public Address/Voice Alarm (PAVA) system shall be installed until a detailed design in accordance with BS 5839-8:2013 - Code of practice for the design, installation, commissioning and maintenance of voice alarm systems has been submitted to and approved in writing by the Local Planning Authority.</p> <p>The scheme shall include details regarding hours of operation, number and location of loudspeakers, proposed mitigation, sound power of loudspeakers and permissible noise levels with consideration of its use e.g announcement or alarm, noise mitigation / limiting measures as appropriate, noise levels assessed against the existing background sound level at the receptors reported in Chapter 5 of the Environmental Statement and a programme of maintenance.</p> <p>Any public address/voice alarm sound system associated with the use of the approved development shall only be used for operational, health and safety, security and emergency announcements.</p> <p>The scheme shall be carried out as approved and retained as such.</p> <p>Reason: To protect the amenity of nearby properties (Cambridge Local Plan 2018 policy 35)</p>	Support
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31	Electric Vehicle Charge Points	<p>No electrical services shall be installed within Cambridge South Station until an electric vehicle charge point scheme has been submitted to and approved in writing by the Local Planning Authority. The scheme shall include:</p> <ol style="list-style-type: none"> 1. Four slow electric vehicle charge points with a minimum power rating output of 7kW 2. Passive provision comprising the necessary infrastructure comprising ducting and capacity in the station network to connect to the local electricity distribution network to facilitate and enable the future installation and activation of additional active electric vehicle charge points as required. 3. The electric vehicle charge points shall be designed and installed in accordance with BS EN 61851 or as superseded. The electric vehicle charge point scheme as approved shall be fully installed prior to the first use of the station and maintained and retained thereafter. <p>Reason: In the interests of encouraging more sustainable modes and forms of transport and to reduce the impact of development on local air quality, in accordance with Policy 36 - Air Quality, Odour and Dust of the Cambridge Local Plan (2018) and with Cambridge City Council's adopted Air Quality Action Plan (2018).</p>	Support the proposed wording, but note condition not accepted by the applicant.
32	Excavated Material	<p>No excavated material or other material shall be placed within public open space, including Hobson's Park, other than in accordance with the approved landscaping details or the approved details for temporary storage contained within the approved soil management plan.</p> <p>Reason: In the interests of amenity and biodiversity (Cambridge Local Plan 2018; Policies 55, 57, 59, 69 and 70).</p>	Support

33	Arboricultural Method Statement (AMS) and Tree Protection Plan (TPP)	<p>No development (or phase thereof) other than a Specified Phase shall commence until a phased tree protection methodology in the form of an Arboricultural Method Statement (AMS) and Tree Protection Plan (TPP) in accordance with BS5837 2012 has been submitted to and approved in writing by the local planning authority. The AMS and TPP will consider the following:</p> <p>(i) all relevant phases of construction in relation to the potential impact on trees detail the proposed tree works</p> <p>(ii) the specification and position of protection barriers and ground protection and all measures to be taken for the protection of any trees from damage during the course of any relevant activity related to the development,</p> <p>(iii) management including supervision, access, site briefing attended by the site manager and retained arboricultural consultant, storage of materials, ground works, installation of services and landscaping.</p> <p>Reason: To satisfy the Local Planning Authority that trees to be retained will be protected from damage during any construction activity, including demolition, in order to preserve arboricultural amenity in accordance with section 197 of the Town and Country Planning Act 1990 and Cambridge Local Plan 2018 Policy 71: Trees.</p>	<p>Support subject to: Preferred wording: 'In logical sequence, the AMS and TPP will consider all relevant phases of construction in relation to the potential impact on trees, including the following:</p> <p>(i) required tree works (ii) the specification and position of protection barriers and ground protection and any other measures to be taken for the protection of any trees from damage during the course of any relevant activity related to the development,</p> <p>(iii) ground works including the installation of services and SUDS</p> <p>(iv) management including supervision, access, site briefing attended by the site manager and retained arboricultural consultant, storage of materials,</p> <p>(v)landscaping.'</p>
34	Arboricultural Method Statement (AMS) and Tree Protection Plan (TPP) implementation	<p>The approved tree protection methodology in the AMS and TPP will be implemented throughout the development and the agreed means of protection shall be retained on site until all equipment, and surplus materials have been removed from the site. Nothing shall be stored or placed in any area protected in accordance with approved tree protection plans, and the ground levels within those areas shall not be altered nor shall any excavation be made without the prior written approval of the local planning authority. If any tree shown to be retained is damaged, remedial works as may be specified in writing by the local planning authority will be carried out.</p> <p>Reason: To satisfy the Local Planning Authority that trees</p>	Support

		to be retained will not be damaged during any construction activity, in order to preserve arboricultural amenity in accordance with section 197 of the Town and Country Planning Act 1990 and Cambridge Local Plan 2018 Policy 71: Trees	
35	Construction Replacement tree planting	<p>If any tree shown to be retained in tree protection methodology in the AMS and TPP is removed, uprooted, destroyed or dies as a result of the CSIE project construction within five years of project completion, another tree shall be planted at the same place and that tree shall be of such size and species, and shall be planted at such time, as may be approved in writing by the local planning authority. Any replacement tree that is lost within five years shall likewise be replaced.</p> <p>Reason: To satisfy the Local Planning Authority that remaining arboricultural amenity will be preserved in accordance with section 197 of the Town and Country Planning Act 1990 and Cambridge Local Plan 2018 Policy 71: Trees.</p>	<p>Support subject to;</p> <p>Amendment: 'If any tree shown to be retained in approved tree protection methodology in the AMS and TPP is removed, uprooted, destroyed or dies as a result of the development hereby permitted CSIE project construction within five years of project completion...'</p>
36	Pedestrian link beneath Cambridge Guided Busway	The new pedestrian link across the Cambridge Guided Busway between Hobson's Park and the Active Recreation Area shall be complete before the existing connection beneath the Cambridge Guided Busway is closed unless an alternative safe access across the Cambridge Guided Busway between Hobson's Park and the Active Recreation Area is provided in accordance with a scheme approved by the local planning authority in writing.	<p>Further discussions required:</p> <p>Need to check with Countryside about the anticipated completions on the Active Recreation Area.</p> <p>Need to review the nodes / links with other footpaths and happens to the redundant paths within the Active Recreation Area which connect to Hobson Park.</p>

Appendix B – Letter from Council to applicant dated 07 December 2021

Charlotte Burton
Principal Planner (Strategic Sites)
Greater Cambridge Shared Planning
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Sara Peters
Network Rail
Capital Delivery
SN1 Building
Station Road
Swindon, SN1 1DG

By email only: sara.peters@networkrail.co.uk

07 December 2021

Dear Ms Peters,

**Network Rail (Cambridge South Infrastructure Enhancements) Order
OBJ23 Cambridge City Council**

Thank you for your letter dated 18 November providing an update on Network Rail's (NR) response to the objections raised by Cambridge City Council. Your correspondence supplements NR's earlier letters dated 1 October and follows on from meetings between the Council's officers and NR Consents Manager and NR Planning Manager in recent weeks.

This letter provides advice from officers on the status of the Council's objections. The purpose of the letter is to aid ongoing discussions with NR at officer level. To be clear, the advice within this letter is given at officer level and does not constitute the formal position of the Council, which will be provided in the Council's Proof of Evidence and our Statement of Common Ground for the Public Inquiry.

I have addressed each of the objections raised in the Council's Statement of Case as summarised in Section 7 of our statement. I have reordered these by grouping them under three key headings, which broadly form the topics on which the Council intends to provide evidence at the Public Inquiry. These combine the Council's objections as local planning authority and landowner with a tenant interest in Hobson's Park.

This letter also puts in writing two matters which have arisen through discussions with NR since the submission of the Council's Statement of Case. These are the

need for additional tree planting in Hobson's Park to mitigate for the loss of structural planting within the AstraZeneca site boundary, and the need for commuted sums towards increased maintenance costs for Hobson's Park (see items 6 & 11).

As discussions on the draft planning conditions are still in progress, this letter does not confirm the position on the proposed draft condition wording, other than where specifically referred to. For the avoidance of doubt, the omission of comments on any draft conditions does not imply agreement to them. Further correspondence will be provided in response to the updated draft conditions sent by NR Planning Manager.

Impact on Hobson's Park and trees

Planning objections

1. Exchange land – adequate mitigation

Further information on the landscaping and biodiversity features, and the accessibility and safety of crossing Addenbrooke's Road is required in order to assess whether the proposed exchange land is appropriate replacement for the loss of existing public open space, in accordance with Local Plan 2018 policy 67.

This matter was raised in our Statement of Case and has not been addressed in your letters dated 1 October or 18 November. Officers require further information to demonstrate that the landscape and biodiversity, and amenity value of the proposed land will provide adequate compensation for the area of Hobson's Park to be lost. This also includes demonstrating that the proposed exchange land is accessible safely given its location physically separate from the rest of Hobson's Park and requiring users to cross Addenbrooke's Road to move between the park and the proposed land. As no further information has been provided, the Council maintains its objection on this ground.

2. Exchange land – timing

The exchange land to compensate for the permanent loss of public open space and the new access routes outside of the site compound must be laid out and available for use before the use of areas of existing public open space for the development commences, in order to provide satisfactory replacement in accordance with Local Plan 2018 policy 67.

This matter was raised in our Statement of Case and has not been addressed in your letters dated 1 October or 18 November. The Council maintains its objection on this ground.

3. Use of Hobson's Park

The temporary use of Hobson's Park must be justified both in terms of the area of land and the duration for which the land is required, and this must be

secured through a condition in order to minimise the temporary loss of public open space in accordance with Local Plan 2018 policy 67.

Your letter refers to a soil management plan. While a soil management plan is required in respect of the temporary use of Hobson's Park this does not provide a response to the Council's objection above because it does not justify the use of Hobson's Park or demonstrate that the area and duration of use is the minimum required.

Updated deposited plans were issued by NR Consents Manager on 26 November which showed a reduced area of temporary land acquisition on Hobson's Park for the site compound. Officers are currently reviewing this and will provide comments in due course.

Notwithstanding this, the Council also requires a response from NR to justify the area of land required and the duration for which that land is required. This additional information will be reviewed by officers alongside the amended deposited plans before the Council can consider whether this matter has been resolved.

Insofar as the soil management plan is concerned, the Council will give consideration to the plan once it has been received but until the Council has had an opportunity to review the plan, officers advise that the Council's objection has not been resolved.

4. Permanent spoil placement

There must be no spoil permanently placed within areas of public open space and this must be secured through a condition in order to ensure that spoil placement does not lead to the permanent loss of public open space or harm to the character of the public open space in accordance with Local Plan 2018 policy 67.

Your letter commits to a condition to provide a soil management plan. While a soil management plan is required in order to agree where soil will be placed, the Council also requires a compliance condition to control where soil will NOT be placed. This is in the form of a compliance condition to prevent excavated material being placed within the public open space unless agreed through the soil management plan or landscaping works.

Officers discussed wording of a suitable condition at the meeting with the NR Planning Manager on 18 November which was subsequently drafted and proposed by the NR Planning Manager (sent on 22 November) as follows:

No excavated material or other material shall be placed within public open space, including Hobson's Park, other than in accordance with the approved landscaping details or the approved details for temporary storage contained within the approved soil management plan.

Officers advise that the Council requires this condition to be agreed in the Statement of Common Ground before this matter can be resolved.

5. Trees

The application has not demonstrated compliance with Local Plan policy 71 for the preservation and protection of trees and hedges. An Arboricultural Implications Assessment (AIA) and Arboricultural Method Statement (AMS) must be submitted prior to determination, and the impact on Tree Preservation Orders (TPOs) and other trees and hedges must be minimised and mitigated through protection measures and replacement planting secured through conditions.

Your letter refers to conditions to secure the implementation of tree protection measures. While such conditions are necessary, this is not sufficient to resolve the Council's objection. As matters currently stand, the Council is not satisfied that the potential impact on trees and hedges can be satisfactorily addressed through conditions because no information has been provided about the extent of tree and hedge loss and the options for mitigation.

Therefore, while officers are happy to engage with NR in respect of the wording of any possible conditions to secure the implementation of tree protection measures, the Council requires submission of further evidence in respect of the extent of tree and hedge loss and the potential mitigation for that loss BEFORE the Council is in a position to agree that this issue can be satisfactorily addressed by way of conditions.

At our meeting with NR Consents Manager on 5 October, officers were advised that the AIA and AMS would come much later on in the process, but that further information may be provided. The Council requires information about the loss of trees and options for appropriate replacement planting to mitigate any impact before the Council can consider whether this issue can be satisfactorily resolved by way of condition.

Any additional information provided will be reviewed by the Council before it can consider whether this matter has been resolved.

6. Structural planting in Hobson's Park

During discussions with NR and following correspondence with representatives for AstraZeneca, officers have been made aware that the boundary of the permanent and temporary land acquisition includes land within the AstraZeneca site, specifically land within the site boundary of the reserved matters consent for the AstraZeneca South Plot development, which has come forward under the outline consent for the Cambridge Biomedical Campus (CBC).

As NR are aware, the outline consent for the CBC secured structure planting along the western boundary of the CBC along the railway line, and secured strategic gaps connecting the green open space within the retained Green Belt with open spaces within the CBC, including one gap which aligns with the station proposals. These elements of structural planting are important components of the mitigation for the CBC.

The Council has been informed that the areas of permanent and temporary mitigation mean that the structural planting along the railway line must be removed and cannot be replaced, and that the station platform including the walkover will align with the strategic gap. As a result, the CBC mitigation cannot be achieved in accordance with the outline consent if the station works go ahead.

It is critical that the proposal includes appropriate mitigation for the loss of structural planting within the CBC. The Council's landscape officer has met with NR Landscape Consultant to discuss options for replacement planting on the eastern side of Hobson's Park. This would require planting mature large specimens and with ground and soil preparation which promotes the fast establishment of trees.

The Council's landscape officer has advised that a suitable planting scheme could be implemented to mitigate this impact, however these details must be secured through inclusion in the Design Principles document. Officers advise that the Council requires submission of an updated Design Principles document to review before this matter can be resolved.

The cost of maintaining these trees is covered in item 11 below.

Landowner objections

7. Hobson's Park – temporary and permanent work

The use of existing public open space for the creation of new access routes and temporary work required for the construction must be the minimum requirement and must be justified.

This matter was raised in our Statement of Case and has not been addressed in your letters dated 1 October or 18 November. Please provide a formal response.

Your letter refers to our comments on the notation of the pedestrian and cycling route on Parameter Plan 1: Access and Movement requesting this is amended to read 'Proposed segregated new pedestrian and cycle access'. You have responded to explain that the detail of the route will come forward through the discharge of conditions which will allow further discussion with stakeholders. Officers advise that the Council accepts this.

8. Hobson's Park – landscaping of routes

The layout of new routes across the public open space should consider the impact on the remaining green spaces between the routes, and any resulting changes to the management regime required or to the use of these spaces for recreation.

This matter was raised in our Statement of Case and has not been addressed in your letters dated 1 October or 18 November. The Council maintains its objection on this ground.

9. Timing of exchange land and new access routes

The exchange land and the new access routes outside of the site compound must be laid out and available for use prior to commencement of the use of the existing open space for the works, which must be secured through an amendment to paragraph 36 of Part 4 of the draft Order. Confirmation that the exchange land will be secured for public open use in perpetuity through the draft Order must be provided.

This matter was raised in our Statement of Case and has not been addressed in your letters dated 1 October or 18 November. The Council maintains its objection on this ground.

10. Pedestrian link beneath Cambridge Guided Busway

The pedestrian link across the Cambridge Guided Busway between Hobson's Park and the Active Recreation Area must be complete before the existing connection beneath the Cambridge Guided Busway is lost. This must be secured through the Order.

This matter was raised in our Statement of Case and has not been addressed in your letters dated 1 October or 18 November. The Council maintains its objection on this ground.

11. Commuted sums towards increased maintenance costs

The Council is reviewing the implications of the proposed works on the maintenance costs for Hobson's Park. This includes additional costs of maintaining any paths, hard surfacing and structures that fall within the Council's maintained areas, and the additional cost of maintaining tree planting on the western side of the railway line as replacement planting for the trees to be lost on the CBC. Officers will discuss this further with NR and provide an estimate of any additional costs for which contributions will be need to be agreed.

Impact on biodiversity and biodiversity net gain

12. Biodiversity Net Gain (BNG)

The application has not provided sufficient Information to demonstrate the minimum 10% biodiversity net gain target is achievable and can provide appropriate mitigation on or near to the site, and as a result has not demonstrated compliance with Local Plan 2018 policies 69 and 70, and NPPF 2021 paragraph 174.

Your letter refers to conditions to secure the delivery of the 10% BNG target. While this condition is necessary to approve the detail of the ecological mitigation, this is not a sufficient response to the matter above as it does not demonstrate that this target is achievable and can provide appropriate mitigation. This is because there is no further information about the deliverability of biodiversity enhancements.

Your earlier letter dated 1 October and meetings with the NR Consents Manager have confirmed that NR has entered into discussions with Cambridgeshire County Council with a view to securing an Options Agreement for the provision of all the BNG units required to meet the 10% target at Lower Valley Farm in Fulbourn.

The letter advised that once discussion have progressed further with the County Council, NR will be able to provide confirmation that it has secured the mechanism for delivering the required 10% BNG. Officers have been advised that NR are aiming to secure the Option Agreement with the County Council ahead of the public inquiry.

In addition to this, officers understand that the BNG calculations submitted with the TWAO application for the 'worst case scenario' are being updated to reflect the changes to the site compound area and to landscaping and that the calculations will be reissued to the Council, however officers have not had sight of this.

The Council currently maintains its objection on these grounds which have not been addressed. Officers look forward to receiving the updated BNG calculations and further information on the proposed mitigation to review before the public inquiry. This additional information will be reviewed by the Council before it can consider whether this matter has been resolved.

13. Birds

The potential impact on the breeding population of Corn Bunting along the line of the rail track and construction route, and on Corn Bunting and Skylark nesting within Hobson's Park needs to be given more weight in the assessment of the impact on existing biodiversity, in accordance with Local Plan 2018 policies 69 and 70.

Your letter advises that NR are looking into whether additional mitigation is necessary to reduce the potential impact on the breeding population of Corn Bunting and nesting of sky larks within Hobson's Park. This matter was raised in our Statement of Case and has not been addressed in your letters dated 1 October or 18 November. The Council does not agree that this issue has been resolved and requires further information on the availability of options for mitigation to review before it can consider whether this matter has been resolved.

Planning objections

14. Green Belt

The application has not made a full and clear case to demonstrate the proposal would not be inappropriate development within the Green Belt in accordance with the NPPF paragraph 150 and Local Plan policy 4, or that very special circumstances exist, in accordance with NPPF paragraph 148.

You have referenced the Department of Transport Strategic Outline Business Case for Cambridge South Station which sets out the requirement for the station and how the proposed location was identified, and the Planning Statement which explains how this meets Green Belt policy in accordance with the NPPF 2021. The Council

acknowledges that NR has put forward a case for the proposal being not inappropriate development in the Green Belt. Officers do not make a judgement as to whether the proposal complies with the NPPF in this regard but are now satisfied that the Inspector has satisfactory information to consider the matter.

15. Drainage

Details as requested by the Sustainable Drainage Engineer must be submitted prior to determination in order to demonstrate the proposals comply with Local Plan policy 32 relating to flood risk.

Your previous letter dated 1 October provided a detailed response to the issues raised by the Council's sustainable drainage engineer. Officers have reviewed this and confirmed this was acceptable in an email to NR Consents Manager dated 5 October. Officers advise that the Council's objection has been resolved.

16. Green roofs

The proposals for biodiverse green roofs must be confirmed as to whether or not they are required as part of the LVIA and Green Belt mitigation.

Your letter states that given the current stage of design, NR cannot confirm the exact location and amount of green biodiverse roof as part of the proposed development. As a result, no amendments will be made to remove the word 'potential' from the Parameter Plan: Land Use and Landscape drawing.

While the Council acknowledges that there is not yet a detailed design for the station, officers have requested in the comment above clarification from NR about whether a biodiverse green roof is required as part of the LVIA and Green Belt mitigation. The Council requires confirmation on this with reference to the submitted documents for the Council to review before this matter can be resolved.

Regarding the wording of the draft condition to secure details of biodiverse green roofs, officers have discussed this at meetings with NR Planning Manager. The Council accepts that the detail of the roof could come forward under the condition requiring the detailed design of the station building and landscaping details, so that a separate condition is not required.

Notwithstanding this, the Council requires that the specification for the substrate and mix of species and a maintenance plan for the biodiverse green roof – as detailed in the draft condition wording requested by the Council – must be included in the Design Principles document and must be complied with unless there are planning or biodiversity reasons which make this not possible. The Council requires submission of an updated Design Principles document to review before this matter can be resolved.

Your letter also responds to our comments on biodiverse green walls requesting details of this feature as many types are not sustainable and are high maintenance. You have responded to explain that this detail would come forward through the conditions. Officers advise that the Council accepts this.

17. BREEAM

A condition for submission of a BREEAM pre-assessment demonstrating the scheme is on-target to achieve BREEAM 'excellent' rating is required in accordance with Local Plan policies 28, 29 and 31, and the Sustainable Design and Construction SPD.

Your response proposes an additional condition to secure submission of a BREEAM pre-assessment. The Council's sustainability consultant supports the wording of the proposed draft conditions 20, 21 and 22 sent by NR Planning Manager on 22 November. The Council requires this condition to be agreed in the Statement of Common Ground before this matter can be resolved.

18. Trip generation and cycle parking

Cambridgeshire County Council Highways Authority must support the predicted trip generation, modal share and number of cycle parking spaces in accordance with Local Plan policies 81 and 82.

Your letter dated 1 October provided a more detailed response with reference to the Transport Assessment. Officers advise that the Council has made its position clear and has nothing further to add. Officers will review the draft condition 19 to secure details of cycle parking as sent by NR Planning Manager on 22 November.

19. Car parking

The maximum number of car parking spaces for each user group must be specified in the Design Principles and details of cycle parking facilities must be secured through the recommended revised wording, in accordance with Local Plan policy 82.

Your letter confirms that NR will amend the Design Principles to specify that no more than 9 vehicle parking spaces will be provided within the station forecourt (5 spaces for blue badge holders and 4 spaces for station staff and maintenance staff) and space for no more than 6 passenger and taxi drop-off/pick-up will be provided within the station forecourt. Officers advise that the Council requires submission of an updated Design Principles document to review before this matter can be resolved.

20. Environmental Health conditions

Conditions relating to noise and vibration, lighting and electric vehicle charging points must be secured in order to mitigate the impact on residential amenity and sensitive receptors, in accordance with Local Plan 2018 policies 34, 35, and 36.

Your letter confirms that NR does not have an objection in principle to the proposed conditions on noise and vibration, and lighting. The wording of those conditions was discussed between the Council's environmental health officers and NR Planning Manager at the meeting on 18 November. The re-drafted conditions issued by NR

Planning Manager on 22 November will be reviewed by officers before the Council can confirm whether this matter has been resolved.

Your letter provides no further information in response to the Council's requirement for electric vehicle charging points. This was also discussed between environmental health officers and NR Planning Manager. Officers set out the case for providing electric vehicle charging for Blue Badge Holders at the station. NR Planning Manager explained that this issue has been escalated within NR. Officers advise that the Council requires confirmation that the provision will be made and agreement to a condition to secure this within the Statement of Common Ground before this matter can be resolved.

I trust the contents of this letter are clear, however if you have any queries then please do not hesitate to contact me.

Yours sincerely,

Charlotte Burton MRTPI
Principal Planning Officer (Strategic Sites)
Greater Cambridge Shared Planning

Appendix C – Response from applicant to Council dated 10 December 2021

From: John Pearson <johnpearson@schofieldlothian.com>

Sent: 10 December 2021 20:08

To: Charlotte Burton <Charlotte.Burton@greatercambridgeplanning.org>; cambridgesouth <cambridgesouth@networkrail.co.uk>

Cc: Guy Belcher <Guy.Belcher@cambridge.gov.uk>; Sarah Tovell <Sarah.Tovell@cambridge.gov.uk>; Alistair Wilson <Alistair.Wilson@cambridge.gov.uk>; Paul Humphrey <Paul.Humphrey@networkrail.co.uk>; Sara Peters <Sara.Peters@networkrail.co.uk>; Niamh Leonard <Niamh.Leonard@networkrail.co.uk>

Subject: RE: Cambridge South Infrastructure Enhancement Order

Hi Charlotte,

Ahead of our meeting on Monday please find enclosed the following draft documents:

- Draft response to your letters (CCiC - SCDC Response table 211208)
- Draft proposed changes to the design principles (Appendix A Design Principles - JP Dec21 - v3)
- Draft Planning Conditions (addition of condition 4 and update on EV charging) (CSIE - DP Condition Tracker – 211210)
- BNG report (158454-ARC-ZZ-ZZZ-REP-ENV-000008 - Technical Note – Biodiversity Net Gain Assessment updated TWAO boundary)
- Draft structural planting proposal (Cambridge South Station - Location of AZ replacement trees v.2)

I look forward to going through this on Monday

Kind regards

John

Director – Environmental Services
Schofield Lothian
M: + 44 (0)7941 986007

From: Charlotte Burton <Charlotte.Burton@greatercambridgeplanning.org>

Sent: 07 December 2021 17:38

To: cambridgesouth <cambridgesouth@networkrail.co.uk>

Cc: John Pearson <johnpearson@schofieldlothian.com>; Guy Belcher <Guy.Belcher@cambridge.gov.uk>; Sarah Tovell <Sarah.Tovell@cambridge.gov.uk>; Alistair Wilson <Alistair.Wilson@cambridge.gov.uk>

Subject: RE: Cambridge South Infrastructure Enhancement Order

Dear Sara,

Thank you for your letters. Please find attached letter in reply.

John – it would be useful to run through each point in turn when we meet next week please.

In the meantime, if you have any queries then please do not hesitate to contact me.

Kind regards,

Charlotte

Charlotte Burton MRTPI | Principal Planning Officer (Strategic Sites)



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From: Sara Peters <Sara.Peters@networkrail.co.uk> **On Behalf Of** cambridgesouth
Sent: 20 November 2021 07:02
To: Charlotte Burton <Charlotte.Burton@greatercambridgeplanning.org>
Subject: Cambridge South Infrastructure Enhancement Order

OFFICIAL

Dear Charlotte

Please find attached further response to objections in respect of the above Order application.

If you require further information please do not hesitate to contact me.

Kind regards

Sara

 **Sara Peters**



TWAO Consultation Manager
Capital Delivery – Anglia

Mobile: 07922 027295

Email: sara.peters@networkrail.co.uk



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Cambridge City Position – Letter dated 7 December 21

Comment	NR Draft Response
<p>1. Exchange land – adequate mitigation</p> <p>Further information on the landscaping and biodiversity features, and the accessibility and safety of crossing Addenbrooke's Road is required in order to assess whether the proposed exchange land is appropriate replacement for the loss of existing public open space, in accordance with Local Plan 2018 policy 67.</p> <p>This matter was raised in our Statement of Case and has not been addressed in your letters dated 1 October or 18 November. Officers require further information to demonstrate that the landscape and biodiversity, and amenity value of the proposed land will provide adequate compensation for the area of Hobson's Park to be lost. This also includes demonstrating that the proposed exchange land is accessible safely given its location physically separate from the rest of Hobson's Park and requiring users to cross Addenbrooke's Road to move between the park and the proposed land. As no further information has been provided, the Council maintains its objection on this ground.</p>	<p>Network note that safe access to the exchange land would be via travelling under Nine Wells Bridge and once constructed via the new accommodation bridge. This would mean that there is no need to cross Addenbrooke's Road.</p> <p>Network Rails application for deemed planning is outline in nature and Network Rail believe that the proposed landscape condition is suitable to provide the council with further details regarding the final layout and design of the Exchange Land.</p> <p>The ES Chapters 8 and 13 concluded that there would be no significant negative effects either during the proposed development's construction or operation phases.</p> <p>In addition Network Rail have committed to achieving 10% Biodiversity Net Gain which will be secured by a planning condition.</p>
<p>2. Exchange land – timing</p> <p>The exchange land to compensate for the permanent loss of public open space and the new access routes outside of the site compound must be laid out and available for use before the use of areas of existing public open space for the</p>	<p>Paragraph 36(1) of the Draft Order, provides that Network Rail shall not under the powers of the Order vest any part of the existing open space until it has vested so much of the replacement land as is equivalent in area to the amount of the existing open space that is required for the authorised works. Paragraph 36(3) provides that Network Rail must lay out as replacement open</p>

Comment	NR Draft Response
<p>development commences, in order to provide satisfactory replacement in accordance with Local Plan 2018 policy 67.</p> <p>This matter was raised in our Statement of Case and has not been addressed in your letters dated 1 October or 18 November. The Council maintains its objection on this ground.</p>	<p>space so much of the replacement land which has been vested under paragraph 36(1) before the authorised works are first brought into use. Once Cambridge City Council has certified that the land has been satisfactorily laid out, the land then vests in the Pemberton Trustees and Cambridge City Council. In this way, before NR can acquire the existing open space, NR must lay out the replacement land, get it certified by CCiC and then vest it in the Pemberton's and CCiC.</p>
<p>3. Use of Hobson's Park</p> <p>The temporary use of Hobson's Park must be justified both in terms of the area of land and the duration for which the land is required, and this must be secured through a condition in order to minimise the temporary loss of public open space in accordance with Local Plan 2018 policy 67.</p> <p>Your letter refers to a soil management plan. While a soil management plan is required in respect of the temporary use of Hobson's Park this does not provide a response to the Council's objection above because it does not justify the use of Hobson's Park or demonstrate that the area and duration of use is the minimum required.</p> <p>Updated deposited plans were issued by NR Consents Manager on 26 November which showed a reduced area of temporary land acquisition on Hobson's Park for the site compound. Officers are currently reviewing this and will provide comments in due course.</p> <p>Notwithstanding this, the Council also requires a response from NR to justify the area of land required</p>	<p>Network Rail have been working closely with our construction partners J Murphy & Sons to look at reducing the amount of temporary land take within Hobson's Park. As a result, a large area of the park envisaged for storing excavated material has now been removed from the proposed TWAO. This has reduced the area of Hobson's Park that is required temporarily during construction by around 50%.</p> <p>Network Rail will continue to look at their construction methodology and land requirements and in order to manage the effects of the proposed construction works on the park and associated features have proposed a number of planning conditions which will enable the local authority to control the development this includes the CoCP, Ecological method statement, Arboriculture method statement and tree protection plan and soils management plan. These would all provide greater clarity on how the construction works will be undertaken and the mitigation to limit the effects of those works on the park.</p>

Comment	NR Draft Response
<p>and the duration for which that land is required. This additional information will be reviewed by officers alongside the amended deposited plans before the Council can consider whether this matter has been resolved.</p> <p>Insofar as the soil management plan is concerned, the Council will give consideration to the plan once it has been received but until the Council has had an opportunity to review the plan, officers advise that the Council's objection has not been resolved.</p>	
<p>4. Permanent spoil placement</p> <p>There must be no spoil permanently placed within areas of public open space and this must be secured through a condition in order to ensure that spoil placement does not lead to the permanent loss of public open space or harm to the character of the public open space in accordance with Local Plan 2018 policy 67.</p> <p>Your letter commits to a condition to provide a soil management plan. While a soil management plan is required in order to agree where soil will be placed, the Council also requires a compliance condition to control where soil will NOT be placed. This is in the form of a compliance condition to prevent excavated material being placed within the public open space unless agreed through the soil management plan or landscaping works.</p> <p>Officers discussed wording of a suitable condition at the meeting with the NR Planning Manager on 18</p>	<p>Agreed and included in drafting of current conditions</p>

Comment	NR Draft Response
<p>November which was subsequently drafted and proposed by the NR Planning Manager (sent on 22 November) as follows:</p> <p><i>No excavated material or other material shall be placed within public open space, including Hobson's Park, other than in accordance with the approved landscaping details or the approved details for temporary storage contained within the approved soil management plan.</i></p> <p>Officers advise that the Council requires this condition to be agreed in the Statement of Common Ground before this matter can be resolved.</p>	
<p>5. Trees</p> <p>The application has not demonstrated compliance with Local Plan policy 71 for the preservation and protection of trees and hedges. An Arboricultural Implications Assessment (AIA) and Arboricultural Method Statement (AMS) must be submitted prior to determination, and the impact on Tree Preservation Orders (TPOs) and other trees and hedges must be minimised and mitigated through protection measures and replacement planting secured through conditions.</p> <p>Your letter refers to conditions to secure the implementation of tree protection measures. While such conditions are necessary, this is not sufficient to resolve the Council's objection. As matters currently stand, the Council is not satisfied that the potential impact on trees and hedges can be satisfactorily addressed through</p>	<p>The indicative landscape plans submitted with the deemed planning permission show the areas of planting proposed to be removed.</p> <ul style="list-style-type: none"> • Cambridge South Station – North of Addenbrookes Bridge Indicative Landscape Plan -Sheet 1 of 4 (Drg ref. 158454-ARC-00-ZZ-DRG-EEN-000074) • Cambridge South Station Indicative Landscape Plan - Sheet 2 of 4 (Drg 158454-ARC-00-ZZ-DRG-EEN-000075) • Cambridge South Station – South of Nine Wells Bridge Indicative Landscape Plan -Sheet 3 of 4 (Drg 158454-ARC-00-ZZ-DRG-EEN-000076) • Shepreth Junction Indicative Landscape Plan -Sheet 4 of 4 (Drg 158454-ARC-00-ZZ-DRG-EEN-000077) <p>Network Rail have since removed the hammerhead from plot 12 which will reduce the land take in the vicinity of Long Road Sixth Form College (Drg ref. 158454-ARC-00-ZZ-DRG-EEN-000074)</p>

Comment	NR Draft Response
<p>conditions because no information has been provided about the extent of tree and hedge loss and the options for mitigation.</p> <p>Therefore, while officers are happy to engage with NR in respect of the wording of any possible conditions to secure the implementation of tree protection measures, the Council requires submission of further evidence in respect of the extent of tree and hedge loss and the potential mitigation for that loss BEFORE the Council is in a position to agree that this issue can be satisfactorily addressed by way of conditions.</p> <p>At our meeting with NR Consents Manager on 5 October, officers were advised that the AIA and AMS would come much later on in the process, but that further information may be provided. The Council requires information about the loss of trees and options for appropriate replacement planting to mitigate any impact before the Council can consider whether this issue can be satisfactorily resolved by way of condition.</p> <p>Any additional information provided will be reviewed by the Council before it can consider whether this matter has been resolved.</p>	<p>and reduced the area of Hobson park required to support construction by about 50%. This is reflected in the updated Order Plans provided to the council.</p> <p>During construction Network Rail have agreed to the inclusion of a condition regarding the submission of an Arboricultural Method Statement and Tree Protection Plan (TPP). This should ensure that trees are protected and maintained during the construction works. The TPP will set out the details of protection measures to minimize the loss of trees including within plot 12 at Long Road Sixth Form.</p> <p>The Parameter Plan, Land Use and Landscape plan drg ref. 158454-ARC-ZZ-ZZ-DRG-LEP-000101, included as part of the deemed planning permission showing at a high level the proposed permanent landscaping. Further information will be provided for the local authorities approval through the proposed landscape planning condition for their approval. It should be noted the condition requires that the Landscaping scheme must be in accordance with Parameter Plan 158454-ARC-ZZ-ZZ-DRG-LEP-000101.</p> <p>The impact on trees has been assessed in the ES, both in Chapter 8 (Biodiversity) and Chapter 13 (Landscape and Visual) which conclude that subject to the proposed mitigation measures there would be no significant adverse effects during the construction and operation of the proposed CSIE project.</p>
<p>6. Structural planting in Hobson's Park</p> <p>During discussions with NR and following correspondence with representatives for AstraZeneca, officers have been made aware that the boundary of</p>	<p>Network Rail propose the following measures to address this which will be captured in revised design principles which the Landscape Plan should adhere to. This will be subject to the local</p>

Comment	NR Draft Response
<p>the permanent and temporary land acquisition includes land within the AstraZeneca site, specifically land within the site boundary of the reserved matters consent for the AstraZeneca South Plot development, which has come forward under the outline consent for the Cambridge Biomedical Campus (CBC).</p> <p>As NR are aware, the outline consent for the CBC secured structure planting along the western boundary of the CBC along the railway line, and secured strategic gaps connecting the green open space within the retained Green Belt with open spaces within the CBC, including one gap which aligns with the station proposals. These elements of structural planting are important components of the mitigation for the CBC.</p> <p>The Council has been informed that the areas of permanent and temporary mitigation mean that the structural planting along the railway line must be removed and cannot be replaced, and that the station platform including the walkover will align with the strategic gap. As a result, the CBC mitigation cannot be achieved in accordance with the outline consent if the station works go ahead.</p> <p>It is critical that the proposal includes appropriate mitigation for the loss of structural planting within the CBC. The Council's landscape officer has met with NR Landscape Consultant to discuss options for replacement planting on the eastern side of Hobson's Park. This would require planting mature large specimens and with ground and soil preparation which promotes the fast establishment of trees.</p>	<p>planning authorities final approval under the Landscape planning condition.:</p> <ul style="list-style-type: none"> • to instal a green fence between AZ and Network Rail. This details of the fence would be submitted through the landscape scheme as part of the deemed planning conditions. • To include replacement planting for the structural planting lost on the western boundary of the railway adjacent AstraZeneca development plus a 10% net gain. <p>In addition Network Rail propose to provide drafting in the order to amend to protect AstraZeneca from any future enforcement action.</p> <p>(See sketch of proposed planting)</p>

Comment	NR Draft Response
<p>The Council's landscape officer has advised that a suitable planting scheme could be implemented to mitigate this impact, however these details must be secured through inclusion in the Design Principles document. Officers advise that the Council requires submission of an updated Design Principles document to review before this matter can be resolved.</p>	
<p>7. Hobson's Park – temporary and permanent work</p> <p>The use of existing public open space for the creation of new access routes and temporary work required for the construction must be the minimum requirement and must be justified.</p> <p>This matter was raised in our Statement of Case and has not been addressed in your letters dated 1 October or 18 November. Please provide a formal response.</p> <p>Your letter refers to our comments on the notation of the pedestrian and cycling route on Parameter Plan 1: Access and Movement requesting this is amended to read 'Proposed segregated new pedestrian and cycle access'. You have responded to explain that the detail of the route will come forward through the discharge of conditions which will allow further discussion with stakeholders. Officers advise that the Council accepts this.</p>	<p>Agreed</p>
<p>8. Hobson's Park – landscaping of routes</p> <p>The layout of new routes across the public open space should consider the impact on the remaining green spaces between the routes, and any resulting</p>	<p>The layout of new routes within the order limits through the park will depend on the final landscape scheme and these routes will be submitted as part of the Landscape proposals under the proposed planning condition.</p>

Comment	NR Draft Response
<p>changes to the management regime required or to the use of these spaces for recreation.</p> <p>This matter was raised in our Statement of Case and has not been addressed in your letters dated 1 October or 18 November. The Council maintains its objection on this ground.</p>	<p>Routes outside the Order limits should remain as they are.</p>
<p>9. Timing of exchange land and new access routes</p> <p>The exchange land and the new access routes outside of the site compound must be laid out and available for use prior to commencement of the use of the existing open space for the works, which must be secured through an amendment to paragraph 36 of Part 4 of the draft Order. Confirmation that the exchange land will be secured for public open use in perpetuity through the draft Order must be provided.</p> <p>This matter was raised in our Statement of Case and has not been addressed in your letters dated 1 October or 18 November. The Council maintains its objection on this ground.</p>	<p>Network Rail are reviewing their Programme.</p>
<p>10. Pedestrian link beneath Cambridge Guided Busway</p> <p>The pedestrian link across the Cambridge Guided Busway between Hobson's Park and the Active Recreation Area must be complete before the existing connection beneath the Cambridge Guided Busway is lost. This must be secured through the Order.</p>	<p>Agreed, suggest a planning condition</p>

Comment	NR Draft Response
<p>This matter was raised in our Statement of Case and has not been addressed in your letters dated 1 October or 18 November. The Council maintains its objection on this ground</p>	
<p>11. Commuted sums towards increased maintenance costs</p> <p>The Council is reviewing the implications of the proposed works on the maintenance costs for Hobson's Park. This includes additional costs of maintaining any paths, hard surfacing and structures that fall within the Council's maintained areas, and the additional cost of maintaining tree planting on the western side of the railway line as replacement planting for the trees to be lost on the CBC. Officers will discuss this further with NR and provide an estimate of any additional costs for which contributions will be need to be agreed.</p>	<p>Network Rail are willing to enter into negotiations about how maintenance of the park will be funded going forward.</p>
<p>12. Biodiversity Net Gain (BNG)</p> <p>The application has not provided sufficient Information to demonstrate the minimum 10% biodiversity net gain target is achievable and can provide appropriate mitigation on or near to the site, and as a result has not demonstrated compliance with Local Plan 2018 policies 69 and 70, and NPPF 2021 paragraph 174.</p> <p>Your letter refers to conditions to secure the delivery of the 10% BNG target. While this condition is necessary to approve the detail of the ecological mitigation, this is not a sufficient response to the matter above as it does not demonstrate that this target is achievable and can</p>	<p>See attached updated BNG Technical note. In terms of what we will be seeking to provide off site through the County Council it would comprise the following:</p> <ul style="list-style-type: none"> • Grassland: 5.48ha or 38.54 units • Woodland: 3.45ha or 8.87 units • Scrub: 0.93ha or 8.70 units • Ponds: 1.1ha or 9.29 units <p>We continue to seek to secure agreement with the County Council to achieve this.</p>

Comment	NR Draft Response
<p>provide appropriate mitigation. This is because there is no further information about the deliverability of biodiversity enhancements.</p> <p>Your earlier letter dated 1 October and meetings with the NR Consents Manager have confirmed that NR has entered into discussions with Cambridgeshire County Council with a view to securing an Options Agreement for the provision of all the BNG units required to meet the 10% target at Lower Valley Farm in Fulbourn.</p> <p>The letter advised that once discussion have progressed further with the County Council, NR will be able to provide confirmation that it has secured the mechanism for delivering the required 10% BNG. Officers have been advised that NR are aiming to secure the Option Agreement with the County Council ahead of the public inquiry.</p> <p>In addition to this, officers understand that the BNG calculations submitted with the TWAO application for the 'worst case scenario' are being updated to reflect the changes to the site compound area and to landscaping and that the calculations will be reissued to the Council, however officers have not had sight of this.</p> <p>The Council currently maintains its objection on these grounds which have not been addressed. Officers look forward to receiving the updated BNG calculations and further information on the proposed mitigation to review before the public inquiry. This additional information will be reviewed by the Council before it can consider whether this matter has been resolved.</p>	

Comment	NR Draft Response
<p>13. Birds</p> <p>The potential impact on the breeding population of Corn Bunting along the line of the rail track and construction route, and on Corn Bunting and Skylark nesting within Hobson's Park needs to be given more weight in the assessment of the impact on existing biodiversity, in accordance with Local Plan 2018 policies 69 and 70.</p> <p>Your letter advises that NR are looking into whether additional mitigation is necessary to reduce the potential impact on the breeding population of Corn Bunting and nesting of sky larks within Hobson's Park. This matter was raised in our Statement of Case and has not been addressed in your letters dated 1 October or 18 November. The Council does not agree that this issue has been resolved and requires further information on the availability of options for mitigation to review before it can consider whether this matter has been resolved.</p>	<p>The potential permanent displacement of corn buntings due to disturbance has also been highlighted by Cambridgeshire City Council. In response to this, the highest number of corn bunting territories were recorded in the recently created habitats of Hobson's Park. This area has been established within the past 10 years for recreation and as a nature reserve for the adjacent Great Kneighton development. Therefore, corn buntings have successfully colonised newly created habitats within a short period of time despite extensive construction taking place immediately to the east (Great Kneighton) and the west (the AstraZeneca development), and the construction of Addenbrookes Road and the Guided Busway routes across the park in 2008. Such construction will have created the types and scale of disturbance similar to those likely from the proposed scheme. The recolonisation of the area by corn bunting is testament to their resilience in this location.</p> <p>In the permanent scheme habitat for corn buntings can be provided along the edge of the Exchange Land. During construction proposals to provide mitigation along the Haul Road can be included within the Construction Ecological Method Statement. The details of this mitigation will be subject to the local planning authorities approval under the proposed deemed planning conditions.</p> <p>Network Rail can include details to provide Corn Bunting Habitat within the final landscape scheme in the design principles. This would state 'Network Rail will include suitable habitat for Corn</p>

Comment	NR Draft Response
	Buntings within the southern boundary of the proposed exchange land.'
<p>14. Green Belt</p> <p>The application has not made a full and clear case to demonstrate the proposal would not be inappropriate development within the Green Belt in accordance with the NPPF paragraph 150 and Local Plan policy 4, or that very special circumstances exist, in accordance with NPPF paragraph 148.</p> <p>You have referenced the Department of Transport Strategic Outline Business Case for Cambridge South Station which sets out the requirement for the station and how the proposed location was identified, and the Planning Statement which explains how this meets Green Belt policy in accordance with the NPPF 2021. The Council acknowledges that NR has put forward a case for the proposal being not inappropriate development in the Green Belt. Officers do not make a judgement as to whether the proposal complies with the NPPF in this regard but are now satisfied that the Inspector has satisfactory information to consider the matter.</p>	Noted
<p>15. Drainage</p> <p>Details as requested by the Sustainable Drainage Engineer must be submitted prior to determination in order to demonstrate the proposals comply with Local Plan policy 32 relating to flood risk.</p>	Noted

Comment	NR Draft Response
<p>Your previous letter dated 1 October provided a detailed response to the issues raised by the Council's sustainable drainage engineer. Officers have reviewed this and confirmed this was acceptable in an email to NR Consents Manager dated 5 October. Officers advise that the Council's objection has been resolved.</p>	
<p>16. Green roofs</p> <p>The proposals for biodiverse green roofs must be confirmed as to whether or not they are required as part of the LVIA and Green Belt mitigation.</p> <p>Your letter states that given the current stage of design, NR cannot confirm the exact location and amount of green biodiverse roof as part of the proposed development. As a result, no amendments will be made to remove the word 'potential' from the Parameter Plan: Land Use and Landscape drawing.</p> <p>While the Council acknowledges that there is not yet a detailed design for the station, officers have requested in the comment above clarification from NR about whether a biodiverse green roof is required as part of the LVIA and Green Belt mitigation. The Council requires confirmation on this with reference to the submitted documents for the Council to review before this matter can be resolved.</p> <p>Regarding the wording of the draft condition to secure details of biodiverse green roofs, officers have discussed this at meetings with NR Planning Manager. The Council accepts that the detail of the roof could come forward under the condition requiring the detailed</p>	<p>Drafting included in proposed update to Design principles. See attached</p>

Comment	NR Draft Response
<p>design of the station building and landscaping details, so that a separate condition is not required.</p> <p>Notwithstanding this, the Council requires that the specification for the substrate and mix of species and a maintenance plan for the biodiverse green roof – as detailed in the draft condition wording requested by the Council – must be included in the Design Principles document and must be complied with unless there are planning or biodiversity reasons which make this not possible. The Council requires submission of an updated Design Principles document to review before this matter can be resolved.</p> <p>Your letter also responds to our comments on biodiverse green walls requesting details of this feature as many types are not sustainable and are high maintenance. You have responded to explain that this detail would come forward through the conditions. Officers advise that the Council accepts this.</p>	
<p>17. BREEAM</p> <p>A condition for submission of a BREEAM pre-assessment demonstrating the scheme is on-target to achieve BREEAM ‘excellent’ rating is required in accordance with Local Plan policies 28, 29 and 31, and the Sustainable Design and Construction SPD.</p> <p>Your response proposes an additional condition to secure submission of a BREEAM pre-assessment. The Council’s sustainability consultant supports the wording of the proposed draft conditions 20, 21 and 22 sent by NR Planning Manager on 22 November. The Council</p>	<p>Agreed and added to the conditions but, we will seek to provide this before the Inquiry</p>

Comment	NR Draft Response
<p>requires this condition to be agreed in the Statement of Common Ground before this matter can be resolved.</p>	
<p>18. Trip generation and cycle parking</p> <p>Cambridgeshire County Council Highways Authority must support the predicted trip generation, modal share and number of cycle parking spaces in accordance with Local Plan policies 81 and 82.</p> <p>Your letter dated 1 October provided a more detailed response with reference to the Transport Assessment. Officers advise that the Council has made its position clear and has nothing further to add. Officers will review the draft condition 19 to secure details of cycle parking as sent by NR Planning Manager on 22 November.</p>	<p>The predicted trip generation, modal share and number of cycle parking has been agreed with the Cambridgeshire County Council Transport Assessment Team.</p>
<p>19. Car parking</p> <p>The maximum number of car parking spaces for each user group must be specified in the Design Principles and details of cycle parking facilities must be secured through the recommended revised wording, in accordance with Local Plan policy 82.</p> <p>Your letter confirms that NR will amend the Design Principles to specify that no more than 9 vehicle parking spaces will be provided within the station forecourt (5 spaces for blue badge holders and 4 spaces for station staff and maintenance staff) and space for no more than 6 passenger and taxi drop-off/pick-up will be provided within the station forecourt. Officers advise that the Council requires submission of an updated</p>	<p>Updated wording in Design principles</p>

Comment	NR Draft Response
Design Principles document to review before this matter can be resolved.	
<p>20. Environmental Health conditions</p> <p>Conditions relating to noise and vibration, lighting and electric vehicle charging points must be secured in order to mitigate the impact on residential amenity and sensitive receptors, in accordance with Local Plan 2018 policies 34, 35, and 36.</p> <p>Your letter confirms that NR does not have an objection in principle to the proposed conditions on noise and vibration, and lighting. The wording of those conditions was discussed between the Council's environmental health officers and NR Planning Manager at the meeting on 18 November. The re-drafted conditions issued by NR Planning Manager on 22 November will be reviewed by officers before the Council can confirm whether this matter has been resolved.</p> <p>Your letter provides no further information in response to the Council's requirement for electric vehicle charging points. This was also discussed between environmental health officers and NR Planning Manager. Officers set out the case for providing electric vehicle charging for Blue Badge Holders at the station. NR Planning Manager explained that this issue has been escalated within NR. Officers advise that the Council requires confirmation that the provision will be made and agreement to a condition to secure this</p>	<p>Network Rail do not currently believe it is reasonable and proportionate to put in the EV charging points at this time. However, they are willing to include passive provision for their future installation given there are only nine parking spaces proposed for the CSIE project. Network Rail have provided amended drafting of the proposed planning condition such that the necessary infrastructure including ducting, capacity within the station network and ability to connect to the grid is provided.</p>

Comment	NR Draft Response
within the Statement of Common Ground before this matter can be resolved.	

South Cambridge DC Position – Letter dated 7 Dec 21

Comment	Who	Response
<p>1. Loss of trees</p> <p>The loss of trees along the railway line and across the scheme must be minimised, and a condition for tree protection measures must be imposed, in accordance with Local Plan 2018 policies HQ/1, NH/2, and NH/4.</p> <p>This matter was raised in our Statement of Case and has not been addressed in your letter. The Council maintains its objection on this ground.</p>		<p>The indicative landscape plans submitted with the deemed planning permission show the areas of planting proposed to be removed.</p> <ul style="list-style-type: none"> • Cambridge South Station – North of Addenbrookes Bridge Indicative Landscape Plan -Sheet 1 of 4 (Drg ref. 158454-ARC-00-ZZ-DRG-EEN-000074) • Cambridge South Station Indicative Landscape Plan - Sheet 2 of 4 (Drg 158454-ARC-00-ZZ-DRG-EEN-000075) • Cambridge South Station – South of Nine Wells Bridge Indicative Landscape Plan -Sheet 3 of 4 (Drg 158454-ARC-00-ZZ-DRG-EEN-000076) • Shepreth Junction Indicative Landscape Plan -Sheet 4 of 4 (Drg 158454-ARC-00-ZZ-DRG-EEN-000077) <p>During construction Network Rail have agreed to the inclusion of a condition regarding the submission of an Arboricultural Method Statement and Tree Protection Plan (TPP). This should ensure that trees are protected and maintained during the construction works.</p>
<p>Biodiversity net gain</p> <p>2. Deliverability of biodiversity net gain</p> <p>The application has not provided sufficient Information to demonstrate the 10% biodiversity net gain target is achievable and can provide</p>	Paul	<p>See attached updated BNG Technical note. In terms of what we will be seeking to provide off site through the County Council it would comprise the following:</p> <ul style="list-style-type: none"> • Grassland: 5.48ha or 38.54 units • Woodland: 3.45ha or 8.87 units

appropriate mitigation on or near to the site, and as a result has not demonstrated compliance with Local Plan 2018 policy NH/4, and NPPF 2021 paragraph 174.

Your letter refers to conditions to secure the delivery of the 10% BNG target. While this condition is necessary to approve the detail of the ecological mitigation, this is not a sufficient response to the matter above as it does not demonstrate that this target is achievable and can provide appropriate mitigation. This is because there is no further information about the deliverability of biodiversity enhancements.

Your earlier letter dated 1 October and meetings with the NR Consents Manager have confirmed that NR has entered into discussions with Cambridgeshire County Council with a view to securing an Options Agreement for the provision of all the BNG units required to meet the 10% target at Lower Valley Farm in Fulbourn.

The letter advised that once discussion have progressed further with the County Council, NR will be able to provide confirmation that it has secured the mechanism for delivering the required 10% BNG. Officers have been advised that NR are aiming to secure the Option Agreement with the County Council ahead of the public inquiry.

In addition to this, officers understand that the BNG calculations submitted with the TWAO application for the 'worst case scenario' are being updated to reflect the changes to the site compound area and to landscaping and that the calculations will be reissued to the Council, however officers have not had sight of this.

- Scrub: 0.93ha or 8.70 units
- Ponds: 1.1ha or 9.29 units

We continue to seek to secure agreement with the County Council to achieve this.

<p>The Council currently maintains its objection on these grounds which have not been addressed. Officers look forward to receiving the updated BNG calculations and further information on the proposed mitigation to review before the public inquiry. This additional information will be reviewed by the Council before it can consider whether this matter has been resolved.</p>		
<p>3. LVIA mitigation</p> <p>The application does not provide sufficient detail about the landscape proposals to provide unreserved assurance of the success of the LVIA mitigation, as required by Local Plan 2018 policies HQ/1, NH/2 and NH/8.</p> <p>Your letter refers to the TWAO application as comparable to an outline planning permission which requires suitable planning conditions requiring the local planning authority to agree the detail of the landscaping proposals. Officers advise that the Council accepts that the detail will come forward through the discharge of conditions for the detailed station design and landscape proposals, and that this matter cannot be resolved at this stage.</p>		<p>Noted</p>
<p>4. Deemed planning consent drawings</p> <p>The deemed planning consent drawings must provide more information to control the scale and height of the substation and railway systems compound to the south of Addenbrooke's Road, in order that the buildings integrate into the rural location, in accordance with Local Plan 2018 policies HQ/1, NH/2 and NH/8.</p>		<p>Network Rail note the suggesting update to the drawings but don't propose to amend it as it is clear based on the existing ground level AOD versus the proposed height AOD. This provides sufficient information on the maximum height of the structures.</p>

<p>Your letter refers to Deemed Planning Drawing – Parameter Plan ‘heights’(158454-ARC-ZZ-ZZ-DRG-LEP- 000102 P01) and highlights that this limits the maximum height of structures to 18m above ordnance datum (AOD). You explain that based on the existing AOD, the maximum height of structures would be 4m. The detail of the structures and the landscaping would be come forward through the discharge of conditions. Officers advise that the Council accepts this matter has been resolved.</p> <p>Notwithstanding this, it is recommended for the avoidance of doubt that this drawing is updated to refer to maximum building heights in the annotations or drawing title.</p>		
<p>5. Noise mitigation and attenuation at Great Shelford</p> <p>Site-specific noise mitigation and attenuation measures must be included in the Code of Construction Practice for locations where works will occur that have the potential to adversely impact residential areas of Great Shelford, in accordance with Local Plan 2018 policies HQ/1 and SC/10.</p> <p>This matter was raised in our Statement of Case and has not been addressed in your letter. The Council maintains its objection on this ground.</p>		<p>Network Rail will be required to set out the proposed mitigation measures in line with Best Practicable Means (BPM) within the Noise and Vibration Management Plan required under the CoCP Part B and secured by the proposed deemed planning conditions.</p> <p>The Code of Construction Practice Part A requires that the timing of the advanced notifications will be set out in the CoCP Part B following consultation with the local authorities Environmental Health Officers.</p> <p>It would be good practice for Network Rail to consult the Council's Environmental Health Team prior to submitting the CoCP and Noise and Vibration Management Plan and it would be expected they would be consulted once the formal submission to discharge the condition is made. Network Rail have entered into a Planning Performance Agreement with the GCSP to support this process.</p>
<p>6. Vibration impacts at Shrepreth Branch Junction</p>		<p>Network Rail will be required to set out the proposed mitigation measures in line with Best Practicable Means (BPM) within the</p>

<p>Good and early engagement with the Council and residents on both the mitigation measures and the consultation strategy to minimise the disruption from major construction ground-borne vibration impacts at Shepreth Branch Junction to local residents and impact on mental health, in accordance with Local Plan 2018 policies HQ/1 and SC/10.</p> <p>This matter was raised in our Statement of Case and has not been addressed in your letter. The Council maintains its objection on this ground.</p>		<p>Noise and Vibration Management Plan required under the CoCP Part B and secured by the proposed deemed planning conditions.</p> <p>The Code of Construction Practice Part A requires that the timing of the advanced notifications will be set out in the CoCP Part B following consultation with the local authorities Environmental Health Officers.</p> <p>It would be good practice for Network Rail to consult the Council's Environmental Health Team prior to submitting the CoCP and Noise and Vibration Management Plan and it would be expected they would be consulted once the formal submission to discharge the condition is made. Network Rail have entered into a Planning Performance Agreement with the GCSP to support this process.</p>
<p>7. Air quality monitoring on the adjacent minor residential roads</p> <p>Further discussions to secure a programme to monitor the impact on air quality on the adjacent minor residential roads around the development, in accordance with Local Plan 2018 policies HQ/1 and SC/12.</p> <p>Your letter provides a detailed response which in summary advises that it is considered likely that any changes in emissions from idling vehicles would be offset by the reduction in vehicle movements to the Cambridge Biomedical Campus. The Council's Environmental Health team has reviewed this and provided comments as follows.</p> <p>Whilst the station is designed to discourage the use of cars with no drop off/pick up or waiting area, the reality is that for some customers this station will prove to be more convenient than either the north or central station,</p>		<p>Noted</p>

<p>and a percentage of customers will be driven to the station; it is not realistic to assume that all customers will walk, cycle or use public transport to the station. This could impact on the local roads around the station due to people waiting/idling in cars to drop off or pick up.</p> <p>However the Environmental Health team agrees with NR that this is obviously extremely difficult to quantify and air quality monitoring is unlikely to be an effective way to monitor this issue. Whilst this will impact on air quality around local roads this will be more effectively managed as part of a wider traffic management programme around the station which is a matter for the Highways Authority.</p> <p>Therefore, officers advise that no further information is required on this matter.</p>		
<p>8. Artificial lighting condition</p> <p>Replacement wording for the artificial lighting condition is required to secure compliance with the relevant guidance relating to construction and operational lighting, in accordance with local Plan 2018 policies HQ/1 and SC/9.</p> <p>Your letter does not provide a response on this, however officers have discussed the wording of the draft condition for lighting details with the NR Planning Manager on 18 November. It was agreed that construction lighting would be covered in the Code of Construction Practice and that operational lighting would be controlled through a separate condition</p>		<p>noted</p>

<p>requiring submission of a detailed operational lighting scheme.</p> <p>The wording of these conditions should require compliance with the Obtrusive Light Limitations for Exterior Lighting Installations contained within the Institute of Lighting Professionals (ILP) 'Guidance Notes for the Reduction of Obtrusive Light - GN01/20 (2020)(or as superseded)', as detailed in our comments. Officers advise that the Council requires agreed wording for a condition to be included in the Statement of Common Ground before the Council considers this matter to be resolved.</p>		
<p>9. Engagement in wider Addenbrooke's Hospital campus masterplanning</p> <p>Network Rail must commit to engage in the review of the wider masterplan for the Addenbrooke's Hospital campus currently being undertaken by the Cambridge University Hospitals NHS Foundation Trust to address connectivity issues, in accordance with Local Plan 2018 policies HQ/1 and TI/2.</p> <p>Your letter advises that NR are engaging with the relevant stakeholders. Officers advise that no further information is requires on this matter at this stage.</p>		Noteda
<p>10. Impact on cycle route NCN 11 at Shepreth Branch Junction</p> <p>The works to the railway line at Shepreth Branch Junction must minimise the impact on the NCN 11 route and be considered carefully alongside the timing of works to other routes within the area to minimise disruption to users. Network Rail must</p>		<p>Network Rail do not object this and will seek to update the CoCP Part A. However, it is noted this detail could be included within the CoCP Part B which the council approve.</p>

<p>consult with the Council, local cycling groups, Great Shelford Parish Council and other user groups.</p> <p>Your letter refers to discussions with the Council. Officers discussed this matter with NR Consents Manager and NR Planning Manager on 5 October. NR explained that a short stretch of the NCN 11 route near Webster's Level Crossing would be closed to allow for the construction compound. NR explained that this would be overnight closure only. NR has considered options to divert the route, however an alternative arrangement to marshal cyclists and pedestrians through the compound during the night closures is the preferred option.</p> <p>While the detailed arrangements would be included in the Code of Construction Practice Part B to be secured through condition, officers requested that NR provide a commitment to minimise closures and to provide marshalled access, or a diversion, with specific reference to this area within the Code of Construction Practice Part A submitted with the TWAO application. Officers advise that the Council requires an updated Code of Construction Practice Part A to review before this matter can be resolved.</p>		
<p>11. Works affecting the Scheduled Ancient Monument</p> <p>The works affecting the Scheduled Monument must be minimal and must have the support of Historic England and Cambridgeshire County Council Archaeology Team, and mitigation must be secured through conditions, in accordance with Local Plan 2018 policies HQ/1 and NH/14.</p>		Noted

<p>Your letter advises that NR are engaging with Historic England in respect of the Scheduled Ancient Monument, and that associated Scheduled Monument Consent will be applied for. Officers have also discussed the wording of a condition to secure a programme of archaeological investigation works, and are currently awaiting feedback from the Cambridgeshire County Council Archaeology Team with respect to the trigger for this condition in relation to other site investigation and enabling works. Feedback will be provided separately to the NR Planning Manager. Officers advise that the wording of an agreed condition must be included in the Statement of Common Ground before the Council considers this matter to be resolved.</p>		
<p>12. Awarded Watercourse informative</p> <p>An informative should be applied to advise the applicant of the requirement to obtain land drainage bye law approval by the Council for works affecting the awarded watercourse.</p> <p>The Council has provided a copy of the Bye Law to the NR Consents Manager. Your letter advises that NR will continue to discuss this matter with the Council. This matter will be dealt with the land drainage bye law approval which will come forward at a later date, and therefore officers advise that the Council considers this matter to be closed for the purposes of the TWAO application.</p>		<p>Noted</p>

APPENDIX A: DESIGN PRINCIPLES

1.0 INTRODUCTION

Cambridge South Station is part of the Cambridge South Infrastructure Enhancements Project (the proposed Development) for which Network Rail (NR) will be seeking powers to construct and operate by submitting an application for a Transport and Works Act Order. Simultaneously, NR will also be making a request for deemed planning permission for the siting, massing and volume of the station and associated structures.

This [Appendix](#) describes the Design Principles that underpin the design and integration of Cambridge South Station into its context. They are written to capture the key principles documented in the Design and Access Statement (DAS) that have shaped the design thus far, which have informed the architectural strategy in locating and arranging the station facilities and access provisions.

Compliance with the Design Principles will be a requirement secured through a planning condition associated to the deemed planning request.

Submissions to discharge the relevant building design and landscaping conditions will be in accordance with the parameter plans formed as part of the deemed planning request and will require a Design Compliance Statement to demonstrate how those proposals comply with this document.

The Design Principles will be maintained and developed in the future detailed design and delivery phases of the proposed Development.

Stations add value to the local areas they serve and must be inclusive and connect people and places in a way which can be used by anyone.

'Our aim: To enhance our identity as an organisation and ensure our assets are connected to the communities they serve, by seeking out opportunities that capture the wider benefits of our work.'

Our Principles of Good Design, Network Rail

'The Government attaches great importance to the design of the built environment:

Good design is a key aspect of sustainable development, is indivisible from good planning, and should contribute positively to making places better for people.'

Paragraph 56 of the National Planning Policy Framework (NPPF)

'The creation of high-quality buildings and places is fundamental to what the planning and development process should achieve.'

Paragraph 124 of the National Planning Policy Framework (NPPF)

The proposed new station is located to serve the Cambridge Biomedical Campus (CBC), which is the largest centre of medical research and health science in Europe and includes the wider Cambridge University Hospital and Royal Papworth Hospital on the wider Addenbrooke's Campus. As such, the new station will provide improved and more sustainable connectivity in the region, providing direct access to potential routes on the rail network for those in South Cambridgeshire, and further afield.

Whilst the proposed Development includes rail infrastructure beyond the station demise to support its feasibility such as track works, line side compounds and removal of two level crossings, these Design Principles only concern the proposed station.

The proposals progressed to date are the result of an iterative design process informed by the Strategic Outline Business Case Project Objectives, the Cambridge City Local Plan, technical route development, public and key stakeholder consultation and pre-application meetings with the Greater Cambridge Shared Planning (GCSP).

Table 1: Strategic Outline Business Case Project Objectives

1.	Increase public transport connectivity between the Cambridge Biomedical Campus and international gateways, in recognition of its international significance.
2.	Improve sustainable transport access to housing, services, and employment within the Cambridge Southern Fringe and Biomedical Campus area, to fulfil existing and future demands.
3.	Minimise highway congestion associated with the Southern Fringe and Cambridge Biomedical Campus by increasing the mode share for sustainable transport modes.
4.	Reduce reliance on central Cambridge transport infrastructure for serving the Southern Fringe and Biomedical Campus.
5.	Be capable of integrating with and enhancing the opportunities presented by Thameslink and East West Rail, to support development of the Biomedical Campus as part of the Golden Triangle life sciences cluster.

2.0 PURPOSE

A railway station serving the busy and thriving CBC is essential to provide sustainable travel and public transport for patients, residents, commuters and national and international visitors in this area of projected growth. A series of Design Principles have been developed to set out the framework for the detailed design of the station and associated works to help not just deliver the design quality and performance standard of the station and surrounding public realm, but to ensure it is an appropriate response to the context within which it is located.

The Design Principles also provide assurance and confidence to stakeholders that the future station will be well designed. They inform the future design of the overall form as well as details of materials, which will be required through planning conditions attached to the deemed planning request.

This Appendix should be read in conjunction with the DAS which describes the wider context, the design of the proposed Development in terms of layout, access and landscape and illustrates the design intent in terms of scale and appearance, illustrating how the proposed Development could meet the technical requirements of the objectives to provide a suitable new station and environment that would improve connectivity for all.

3.0 PROPOSALS

In developing the basis of the illustrative concept for the station, which is constrained by the adjacent AstraZeneca plot to the East, Cambridgeshire Guided Busway (CGB) overbridge to the North and Hobson's Park to the West, we have developed key Design Principles which are consistent with Network Rail's Principles of Good Design and provide the framework for a contextual design approach which seeks to maximise the overall benefit provided by the proposed Development and demonstrate compatibility with relevant local planning policy frameworks and wider Local Plan.

The general basis of these principles is as follows:

1. **Identity** – a station that is developed in a way which provides value for money and a high-quality experience to the user.
2. **Passengers** – meets the needs of passengers in the form and function of the station and improve and simplify journeys.
3. **Community** – balance station infrastructure requirements with forming a new accessible place within the local community and accessing trains and meeting people who arrive by train.
4. **Inclusive** – the design approach will ensure the overall journey experience from forecourt to train is intuitive and accessible to all.
5. **Collaborative** – the proposed Development will continue engage its users and neighbours to support positive outcomes for all.
6. **Connected** – the layout should support the simple and intuitive movement of people, connecting one mode of transport to another, where passenger experience is at the forefront of design considerations.
7. **Contextual** – the station will integrate well into its context, responding to the character and form of Hobson's Park to the east and the wider landscape beyond. To the west, it will provide a well-integrated frontage to the wider CBC campus.
8. **Innovative** – a design that minimises its impact on the environment and that allows for future adaptation and change.
9. **Sustainable** – the station will be designed in a way which considers the whole life cycle of the proposed Development to minimise waste and provide future flexibility.

3.1. Identity

An appropriate response to context will ensure that the local character is protected and enhanced. The proposed development should create a scale and form that is appropriate to existing buildings, the public realm and open spaces, which complement the local identity of an area.

Proposals are therefore to be developed in a way which includes variety and interest within a coherent, place-responsive design. One which is legible and creates a positive sense of place and identity whilst also responding to the local context and respecting local distinctiveness.

The proposed station will respond to the following principles:

No.	Design Principle Name	Design Principle
3.1A	Identity	The development of the station form provides an opportunity to capture the identity of a functional and sustainable community asset that is integrated within its context.
3.1B	Placemaking	Through its layout and materials, the intent is to provide a sense of place for passengers arriving at the station where the entrance concourse integrates with the public realm and open spaces on its east and west frontages, to provide a useful and intuitive space.
3.1C	Be appropriate to its setting <u>and Conserve the character and form of the green corridor, Hobson's Park to the west and the open countryside beyond</u>	By careful consideration of the landscape elements, form and materials balance visual legibility of the Station from key destinations, with visual and physical integration into Hobson's Park and Green Belt.
3.1D	Provide a positive addition to the CBC public realm	The proposed eastern station entrance will interface with the Biomedical Campus public realm and respond to the specific landscape character of the area.
3.1E	Conserve the character and form of the green corridor, Hobson's Park to the west and the open countryside beyond	Principle to this is the preservation of the green corridor (forming part of Cambridge's Green Belt) as an area of permanent openness from the city's edge towards its historic core, achieved by placing the station tight up to the railway and by minimising its footprint and that of its associated infrastructure.
3.1F	Frontage to the east	Provide <u>ing improved accessibility an accessible entrance on the eastern side of the Railway to jobs on the providing access to the</u> CBC and services at the hospitals are a key justification for the station location. Transport modelling has supported this and it would also provide the opportunity for an international gateway to the CBC as set out in the Strategic Outline Business Case.

3.2. Passengers

With customer satisfaction and well-being forming vitally important criteria which encourage people to use rail travel, the proposed footprint includes sufficient and inclusive facilities and public realm.

The footprint has been influenced by dynamic passenger modelling to ensure the safe and efficient flow of passengers at peak hours and future growth can be accommodated and through consultation we have been able to better understand the users, accommodate their needs and aspirations to positively influence the proposals.

In summary the proposed station will:

No.	Design Principle Name	Design Principle
3.2A	Form a gateway	The Station Entrance to the east will form a junction with Francis Crick Avenue, set within a new public realm that seamlessly links and integrates with the surrounding context and environmental mitigation of previous schemes.
3.2B	Cater for different passengers	To the west, there will be a Station Entrance in the north east corner of the park interfacing with the existing park access routes to provide safe, and level access straight into the station.
3.2C	Improve passenger experience through good station design	Whilst meeting the future demands of passengers, the passenger experience is to be enhanced by creating a sense of space and light, seamlessly integrating the upper- and lower-level passenger spaces with the external public realm <u>including Hobsons park and the CBC-western wildlife and eastern Biomedical Campus.</u>
3.2D	Treat all passengers equally	Consider the experience and environment for users through inclusive design.
3.2E	Maximise benefits to as many people as possible	By undertaking passenger demand and incorporating the results within the proposals, the proposed Development will provide sufficient access which is catered for different users entering, exiting or waiting at the station.
3.2F	Create a new accessible interchange appropriate to the context	The proposed works will maximise opportunities for urban greening whilst providing suitable amenities such as cycle parking, lifts, wayfinding and connected spaces that are intuitive with careful consideration of desire lines both within and beyond the station.
3.2G	Fully accessible	From the ground floor accommodation through to the platform environment, the design is inclusive for users of the station and in keeping with its neighbours experiencing it as a back drop.
3.2H	Provide space for information	Information about transport options are accessible and easy to find.
<u>3.2G</u>	<u>Car Parking</u>	<u>No more than 9 vehicle parking spaces will be provided within the station forecourt (5 spaces for blue badge holders and 4 spaces for station staff and maintenance</u>

		<u>staff) and space for no more than 6 passenger and taxi drop-off/pick-up will be provided within the station forecourt.</u>
<u>3.4C</u>	<u>Accessible and flexible, public transport interchange</u>	<u>A variety of covered cycle parking areas to both sides of the station to suit various types of bicycles are to be provided, as well as accessible taxi and kiss and ride areas including ramps/ lifts for evacuation to ensure the station provides a fully accessible and flexible, public transport interchange.</u>

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3.3. Community

The proposed Development will balance local community requirements with infrastructure and functional asset requirements by engaging with key residents, business, community groups and recreational users and site operators within the local area to enable better coordination between public and private resources and improved outcomes for the community.

In summary the proposed station will:

No.	Design Principle Name	Design Principle
3.3A	Be permeable to the community it serves	The Station will form a highly visible Station Entrance to the east forming a junction with Francis Crick Avenue, set within a new public realm that seamlessly links and integrates with the surrounding context and environmental mitigation of previous schemes.
3.3B	Have a positive visual appearance	By creating a considered experience for the user and wider community, specifically from the existing development around it.
3.3C	Consider community opportunities	Design of the station will take into account community feedback to drive a design in keeping with the local context and priorities.
3.3D	Provide space for people	Space will be provided for movement, waiting and meeting of people in varying weather conditions.
3.3E	Minimise impact on neighbours	Maintenance requirements of the works are considered at the earliest design stages and sustainable solutions considered as an intrinsic part of the design.

3.4. Inclusive

The designs should ensure the overall journey experience from forecourt to train is simple and places people at the heart of the design process.

In summary the proposed station will be designed in a manner which allows people to use them in an inclusive way and reduces barriers to access and participation as well as being:

No.	Design Principle Name	Design Principle
3.4A	Resilient	The station is designed to be resilient to future climate change, and the space to support passenger growth.
3.4B	Enhanced accessibility	The proposed Development will continue to listen to its users and provide suitable and accessible space in the layouts ensuring the station is as inclusive as possible to all users and staff.
3.4C	Considerate	A variety of covered cycle parking areas to both sides of the station to suit various types of bicycles are to be provided, as well as accessible taxi and kiss and ride areas including ramps/ lifts for evacuation to ensure the station provides a fully accessible and flexible, public transport interchange.
3.4D	Convenient	Proposals shall have a detailed design that is safe and considers the convenience of the users and appropriateness to the context of the adjacent landscape character.
3.4E	Provide considered and accessible places for people	Spaces for seating, information about transport options will be accessible and easy to find.

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3.5. Collaborative

The proposed station area is of interest to multiple stakeholders, therefore it is crucial to seek all parties support both economically and socially through engagement to capture the greatest benefit from the proposed Development for all.

A mitigation plan has been developed to respond to the Environmental Impact Assessment and consultees and stakeholders have to date informed the station layout, proposed materials and access arrangements.

In summary the proposed station will:

No.	Design Principle Name	Design Principle
3.5A	Engage	To ensure the proposals lead to a successful outcome focused on people and places they will continue to be developed around an open dialogue with people, communities and its neighbours.
3.5B	Listen	The proposed Development will listen to its users and shall be developed through a multi-disciplinary collaborative design process such that all features of the proposed Development, maintenance access, its integration with the surroundings, and environmental mitigation are coordinated.
3.5C	Collaborate	Prior to the submission of conditions relating to the detailed design of the station the proposed Development will engage with the Cambridgeshire Quality Panel.
3.5D	Review	The proposed Development will continue to engage and consult with key stakeholders such as the City Council's Access Officer and NR's Built Environment Accessibility Panel.

3.6. Connected

The success of transport infrastructure relies on simplifying journeys, connecting one mode of transport to another, putting passenger experience at the forefront of design considerations. The Transport Assessment has identified that 60% of trips to the railway station expected to be by foot; 24% by cycle; 10% by other public transport; and 5% by taxi or drop off the station has been developed to ensure it is well-connected to enable easy access for all to jobs and services using sustainable modes such as pedestrians, buses, bicycles and the potential future CSET route.

In summary the proposed Development will:

No.	Design Principle Name	Design Principle
3.6A	Create a new accessible interchange appropriate to its context	The proposed Development will reflect and enhance its context through seeking opportunities for urban greening whilst providing suitable amenities such cycle parking, lifts and way-finding.
3.6B	Integrate with key desire lines	The connectivity of spaces is to be intuitive with careful consideration of desire lines within the station, to local destinations and onward travel.
3.6C	Integrate with future schemes	The station eastern forecourt design is to be adaptable to ensure it can integrate with future schemes such as the emerging CSET scheme. The proposed Development will continue to engage with interfacing schemes at the next stage of design.
3.6D	Provide space for interchange	With the Cambridge Guided Busway, pedestrian, kiss-and-ride and cycle access, as well as the potential CSET scheme space is to be provided to support the movement of people between modes which will all converge on or near the railway station access.
3.6E	Manage interfaces	The junction design on Francis Crick Avenue must be coordinated with the station access to minimise conflict between competing users.
3.6F	Connect modes	Provide plentiful, covered and secure cycle parking and maximise connections with existing path and cycle networks.
3.6G	Maximise cycle and pedestrian access from both east and west (with cycle parking provided both sides of the railway)	To reduce end to end journey times for all users, entrances will be provided to the East and the West.
3.6H	Provide safe and good pedestrian and cycle connections	The proposed Development will provide a direct, surfaced and well-lit and signposted access route to each side of the station that is clearly navigable and free of obstacles.
3.6I	Minimise impact on existing infrastructure	Bus services on Francis Crick Avenue or the existing Guided Busway will not be impacted by the station design.

3.6J	Ensure direct access to key nodes	The station entrance and access should integrate within the existing urban environment with good access to local population and services.
3.6K	Provide adequate, not excessive vehicle access	Designs will include access for operational staff, maintenance, emergency vehicles and access for taxis, disabled users and kiss-and-ride.
3.6L	Connect green	Seek opportunities to link to other biodiversity gain strategies being undertaken elsewhere on the CBC site.

3.7. Contextual

Proposals are to be in proportion and sympathetic to the local character, enhancing the civic quality and natural character of the existing environment. One of the key challenges in developing the design vision is the need to recognise, respect and respond appropriately to the existing context and emerging CBC whilst developing an integrated station appropriate for the Green Belt and the wider growth expected in the Southern Fringe area of Cambridge.

The existing railway, which the proposed station serves, sits on the eastern boundary of Hobson's Park. An area of grassland and lakes forming part of a green wildlife corridor that runs from Shelford and Trumpington along Hobson's Brook, Vicars Brook and northward to join the River Cam forming an ecological corridor.

Therefore whilst the wildlife area adjacent the proposed station forms an important community amenity for those working and living nearby, it is very much part of a bigger picture of strategic Green Belt which aims to protect and enhance the quality and purposes of Green Belt land.

This open green area, rich in habitat and wildlife which forms part of the southern gateway to Cambridge, has been key in influencing the station concept.

Through site analysis and engagement we have established key masterplan planning requirements which impact the site layout, massing and vision such as permeability and views and embedded these within the design principles:

No.	Design Principle Name	Design Principle
3.7A	Minimise its footprint	In recognition of the site as a 'green corridor' which contributes to the important characteristics of the city and is a key component for providing amenity and biodiversity the proposed Development within Hobson's Park avoids excessive landtake, during construction and operation, to allow retention of as much of the existing vegetation, open space and path network as possible.
3.7B	Consider landscape and the environment	Landform change within Hobson's Park would only occur where it is necessary to provide a gentle transition between the existing ground levels of the Park and the finished floor levels of the proposed station building and its associated structures. This includes along the route of the proposed shared pedestrian and cyclist access path across the Park, and the connections to the existing path network to the south-west of the station and the existing maintenance track parallel with the railway.
3.7C		The gradients of landform change along these routes would be suitably gradual to avoid the requirement for formal ramps and steps, given the detrimental effect these would have upon the landscape character and visual amenity of the Park.
3.7D		On a small number of occasions, away from these routes, these may need for steeper landform slopes in order to minimise the loss of, or harm to existing native tree and shrub vegetation.
3.7E		Located between Cambridge Biomedical Campus, the largest centre of medical research and health science in Europe and <u>the 'Great Kneighton' Trumpington residential area housing</u>

	Integrate well with both the built and natural environment	development of about 2000 units , the design of the station needs to maintain and serve as a visual amenity to both sides of this emerging urban context each side of the Green Belt.
3.7F		This approach, sympathetic to its natural context and emerging modern neighbours has influenced design to date enabling it to contribute positively to the Southern Fringe Area Development Framework (by supporting a gateway in this area) and Green Belt as a whole.
3.7G		As such, the prevailing consideration in developing the station concept is one that both maintains and enhances the quality of its important landscape setting whilst acknowledging the material pallets of the both emerging residential development to the west, and that of the newest additions of the Biomedical Campus to the east.
3.7H	Restrict vehicular access to the east side only	Given the recreational and wildlife value of the Green Belt/Hobson's Park, over provision of vehicular access is not warranted apart from necessary maintenance
3.7I	Integrate with the existing park landscape structure	The station is to be situated behind the tree belt that runs on gently sculpted low mounds along the Park's east edge.
3.7J		The layout of the station <u>will seek to integrate and connect</u> embraces the connection of with the landscape <u>setting of Hobson Park with its watercourses</u> by creating visually and biodiversity enriching design.
3.7K		By promoting <u>Promote</u> the station's legibility through reinforcement of the series of 'visual nodes' that already exist through Hobson's Park, Clay Farm and the green corridor.
3.7L	Integrate with the proposed CBC landscape masterplan	The development's external form, roofscapes and materiality reflect the semi-naturalised character and landform of the park.
3.7M		The station is to provide a visual and physical connection across the railway seeking opportunities to maximise biodiversity and in accord with the CBC masterplan principles including avoidance of harm to the established 25m wide strategic gaps between the CBC buildings to the east of the railway, by locating the largest parts of the proposed built form away from these.
3.7N		The station emphasises the landscape context through the potential use of a planted / landscaped roof contributing to local biodiversity. The detail will be discussed with future asset owners and maintainers in the next stage of design.
3.7O	Be conscious of the operational rail context to provide a safe and maintainable asset	Proposals will not be allowed to affect the operation of the railway or Over Head Line Equipment (OHLE), especially if it required Possessions to undertake this work, which would be both disruptive and expensive.
3.7P	Improve local biodiversity	The prevailing landscape context should inform opportunities for an east-west biodiversity gain through urban greening and green linkages.

Commented [JP5]: Just about fitting into its context which we say in about 4 places.

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3.7Q		Integrate swales and attenuation ponds into their setting.
3.7R	Form and material	The material palette will be contemporary but in proportion and sympathetic to its setting acknowledging the materials currently being developed within the neighbouring AstraZeneca Southern Biomedical Campus masterplan and the more natural pallet within Hobson's Park.
3.7S	Biodiverse roof	Network rail will seek to provide the station with a biodiverse roof with an extensive substrate of varying in depth. The roof will be planted/seeded with an agreed mix of species focused on wildflower planting indigenous to the local area and shall contain no more than a maximum of 25% sedum (green roofs only).
3.7T	Green Fencing	The proposed landscape design will incorporate a green fence between the Astrazenica car park and the Cambridge South Station.
3.7U	Structural Planting	To include replacement planting for the structural planting lost on the western boundary of the railway adjacent Astrazenica. This will include: <ul style="list-style-type: none"> 20 No. large trees 44 No. small trees 20 No. bat boxes 4 No. bird boxes Network Rail will factor in a 10% net gain to these figures as part of its overall commitment to biodiversity.
3.7V	Birds	Network Rail will include suitable habitat for Corn Buntings within the southern boundary of the proposed exchange land.

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3.8. Innovative

The vision for the Station is that it should form a contemporary, inclusive and functional quality packaged within a suitably scaled architectural envelop that is sustainable throughout its life.

In summary the proposed station will:

No.	Design Principle Name	Design Principle
3.8A	Minimise its footprint	In recognition of the site as a 'green corridor' which contributes to the important characteristics of the city and is a key component for providing passive sport and recreation for amenity and biodiversity the proposed Development within Hobson's Park avoids excessive landtake, during construction and operation, to allow retention of as much of the existing vegetation, open space and path network as possible.
3.8B	Smart Architecture	The external form, roofscapes and materiality should not only reflect the semi-naturalised character of the park but provide

		adequate cover to support passenger comfort and operational dwell times.
3.8C		Anticipate efficient future capacity and demand opportunities in today's design.
3.8D		Seek potential for harvesting sustainable resources such as solar and grey water systems.
3.8E		Investigate solutions to ensure the eastern entrance can sustain the level of envisaged multimodal demand.
3.8F	Provide robust operational flexibility	The platform layout allows for flexibility in future services and timings.
3.8G	Provide robust operational flexibility	The station is to provide operational resilience through two station entrances and associated access which also economically and socially provides the greatest benefit from the proposals.

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Commented [JP8]: Why not just say two entrances. How do we demonstrate compliance later w.r.t greatest economic and social benefit.

Also we say this elsewhere.

3.9. Sustainable

Applying “good design” should produce sustainable infrastructure sensitive to place, efficient in the use of natural resources and energy used in their construction, matched by an appearance that demonstrates good aesthetics as far as possible.

The station architecture, landscape and engineering design is to be as aesthetically sensitive, durable, adaptable and resilient as it can reasonably be.

A BREEAM assessment has been undertaken to identify and factor into design targets that impact layout and massing.

Due to the nature of the proposed development the use of external lighting will be essential for user and staff safety and security. It is recognised, however, that external lighting and lighting from within the proposed station buildings and structures may have an adverse effect upon local landscape character and the visual amenity of users of Hobson’s Park and the surrounding public open spaces.

To assist in reducing such potential adverse effects, the proposed Development has been planned to minimise impact at night from lighting and considered lighting upon approach.

In summary the proposed station will:

No.	Design Principle Name	Design Principle
3.9A	Habitat	Within this landscape context, the station infrastructure should where feasible, seek to be an integral part of the natural landscape enabling species migration and providing diverse habitats.
3.9B		Biodiversity targets will be agreed with the local authority.
3.9C		The station architecture will minimise clutter by seeking dual purposes where possible, as well as opportunities to enrich biodiversity where it can.
3.9D		Design proposals shall prioritise improving connectivity between existing habitats wherever reasonably practicable.
3.9E	Net Gain	Network Rail are committed to achieving 10% net gain in biodiversity as part of the proposed Development.
3.9F	Energy	Encourage energy efficiency in the station design.
3.9G		The station will be designed to a BREEAM target rating of excellent.
3.9H	Climate	The station will -be designed with the aim of being resilient to climate change - <u>and the space to support passenger growth.</u>
3.9I	<u>Sustainable Drainage</u>	SuDS measures are to be identified and incorporated into the design of all external hard surfaces.
3.9J	Resources	The station shall be efficient in its use of resources and multifunctional wherever reasonably practicable. For example, structures will be designed to accommodate multiple functions where it makes sense to do so.

Commented [JP9]: 10% net gain

Commented [JP10]: Repeats 3.9A

3.9K		The roof geometry should consider simultaneously create volume where it's needed whilst providing an opportunity for grey water recycling.
3.9L		The station works are to be designed in a way which considers the whole life cycle of the proposed Development to minimise waste and provide future flexibility.
3.9M		Provide long lasting low maintenance assets.
3.9N	Sustainable and durable material selection	Target Green Guide A or A+ materials where possible.
3.9O		Utilise platform systems which have sustainable benefits over other systems such as reduced levels of embodied carbon and reduced whole life costs of other platform types.
3.9P	Heritage	Constructed between 1614 and 1620, Hobson's Conduit and its tributaries are a valued historic and wildlife resource. Proposals therefore minimise impact on them through integrated landscape drainage solutions and minimising run-off.
3.9Q	Lighting	Lighting will be the minimum necessary to provide safe conditions and will be in accordance with relevant guidance set out in the 'Guidance Notes for the Reduction of Obtrusive Light, 2020- GN01/20'.

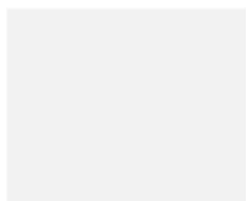
CAMBRIDGE SOUTH INFRASTRUCTURE ENHANCEMENTS

Technical Note – Biodiversity Net Gain Assessment updated TWAO boundary

Document Ref: 158454-ARC-ZZ-ZZZ-REP-ENV-000008 - Technical Note – Biodiversity Net Gain
Assessment updated TWAO boundary.

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Biodiversity

1.1 Introduction

Arcadis Consulting (UK) Limited ('Arcadis') was commissioned by Network Rail Infrastructure Limited ('the Client') to carry out a Biodiversity Net Gain (BNG) assessment for the Cambridge South Infrastructure Enhancements Project (the proposed Development).

1.2 Purpose of report

The purpose of this technical note is to demonstrate the steps taken by Arcadis and Network Rail to achieve maximum possible biodiversity net gain on the site.

1.3 Site description

The site is situated within the County of Cambridgeshire, within the administrative boundaries of Cambridge City Council, Trumpington Ward and South Cambridgeshire District Council. The proposed Development comprises the construction of a new railway station with four island passenger platforms, a two-storey station building with space for ticket vending machines, automatic ticket barriers, station forecourt, main footbridge and stairs. There would be step-free access with two lifts on each platform covered by canopies. In addition, there would be taxi and passenger drop-off facilities, cycle parking, pedestrian and cycle paths into the station. The station is proposed to be built out in phases, whilst maintaining a live operational railway. The proposed Development would also incorporate some improvements to Shepreth Branch Junction and a new connection between existing lines at Hills Road. Space for 1,000 cycles arranged on both sides of the railway is proposed and includes a variety of "Sheffield stands", two-tier racks and parking for non-standard cycles. The precise location of the cycle stands would be finalised during detailed design of the station.

1.4 Methodology

The full details of the assessment can be found within the Cambridge South Infrastructure Enhancements Environmental Statement Volume 3: Technical Appendix 8.10 – Biodiversity Net Gain Assessment (document number: 158454-ARC-00-ZZ-STA-EEN-000022)

All versions of the metric were calculated using the Defra Biodiversity Metric 2.0 (Ref 1).

Extended Phase 1 habitat surveys were undertaken during May 2019 and updated in October 2020 and July 2021 to determine the extent and types of habitats present on-site. The Phase 1 habitat types were then converted into the habitat types used in the UK Habitat (UKHab) Classification System. The Phase 1 survey data also informed the condition assessments, which were supported by the habitat condition assessment sheet provided for UKHab habitat types within the Technical Supplement. This data was then used to calculate the number of biodiversity units provided by each habitat currently within the site boundary by using the Defra Biodiversity Metric 2.0. The resulting value represents the baseline condition of the site in terms of biodiversity units.

The site was reassessed for the post-development conditions using the same method; however, the post-development habitats were informed by the Development as shown in the Indicative Landscape Plan (158454-LMS-ZZZ-DRG-LEP-000001 to LMS-ZZZ-DRG-LEP-000015). Additional risk factors for difficulty of creating or restoring a habitat and temporal risk are predefined within the Metric tool.

1.5 Previous Metric Submissions

Several versions of the metric calculation have been previously provided to Network Rail. These are presented in the initial version of the Biodiversity Net Gain Assessment Technical Note 'Technical Note - Biodiversity Net Gain Assessment' (Issued April 2021).

These included iterations of the design which involved large areas of Hobson's Park being used for spoil storage and sorting, as well as versions which excluded spoil storage from this location.

1.5.1 Version 5 - Metric with Exchange land

The most recent previous submission of the calculation (Version 5), presented in Image 1 below, assumed spoil would be stored off-site, and so this area retained as undisturbed habitat. It also considered a change in the site boundary to compensate for the loss of land from Hobson's Park for the new station. The new proposed area comprised neutral grassland, woodland planting and a pond.

Image 1. Change to Site Boundary (Blue - previous site boundary, Red - current site boundary)



This version resulted in a percentage decrease in habitat units on-site post-development, with a final habitat loss of -5.24%.

Image 2 BNG results for version 5

On-site post-intervention (Including habitat retention, creation, enhancement & succession)	Habitat units	231.48
	Hedgerow units	5.36
	River units	6.69
Off-site baseline	Habitat units	0.00
	Hedgerow units	0.00
	River units	0.00
Off-site post-intervention (Including habitat retention, creation, enhancement & succession)	Habitat units	0.00
	Hedgerow units	0.00
	River units	0.00
Total net unit change (including all on-site & off-site habitat retention/creation)	Habitat units	-12.80
	Hedgerow units	0.53
	River units	0.61
Total net % change (including all on-site & off-site habitat creation + retained habitats)	Habitat units	-5.24%
	Hedgerow units	10.91%
	River units	10.11%

1.6 Current Metric Submissions

The metric was recalculated following an update to the Phase 1 habitat survey for the baseline, and a change to the design for the proposals. Post-development habitats were calculated in two different scenarios. Version 6 included the spoil being stored on-site within Hobson's Park. Version 7 included this spoil being stored off-site beyond the site boundary and therefore excluded from the calculations.

For both calculations, the baseline habitats were updated from Version 5, based on the results of the updated Phase 1 habitat survey, and the red line boundary as established for Version 5.

1.6.1 Version 6 – spoil retained on-site

Updated Phase 1 habitat survey results were used to determine the baseline biodiversity units on-site. Landscape design plans were used to determine the post-development habitats.

This version of the metric assumed that the spoil would be stored on-site within Hobson's Park, an area of neutral grassland and woodland planting. 3.77 ha of this habitat would be reinstated following construction; however, the use of this area results in a large decrease in post-development on-site habitat units (-15.93%).

Hedgerow units on-site increased by 19.58%, largely due to the creation of several new biodiverse hedgerows. River units also increased by 10.11% as in Version 5, this is due to the proposed enhancement of a section of the river, described in more detail in Technical Note - Biodiversity Net Gain Assessment (April 2021).

Image 3 BNG result for version 6

On-site baseline	Habitat units	246.26
	Hedgerow units	11.07
	River units	6.07
On-site post-intervention (Including habitat retention, creation, enhancement & succession)	Habitat units	207.02
	Hedgerow units	13.24
	River units	6.69
Off-site baseline	Habitat units	0.00
	Hedgerow units	0.00
	River units	0.00
Off-site post-intervention (Including habitat retention, creation, enhancement & succession)	Habitat units	0.00
	Hedgerow units	0.00
	River units	0.00
Total net unit change (including all on-site & off-site habitat retention/creation)	Habitat units	-39.24
	Hedgerow units	2.17
	River units	0.61
Total net % change (Including all on-site & off-site habitat creation + retained habitats)	Habitat units	-15.93%
	Hedgerow units	19.58%
	River units	10.11%

1.6.2 Version 7 – spoil moved off-site

This version of the Metric was consistent with Version 6, except that it accounted for the storage of the spoil off-site. This resulted in the retention of 3.77 ha of neutral grassland within Hobson's Park. The percentage decrease in habitat units on-site post-development would be 7.57%, with a loss of 18.64 habitat units.

Image 4 BNG result for version 7

On-site baseline	Habitat units	246.26
	Hedgerow units	11.07
	River units	6.07
On-site post-intervention (Including habitat retention, creation, enhancement & succession)	Habitat units	227.62
	Hedgerow units	13.24
	River units	6.69
Off-site baseline	Habitat units	0.00
	Hedgerow units	0.00
	River units	0.00
Off-site post-intervention (Including habitat retention, creation, enhancement & succession)	Habitat units	0.00
	Hedgerow units	0.00
	River units	0.00
Total net unit change (including all on-site & off-site habitat retention/creation)	Habitat units	-18.64
	Hedgerow units	2.17
	River units	0.61
Total net % change (including all on-site & off-site habitat creation + retained habitats)	Habitat units	-7.57%
	Hedgerow units	19.58%
	River units	10.11%

1.7 Conclusion

Although, a net loss for area-based habitats has been calculated, the proposed Development has committed to achieving 10% net gain. The calculations will be reviewed again at detailed design stage and the assessment will be refined further. In order to secure 10%, a combination of the following options will be explored:

- The purchasing of additional land to provide space to build new habitat;
- Purchasing biodiversity units from 3rd party organisations; or
- Working with 3rd parties such as local authorities, trusts, etc. to deliver biodiversity units on their land.

References

Reference	Title
Ref 1	The Biodiversity Metric 2.0 (JP029) 2019. Available at http://publications.naturalengland.org.uk/publication/5850908674228224 Accessed 19.1.21

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No.	Subject	Proposed Wording	Agreed with GCSP
1	Time for commencement	The development hereby permitted must commence before the expiration of 5 years from the date on which the Order comes into force. Reason: To ensure that the development is commenced within a reasonable period of time.	Yes
2	Accordance with drawings	The development must be carried out in accordance with the planning drawings. Reason: To ensure compliance with the approved plans and for the avoidance of doubt.	Yes
3	Accordance with Design Principles	The development must be carried out in accordance with the Design Principles scheduled in approved Cambridge South Design Principles (Appendix A of the Design and Access Statement 158454-ARC-ZZ-ZZZ-REP-EAR-0000)	Yes
4	Changes	Where under any of these conditions the approval, agreement or consent of the local planning authority is required to any matter, that approval, agreement or consent must be given in writing. The development must be implemented in accordance with any such approval, agreement or consent, or any subsequent revisions that have been submitted to, and approved by, the local planning authority. Reason: To provide for certainty in the approvals and implementation processes.	
5	Phasing Plan	No development shall commence (including demolition) until a Phasing Plan for the development hereby permitted has been submitted to and approved in writing by the local planning authority. The Phasing Plan must include a proposed sequence for the proposed works including the following elements: (i) Enabling works e.g archaeology and site investigations (ii) Cambridge South station; (iii) Alterations to Webster's Footbridge; (iv) Accommodation bridge over Hobson's Brook; (v) Railway Systems Compound; (vi) Landscaping; and (vii) Any other building/structure or alteration to an existing building/structure for which details of scale and external appearance were not provided as part of the request for the planning direction. The phasing plan shall identify: a) any phases of development to which planning conditions 6, 7, 8, 10, 11, 12, [BNG condition number], 13, 26, 29 or [AMS & TPP condition number] will not apply, and in each of those conditions a 'Specified Phase' means any phase of the development for which the approved Phasing Plan specifies that the relevant condition will not apply. b) Indicative duration of works for each area including when areas of open space used temporarily for construction can be made available to the public. The development shall only be carried out in accordance with the approved details submitted . Reason: To clarify how the works are to be phased to assist with the determination of discharge of conditions	Yes
5	Submission of preliminary contamination assessment	Prior to the commencement of each phase of the development (other than a Specified Phase) a site investigation strategy for that phase setting out the location and details of the site investigations to be carried out to effectively determine the nature and extent of any contamination, including soil, gas and/or water to inform the remediation strategy shall be submitted to and approved in writing by the local planning authority. The site investigation strategy will be based on the information identified in the desk study undertaken to support Chapter 12 of the Environmental Statement (doc NR16). The site investigations shall be undertaken in accordance with the Site investigation strategy approved in writing by the relevant planning authority. Reason: To mitigate anticipated construction impacts arising from the development and to ensure that the development does not adversely affect human health or the environment during and following construction.	Yes
6	Submission of site investigation report and remediation strategy	Prior to undertaking any excavations with the exception of works agreed under conditions 6 (site investigations) and 11 (Archaeology) or phases identified under condition 5 the following shall be submitted to and approved in writing by the local planning authority: (a) A site investigation report detailing the findings of the site investigations carried out under Condition 6 to determine the nature and extent of any contamination, including the results of the soil, gas and/or water analysis and subsequent risk assessment to any receptors. (b) A proposed remediation strategy detailing the works required in order to address unacceptable risks from the identified contamination given the proposed end use of the site and surrounding environment including any controlled waters. The strategy shall include a schedule of the proposed remedial works setting out a timetable for all remedial measures that will be implemented The works shall be undertaken in accordance with the approved Remediation Strategy approved in writing by the relevant planning authority. Reason: To mitigate anticipated construction impacts arising from the development and to ensure that the development does not adversely affect humans or the environment during and following construction	Yes
6	Implementation and completion of remediation strategy works	Prior to the first occupation of land under any phase of the development (other than a Specified Phase) the following shall be submitted to and approved in writing by the local planning authority: (a) a completion report demonstrating that the approved remediation scheme as required by condition 7 has been undertaken and that the land has been remediated to a standard appropriate for the end use; and (b) details of any post-remedial sampling and analysis (as defined in the approved Material Management Plan submitted under the Code of Construction Practice Part B) shall be included in the completion report along with all information concerning materials brought onto, used in, and removed from the development. The information provided must demonstrate that the site has met the required clean-up criteria set out in the remediation strategy . Reason: To mitigate anticipated construction impacts arising from the development and to ensure that the development does not adversely affect humans or the environment during and following construction.	Yes

Comment / Next step

Ensures we can submit amendments to approved plans

7	Unexpected contamination	<p>If unexpected contamination is encountered whilst undertaking the development which has not previously been identified, works shall immediately cease in the contaminated area until the local planning authority has been notified and a remediation strategy including details of any further site investigations required to address unexpected contamination the has been approved following steps (a) and (b) of condition 7 above.</p> <p>The approved remediation shall then be fully implemented under condition 7.</p> <p>Reason: To mitigate anticipated construction impacts arising from the development and to ensure that the development does not adversely affect humans or the environment during and following construction.</p>	Yes
7	Code of Construction Practice	<p>(a) The development must be carried out in accordance with the provisions of the Code of Construction Practice (Part A) contained in the Environmental Statement (Volume 3: Appendix 2.4) unless amended through the CoCP Part B.</p> <p>(b) Other than in relation to a Specified Phase no development or phase thereof is to commence until a Code of Construction Practice (Part B) has been submitted to and approved by the local planning authority for that phase of work</p> <p>The Code of Construction Practice (Part B) shall include the following documents other than in relation to a Specified Phase:</p> <ol style="list-style-type: none">1) Flood Emergency Response Plan2) Emergency and Incident Response Plan3) Dust management Plan4) Construction Logistics Plan5) Construction Travel Plan6) Construction Traffic Management Plan7) Site Waste Management Plan8) Materials Management Plan (Includes storage of excavated material)9) Lighting Management Plan10) Pollution Control Plan11) Carbon Efficiency Plan12) Noise and Vibration Management Plan <p>Reason: To mitigate anticipated construction impacts arising from the development and to protect local and residential amenity.</p>	Yes
8	Archaeological mitigation, investigation and evaluation	<p>No development except for site investigations, works to trees or any Specified Phase shall commence until the implementation of a programme of archaeological investigations [for that phase] has been undertaken in accordance with a written scheme of investigation which has been submitted to and approved by the local planning authority. The approved scheme shall be implemented in full including any post development requirements, e.g. archiving and submission of final reports.</p> <p>Reason: To ensure that the archaeological investigation is initiated at an appropriate point in development procedure.</p>	Yes
8	Construction Ecological Method Statement (EMS)	<p>No development [or phase thereof] other than a Specified Phase shall commence until an Ecological Method Statement (EMS) [for that phase] addressing protection, enhancement, mitigation and compensation during construction has been submitted and approved in writing by the local planning authority. The EMS shall include the following:</p> <p>(a) Review of site potential and constraints, based on species surveys and operational limitations of the site.</p> <p>(b) Detailed design(s) and/or working method(s) to achieve stated objectives, including:</p> <ol style="list-style-type: none">i. Risk assessment of potentially damaging construction activities.ii. Identification of “biodiversity protection zones”.iii. Practical measures (both physical measures and sensitive working practices) to avoid or reduce impacts during construction (may be provided as a set of method statements).iv. The location and timings of sensitive works to avoid harm to biodiversity features.v. The times during construction when specialist ecologists need to be present on site to oversee works.vi. Responsible persons and lines of communication.vii. The role and responsibilities on site of an ecological clerk of works (ECoW) or similarly competent person.viii. Use of protective fences, exclusion barriers and warning signs if applicable (Excluding Trees). <p>(c) Extent and location/area of proposed works on appropriate scale maps and plans.</p> <p>(d) Details of monitoring and remedial measures, including timetable for submission to local planning authority.</p> <p>The strategy shall also set out (where the results from monitoring show that conservation aims and objectives of the EMS are not being met) contingencies and/or remedial action will be identified, agreed and implemented so that the development still delivers the fully functioning biodiversity objectives of the originally approved development. The EMS shall be implemented and maintained in accordance with the approved details.</p> <p>Reason: To ensure that the development does not adversely affect the natural wildlife and ecology of the area.</p>	Yes
9	Biodiversity Net gain	<p>No development or phase thereof (other than a Specified Phase) shall commence until a Biodiversity Net Gain (BNG) report, demonstrating BNG best practice and minimum 10% BNG (to include DEFRA metric V2 calculations and assumptions made) has been submitted to and approved in writing by the local planning authority.</p>	Yes
9	Surface water drainage Strategy - Construction	<p>No development (or phase thereof) except for site investigations, works to trees, demolition or works under any Specified Phase shall commence shall commence until details of measures indicating how additional surface water run-off from the site will be avoided during the construction works have been submitted to and approved in writing by the Local Planning Authority.</p> <p>The applicant may be required to provide collection, balancing and/or settlement systems for these flows. This should include the maintenance proposals during construction. The approved measures and systems shall be brought into operation before any works to create buildings or hard surfaces commence.</p> <p>The scheme shall subsequently be implemented in accordance with the approved details prior to the occupation of the respective phase of the development or in accordance with the implementation programme agreed in writing with the local planning authority.</p> <p>Reason: To ensure appropriate surface water drainage and to prevent the increased risk of flooding.</p>	No

NR to review

10	Surface water drainage Strategy operation	<p>No development (or phase thereof) except for site investigations, works to trees, demolition or works under any Specified Phase shall commence until a surface water drainage scheme (for that phase), based on sustainable drainage principles and principles within the Flood Risk Assessment, has been submitted to and approved in writing by the local planning authority. The scheme shall include where appropriate:</p> <p>(a) Full calculations detailing the existing surface water runoff rates for the QBAR, 3.3% Annual Exceedance Probability (AEP) (1 in 30) and 1% AEP (1 in 100) storm events. (b) Full results of the proposed drainage system modelling in the above-referenced storm events (as well as 1% AEP plus climate change) , inclusive of all collection, conveyance, storage, flow control and disposal elements and including an allowance for urban creep, together with an assessment of system performance. (c) Site Investigation and test results to confirm infiltration rates. (d) Details of overland flood flow routes in the event of system exceedance, with demonstration that such flows can be appropriately managed on site without increasing flood risk to occupants. (e) Details of the maintenance/adoption of the surface water drainage system.</p> <p>The scheme shall subsequently be implemented in accordance with the approved details prior to the occupation of the respective phase of the development or in accordance with the implementation programme agreed in writing with the local planning authority. Reason: To ensure appropriate surface water drainage and to prevent the increased risk of flooding.</p>	No	Split the Surface Water Drainage condition as think, modelling, site investigation and maintenance should be in the strategy. The physical structures, land form, pipe work etc would be in the Drainage Scheme
10	Surface water drainage scheme	<p>No development (or phase thereof) except for site investigations, works to trees, demolition or works under any Specified Phase shall commence until a surface water drainage scheme (for that phase), based on the surface water drainage strategy, has been submitted to and approved in writing by the local planning authority. The scheme shall include where appropriate:</p> <p>(a) Detailed drawings of the entire proposed surface water drainage system, including levels, gradients, dimensions and pipe reference numbers. (b) Details of the proposed attenuation and flow control measures. (c) Measures taken to prevent pollution of the receiving groundwater and/or surface water. (d) Full details of culvert extension appropriately sized to convey the existing channel modelled flow.</p> <p>The scheme shall subsequently be implemented in accordance with the approved details prior to the occupation of the respective phase of the development or in accordance with the implementation programme agreed in writing with the local planning authority. Reason: To ensure appropriate surface water drainage and to prevent the increased risk of flooding.</p>	No	see notes in 14.
11	Detailed design approval: Cambridge South station	<p>No development relating to the construction of Cambridge South station shall commence until full details of the scale, massing and external appearance, including details of floor plans, biodiverse roof, elevations, and long sections of the development has been submitted to, and approved by, the local planning authority. This must be in accordance with the parameter plans, and shall be submitted with a Design Compliance Statement demonstrating compliance with the relevant Cambridge South Design Principles (Appendix A of the Design and Access Statement 158454-ARC-ZZ-ZZZ-REP-EAR-00000). The submitted scale details must include plans at a minimum scale of 1:250, and elevations at a minimum scale of 1:100. Reason: To enable reasonable and proper control to be exercised over these aspects of the development</p>	Yes	
11	External Materials: Cambridge South Station	<p>No construction of any part of Cambridge South station that is intended to be externally visible on completion of the development shall commence until the following has been submitted to and approved in writing by the local planning authority. Development shall be carried out in accordance with the approved details.</p> <p>a) details of all the materials for the external surfaces of buildings to be used in the construction of the development b) a sample panel for relevant materials (including external brickwork) shall be submitted to and approved in writing by the local planning authority. The approved sample panel is to be retained on site for the duration of the works for comparative purposes, and works will take place only in accordance with approved details.</p> <p>Reason: To ensure that the external appearance of the development does not detract from the character and appearance of the area (Cambridge Local Plan 2018 policies 55 and 57).</p>	Yes	
12	Roof Top Plant: Cambridge South Station	<p>Any roof mounted plant/equipment shall not be installed until details of the plant/equipment have been submitted to and approved in writing by the local planning authority. The details shall include the type, dimensions, materials, location, and means of fixing. The development shall be carried out in accordance with the approved details. Reason: To ensure that the external appearance of the development does not detract from the character and appearance of the area (Cambridge Local Plan 2018 policies 55 and 57).</p>	Yes	
12	Public Art: Cambridge South Station	<p>No development relating to the construction of Cambridge South station shall commence until a Public Art Delivery Plan (PADP) has been submitted to and approved in writing by the local planning authority. The PADP must include the following:</p> <p>(a) Details of the public art and artist commission; (b) Details of how the public art will be delivered, including a timetable for delivery; (c) Details of the location of the proposed public art on the application site; (d) The proposed consultation to be undertaken; (e) Details of how the public art will be maintained; (f) How the public art would be decommissioned if not permanent; (g) How repairs would be carried out; and (h) How the public art would be replaced in the event that it is destroyed.</p> <p>The approved PADP shall be fully implemented in accordance with the approved details and timetabling. Once in place, the public art shall not be moved or removed otherwise than in accordance with the approved maintenance arrangements Reason: To provide public art as a means of enhancing the development (Cambridge Local Plan policies 55 and 56 and the Cambridge City Council Public Art SPD (2010).</p>	Yes	
13	Waste: Cambridge South Station	<p>No development relating to the construction of Cambridge South station shall commence until a scheme for the on-site storage facilities for commercial waste, including waste for recycling has been submitted to and approved in writing by the local planning authority. The approved scheme shall be carried out before the use is commenced and shall be retained as such. Reason: To ensure that the need for refuse and recycling is successfully integrated into the development.</p>	Yes	
13	Cycle Parking: Cambridge South Station	<p>Cambridge South station shall not be brought into use until cycle parking for station users has been installed and made operational in accordance with details that have been submitted to and approved in writing by the local planning authority. The number of cycle parking shall be agreed by the local highways authority. The details shall include the type of stands, location and means of enclosure, and shall include a cycle parking management plan. The cycle parking shall be provided and maintained in accordance with the approved details.</p> <p>Reason: To ensure appropriate provision for the secure storage of bicycles (Cambridge Local Plan 2018 Policy 82).</p>	Yes	

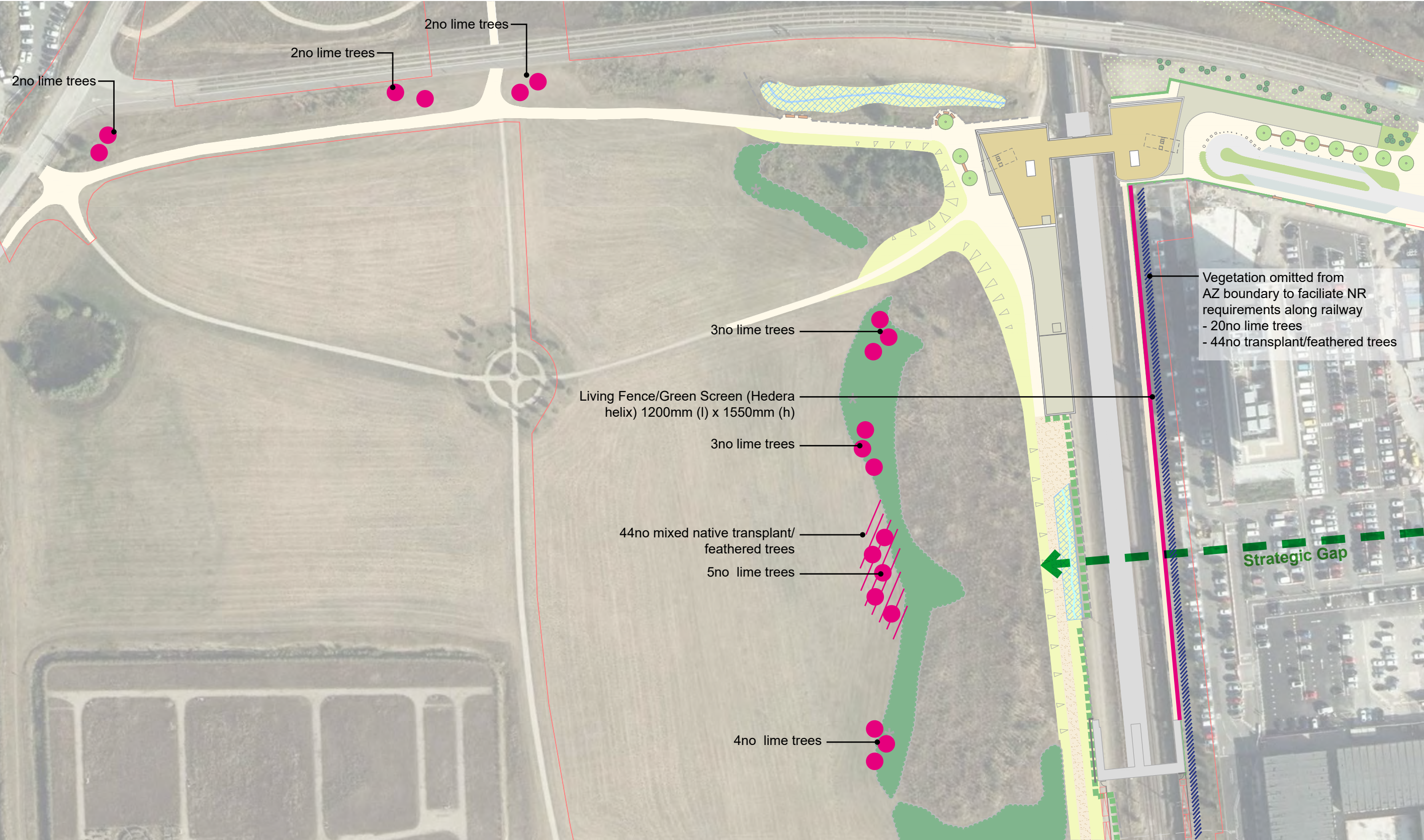
14	BREEAM Pre-Assessment: Station Building	No development relating to the station building shall commence until a BREEAM preassessment prepared by an accredited BREEAM Assessor has been submitted to, and approved by, the local planning authority indicating that the building is capable of achieving the applicable 'excellent' rating as a minimum, with maximum credits achieved for Wat 01. Reason: In the interests of reducing carbon dioxide emissions, ensuring efficient use of water and promoting principles of sustainable construction and efficient use of buildings (Cambridge Local Plan 2018 Policy 28 and the Greater Cambridge Sustainable Design and Construction SPD 2020).	Yes
14	BREEAM Design Stage Certification	Within 6 months of commencement of development or Specified Phase , a BRE issued Design Stage Certificate shall be submitted to and approved in writing by the local planning authority demonstrating that BREEAM 'excellent' as a minimum will be met, with maximum credits for Wat 01 (water consumption). Where the Design Stage certificate shows a shortfall in credits for BREEAM 'excellent', a statement shall also be submitted identifying how the shortfall will be addressed. If such a rating is replaced by a comparable national measure of sustainability for building design, the equivalent level of measure shall be applicable to the development. Reason: In the interests of reducing carbon dioxide emissions and promoting principles of sustainable construction and efficient use of buildings (Cambridge Local Plan 2018 Policy 28 and the Greater Cambridge Sustainable Design and Construction SPD 2020).	Yes
15	BREEAM Post Construction Certification	Within 6 months of occupation of Cambridge South station, a BRE issued post Construction Certificate shall be submitted to and approved in writing by the local planning authority, indicating that the approved BREEAM rating has been met. If such a rating is replaced by a comparable national measure of sustainability for building design, the equivalent level of measure shall be applicable to the proposed development. Reason: In the interests of reducing carbon dioxide emissions and promoting principles of sustainable construction and efficient use of buildings (Cambridge Local Plan 2018 Policy 28 and the Greater Cambridge Sustainable Design and Construction SPD 2020).	Yes
15	Detailed design approval: Other elements of the proposed development	No development relating to the following elements of the development shall commence (or phase thereof) until full details of the scale and external appearance of the development concerned has been submitted to, and approved by, the local planning authority. (a) Alterations to Webster's Footbridge. (b) Accommodation bridge over Hobson's Brook. (c) Railway Systems Compound Buildings and Structures . (d) Any other building/structure or alteration to an existing building/structure for which details of scale and external appearance were not provided as part of the request for the planning direction. Design details must be in accordance with the parameter plans. The submitted scale details must include plans at a minimum scale of 1:250, and elevations at a minimum scale of 1:100 and details of external appearance shall include samples of materials to be used externally. Reason: To enable reasonable and proper control to be exercised over these aspects of the development.	Yes
16	Lighting Scheme	No permanent artificial lighting shall be installed until a detailed artificial lighting scheme has been submitted to and approved in writing by the local planning authority. The lighting scheme shall meet the Obtrusive Light Limitations for Exterior Lighting Installations contained within the Institute of Lighting Professionals (ILP) 'Guidance Notes for the Reduction of Obtrusive Light - GN01/20 (2020)(or as superseded)'. Development shall be carried out only in accordance with the approved details. Reason: To protect the amenity of nearby residential properties (Cambridge Local Plan 2018 policy 34).	Yes
16	Soil Management Plan	No development except for works to trees or any Specified Phase shall commence until until a Soils Management Plan detailing protection of ground to be reinstated to open space, sustainable drainage or general landscape, methodology of soil stripping, storage, handling, haul routes, formation level decompaction measures, soil re-spreading and decompaction as well as soil/spoil disposal (if necessary). Development must be carried out in accordance with the approved details and in accordance with the recognised 'Construction Code of Practice for the Sustainable Use of Soils on Construction Sites' produced by DEFRA and Protecting and Enhancing Soils Policy Position Statement produced by Chartered Institute of Water and Environmental Management (CIWEM). Reason: To ensure that the details of the groundworks are acceptable (Cambridge Local Plan 2018; Policies 55, 57 and 59).	Yes
17	Hard and Soft Landscape	No development except for those phases identified under condition 5 shall commence until details of a hard and soft landscape scheme have been submitted to and approved in writing by the local planning authority. This scheme must be in accordance with Parameter Plan 158454-ARC-ZZ-ZZ-DRG-LEP-000101, and shall be submitted with a Design Compliance Statement demonstrating compliance with the relevant Cambridge South Design Principles (Appendix A of the Design and Access Statement 158454-ARC-ZZ-ZZZ-REP-EAR-00000) . Details of the scheme must include: (a) proposed finished levels or contours including proposed grading and mounding of land areas including sections through the areas to show the proposed make-up of the mounding, the levels and contours to be formed and showing the relationship of proposed mounding to existing vegetation and surrounding landform and (b) details of post formation soil decompaction. (c) car parking layouts, other vehicle and pedestrian access and circulation areas; hard surfacing materials; tree pits, including those in planters, hard paving and soft landscaped areas , minor artefacts and structures (e.g. Street furniture, location of artwork, refuse or other storage units, signs, lighting, CCTV installations and water features); proposed (underground elements need to be coordinated with the landscape plans prior to be being installed) and existing functional services above and below ground (e.g. drainage, power, communications cables, pipelines indicating lines, manholes, supports); (d) planting plans: written specifications (including cultivation and other operations associated with plant and grass establishment); schedules of plants, noting species, plant sizes and proposed numbers/densities where appropriate and an implementation programme; (e) boundary treatments indicating the type, positions, design, and materials of boundary treatments to be erected; and (f) a landscape maintenance and management plan for proposed landscaped areas and green biodiverse roof, including long term design objectives, management responsibilities and maintenance schedules/programme for all landscape areas. (g) if within a period of five years from the date of the planting, or replacement planting, any tree or plant (except through an act of god or vandalism) is removed, uprooted or destroyed or dies, another tree or plant of the same species and size as that originally planted shall be planted at the same place as soon as is reasonably practicable, unless the local planning authority gives its written consent to any variation; Reason: In the interests of visual amenity and to ensure that suitable hard and soft landscape is provided as part of the development (Cambridge Local Plan 2018; Policies 55, 57 and 59).	Yes
17	Plant/machinery/equipment (station building)	No operational plant, machinery or equipment both internal and external shall be installed until a noise assessment demonstrating that the collective rating level (in accordance with BS4142:2014) from all plant, equipment and vents etc associated with the development (or phase there of) is less than or equal to the existing background sound level at the receptors reported in Chapter 5 of the Environemntal Statement. Development shall be carried out and maintained only in accordance with the approved details. Reason: To protect the amenity of nearby properties (Cambridge Local Plan 2018 policy 35)	Yes

18	Platform Announcement Sound System	<p>No station and platform Public Address/Voice Alarm (PAVA) system shall be installed until a detailed design in accordance with BS 5839-8:2013 - Code of practice for the design, installation, commissioning and maintenance of voice alarm systems has been submitted to and approved in writing by the Local Planning Authority.</p> <p>The scheme shall include details regarding hours of operation, number and location of loudspeakers, proposed mitigation, sound power of loudspeakers and permissible noise levels with consideration of its use e.g announcement or alarm, noise mitigation / limiting measures as appropriate, noise levels assessed against the existing background sound level at the receptors reported in Chapter 5 of the Environemntal Statement and a programme of maintenance.</p> <p>Any public address/voice alarm sound system associated with the use of the approved development shall only be used for operational, health and safety, security and emergency announcements.</p> <p>The scheme shall be carried out as approved and retained a such.</p> <p>Reason: To protect the amenity of nearby properties (Cambridge Local Plan 2018 policy 35)</p>	Yes	Minor change suggested re. in accordance BS 5839-8:2013
18	Electric Vehicle Charge Points	<p>No electrical services shall be installed within Cambridge South Station until an electric vehicle charge point scheme has been submitted to and approved in writing by the Local Planning Authority. The scheme shall include Passive provision comprising the necessary infrastructure including ducting and capacity in the station network and ability to connect to the local electricity distribution network to facilitate and enable the future installation and activation of additional active electric vehicle charge points as required.</p> <p>The passive provision for the the electric vehicle charge points shall be designed to allow for future installed inaccordance with BS EN 61851 or as superseded. The electric vehicle charge point scheme as approved shall be fully installed prior to the first use of the station and maintained and retained thereafter.</p> <p>Reason: In the interests of encouraging more sustainable modes and forms of transport and to reduce the impact of development on local air quality, in accordance with Policy 36 - Air Quality, Odour and Dust of the Cambridge Local Plan (2018) and with Cambridge City Council's adopted Air Quality Action Plan (2018).</p>	No	network Rail can only commit to passive provision at this time. Further justiiification needs to be provided.
19	Excavated Material	<p>No excavated material or other material shall be placed within public open space, including Hobson's Park, other than in accordance with the approved landscaping details or the approved details for temporary storage contained within the approved soil managerment plan.</p> <p>Reason: In the interests of amenity and biodiversity (Cambridge Local Plan 2018; Policies 55, 57, 59, 69 and 70).</p>	Yes	
19	Arboricultural Method Statement (AMS) and Tree Protection Plan (TPP)	<p>No development (or phase thereof) other than a Specified Phase shall commence until a phased tree protection methodology in the form of an Arboricultural Method Statement (AMS) and Tree Protection Plan (TPP) in accordance with BS5837 2012 has been submitted to and approved in writing by the local planning authority.</p> <p>The AMS and TPP will consider the following:</p> <p>(i) all relevant phases of construction in relation to the potential impact on trees detail the proposed tree works</p> <p>(ii) the specification and position of protection barriers and ground protection and all measures to be taken for the protection of any trees from damage during the course of any relevant activity related to the development,</p> <p>(iii) mangement including supervision, access, site briefing attended by the site manager and retained arboricultural consultant, storage of materials, ground works, installation of services and landscaping.</p> <p>Reason: To satisfy the Local Planning Authority that trees to be retained will be protected from damage during any construction activity, including demolition, in order to preserve arboricultural amenity in accordance with section 197 of the Town and Country Planning Act 1990 and Cambridge Local Plan 2018 Policy 71: Trees.</p>	Yes	
20	Arboricultural Method Statement (AMS) and Tree Protection Plan (TPP) implementation	<p>The approved tree protection methodology in the AMS and TPP will be implemented throughout the development and the agreed means of protection shall be retained on site until all equipment, and surplus materials have been removed from the site. Nothing shall be stored or placed in any area protected in accordance with approved tree protection plans, and the ground levels within those areas shall not be altered nor shall any excavation be made without the prior written approval of the local planning authority. If any tree shown to be retained is damaged, remedial works as may be specified in writing by the local planning authority will be carried out.</p> <p>Reason: To satisfy the Local Planning Authority that trees to be retained will not be damaged during any construction activity, in order to preserve arboricultural amenity in accordance with section 197 of the Town and Country Planning Act 1990 and Cambridge Local Plan 2018 Policy 71: Trees</p>	Yes	
20	Construction Replacement tree planting	<p>If any tree shown to be retained in tree protection methodology in the AMS and TPP is removed, uprooted, destroyed or dies as a result of the CSIE project construction within five years of project completion, another tree shall be planted at the same place and that tree shall be of such size and species, and shall be planted at such time, as may be approved in writing by the local planning authority. Any replacement tree that is lost within five years shall likewise be replaced.</p> <p>Reason: To satisfy the Local Planning Authority that remaining arboricultural amenity will be preserved in accordance with section 197 of the Town and Country Planning Act 1990 and Cambridge Local Plan 2018 Policy 71: Trees.</p>	Yes	
21	Pedestrian link beneath Cambridge Guided Busway	<p>The new pedestrian link across the Cambridge Guided Busway between Hobson's Park and the Active Recreation Area shall be complete before the existing connection beneath the Cambridge Guided Busway is closed unless an alternative safe access across the Cambridge Guided Busway between Hobson's Park and the Active Recreation Area is provided in accordance with a scheme approved by the local planning authority in writing.</p>	Yes	

Cambridge South Station
Relocation Proposal for Astra Zeneca's western boundary trees

Potential locations for the replacement AZ trees within Hobson's Park were discussed in a meeting held on 15/11/2021 with Dinah Foley-Norman and Alistair Wilson from Cambridge City Council and Ben Hilder, Laura Jazwinski and Guy Stone from Arcadis. The drawing below arises from the discussion and follow-up email from Dinah Foley-Norman (dated 25/11/2021) which shows the agreed approach.

- Notes:
- 1. Tree pits will be designed at detailed design stage in conjunction with CCC. This will include measures to improve site conditions, soil and drainage.
 - 2. Trees to be planted at 18-20cm girth.
 - 3. Precise positions of trees to be agreed within these areas at detailed design stage with CCC.



Appendix D - Cambridge City Council Air Quality Action Plan (2018)

Cambridge City Council Air Quality Action Plan 2018 - 2023

In fulfilment of Part IV of the
Environment Act 1995
Local Air Quality Management

2018
Version 2, 2019 update



Local Authority Officer	Anita Lewis
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Report Reference number	AQAP 2018 - 2023
Date	January 2018

Log of changes	
V1.1	<ul style="list-style-type: none"> • Minor formatting changes – front page, figures 9, 10, 12, 13. • Inclusion of two consultee responses received after 1st March 2018, pages 87 and 91.
Date	April 2018
V2	<ul style="list-style-type: none"> • Executive Summary includes an update of changes in Version 2 • Update on Planning background, section 3.2 • Update on Local Transport Plan, section 3.2 • Update on Greater Cambridge Partnership, section 3.2 • New measures in Table 4.1 • Wording changes in measures in Table 4.1 • Report on full Public Consultation, summer of 2018, added to Appendix E
Date	March 2019

Executive Summary

This Action Plan sets out Cambridge City Council's priority actions for improving areas of poor air quality in the city and maintaining a good level of air quality in a growing city.

The plan responds to the evidence gathered from air quality monitoring across Cambridge and analysis of the sources of air pollution contributing to the problem.

Evidence and analysis show that the largest local source of air pollutants of concern is from motor vehicles and that in some city centre locations the annual average concentrations of Nitrogen Dioxide continue to exceed national objectives. The success and growth of Cambridge also continue to provide a challenge to reducing - pollutant levels.

Air quality needs to be tackled in different ways and therefore Cambridge City Council, the Greater Cambridge Partnership and Cambridgeshire County Council officers have worked together to identify the range of actions required and will also take responsibility for ensuring they are progressed.

The Identified actions fall in to three main categories;

- Reducing local traffic emissions as quickly as possible to meet national objectives;
- Maintaining pollutant levels below national objectives;
- Improving public health by reducing population exposure to air pollutants.

Tackling traffic emissions locally requires a move away from the internal combustion engine and in particular diesel powered vehicles. Using the evidence available, key transport sectors will be targeted with specific policies regulating, supporting and incentivising the shift. For example, Cambridge City Council is driving a shift towards a low emission electric and plug in -hybrid licenced taxi fleet using a combination of policy and funded infrastructure support. Greater Cambridge Partnership Initiatives are also underway to effect a change to bus emissions and to reduce the impact from commercial deliveries.

Maintaining or reducing pollutant levels and improving health in the face of significant population and employment growth requires evidence-based, medium and long term land use and transport planning actions; for example Cambridge City Council have worked with the Greater Cambridge partnership to produce a detailed feasibility study for implementing a Clean Air Zone for Cambridge.

The Action Plan details the most immediate and developed actions, outlines the actions in development and highlights those wider actions contributing to improved air quality. It sets out the known timescales, and reporting metrics for those actions. The document is required however to be flexible and evolve to respond to funding and policy changes and will be reviewed and updated annually.

There have been a few changes since AQAP v1 was prepared. The sections about the Local Transport Plan, the Greater Cambridge Partnership and the planning framework have been updated. Some additional measures for the introduction of EV charge points and car club provision have been included in AQAP v2. This version also includes two new measures from the Combined Authority of Cambridgeshire and Peterborough (CACP) – the Cambridge Area Metro (CAM) and the Strategic Bus Review. The first phases of the CAM may be in place during the lifetime of this plan; planning for both will be in progress. Another addition is the EV strategy, which has been initiated by Cambridge City Council; the strategy will provide an over-arching approach to increasing the availability of electric vehicle charging infrastructure in Cambridge and beyond.

Update on progress with the AQAP measures, including the new measures, will be incorporated into the Annual Status Report on air quality in Cambridge; **the most recent version is available on Cambridge City Council website¹.**

¹ <https://www.cambridge.gov.uk/air-pollution-levels-and-monitoring-them>

Responsibilities and Commitment

This AQAP was prepared by the Environmental Health Department of Cambridge City Council with the support and agreement of the following officers and departments:

Cambridge City Council

Joel Carré (Head of Environmental Services)

Yvonne O'Donnell (Environmental Health Manager)

Jo Dicks (Environmental Quality & Growth Manager)

Anita Lewis (Scientific Officer)

Stephen Kelly (Joint Director of Planning and Economic Development, with SCDC)

Julian Sykes (Planning Policy)

Sarah Dyer (City Development)

Cambridgeshire County Council

Jeremy Smith, (Head of Transport & Infrastructure Policy & Funding)

Iain Green (Public Health - for Liz Robin, Director of Public Health)

Sonia Hansen (Highways)

Greater Cambridge Partnership

Paul Rawlinson (and team)

South Cambridgeshire District Council (SCDC) – ex officio

Paul Quigley (Head of Environment Commissioning)

Soraya Hashemi (Scientific Officer)

The outline of this Air Quality Action Plan has been approved by Cambridge City Council Environment Scrutiny Committee (March 2015)² and the final Air Quality Action Plan was unanimously adopted at Cambridge City Council Environment Scrutiny Committee in March 2018³.

The Air Quality Action Plan will be subject to an annual review, appraisal of progress and reporting to the Environment Scrutiny Committee (Cambridge City Council).

The Plan will also be reported to the Health Committee for information (Cambridgeshire County Council) and the Cambridge Area Joint Committee for discussion (Cambridge City Council and Cambridgeshire County Council). Progress

² <https://democracy.cambridge.gov.uk/ieListDocuments.aspx?CId=177&MId=2570&Ver=4>

³ <https://democracy.cambridge.gov.uk/mgCommitteeDetails.aspx?ID=177>

each year will be reported in the Annual Status Reports (ASRs) produced by Cambridge City Council, as part of our statutory Local Air Quality Management duties.

The Air Quality Action Plan is a live document. Measures will be added and developed throughout the lifetime of this Plan.

If you have any comments on this AQAP please send them to:

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1. Introduction

Background

As Cambridge grows, one of Cambridge City Council's overriding priorities is to ensure that it continues to be an economic success story, and an attractive place to live, work in and visit. This economic success has brought challenges - including more traffic on our roads, increased congestion, and at times poorer air quality. That's why we are committed to developing our second Air Quality Action Plan – focusing on 7 sets of measures that we will take, with Cambridgeshire County Council and the Greater Cambridge Partnership, to ensure that Cambridge continues to thrive in the future. The Air Quality Action Plan fits with the Cambridge City Council Visions to make Cambridge a great place to live, learn and work, and to care for the planet.

Air pollution affects everyone throughout their lifetime. Long term exposure to air pollution is a real health burden. In particular, it affects the most vulnerable in society: children and older people, and those with heart and lung conditions. Air pollution is recognised as a contributing factor in the onset of heart disease and cancer. There is also often a strong correlation with equalities issues, because areas with poor air quality are also often the less affluent areas^{4,5}.

The annual health cost to society of the impacts of very small particles in the air (particulate matter) alone in the UK is estimated to be around £16 billion⁶. Cambridge City Council is committed to reducing the exposure of people in Cambridge to poor air quality in order to improve health. Public Health data attributed 47 premature deaths in Cambridge to air pollution in 2010⁷. These figures do not include the adverse health impacts of nitrogen dioxide, nor do they include the effect of air pollution on morbidity, the level of illness.

⁴ Environmental equity, air quality, socioeconomic status and respiratory health, 2010

⁵ Air quality and social deprivation in the UK: an environmental inequalities analysis, 2006

⁶ Defra. Abatement Cost Guidance for Valuing Changes in Air Quality, May 2013.

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/197898/pb13912-airquality-abatement-cost-guide.pdf

⁷ These are the latest data available.

About this report

This report outlines the actions that Cambridge City Council, Cambridgeshire County Council and the Greater Cambridge Partnership will undertake between 2018 and 2023 in order to reduce concentrations of air pollutants and minimise exposure to air pollution; thereby positively impacting on the health and quality of life of residents and visitors to Cambridge.

This action plan replaces the previous action plan which ran from 2008. A key objective of the previous plan was to lower emissions from buses and taxis by requiring newer vehicles with higher Euro emission standards. A range of supporting measures including planning policies, infrastructure changes, reductions in building emissions as well as increasing cycling and walking facilities were incorporated into the previous plan. These measures remain important supporting measures to improve air quality in Cambridge so have been carried forward and refreshed in this Plan.

Whilst the plan was successful in its implementation - the bus and taxi fleet have been upgraded to newer vehicles - the anticipated improvement in air quality has not been observed; real-time emissions monitoring in Cambridge showed that emissions in the city centre are higher than those that were expected, and that improvements with increasing Euro standards are not always seen. Projects delivered through the past action plan are listed in Appendix A.

This Action Plan has been developed in recognition of the legal requirement on the local authority to work towards Air Quality Strategy (AQS) objectives under Part IV of the Environment Act 1995 and relevant regulations made under that part and to meet the requirements of the Local Air Quality Management (LAQM) statutory process. It has been developed by officers from both the city and county councils. Progress on the measures in this plan will be reviewed annually and reported within Cambridge City Council's air quality Annual Status Report to Defra. The plan is designed to be responsive and flexible, so measures will be developed, removed or added in throughout its lifetime, as required.

The key objective of this plan is to encourage, enable and require, where appropriate, the shift from internal combustion engine vehicles to low emission petrol hybrid and ultra low emission electric vehicle. Our priorities are to tackle emissions

from transport through a range of hard and soft measures. The 7 main areas for action (the sets of measures) are:

1. Reduce emissions from Taxis by requiring low emission taxis
2. Reduce emissions from Buses and Coaches
3. Reduce emissions from HGVs
4. Reduce emissions from all traffic/other traffic by providing better public transport
5. Maintaining Low Emissions through the planning process and long-term planning
6. Improving Public Health
7. Leading By Example

Work on these elements of the plan is already in progress. Details on these key priorities and measures for delivering them are provided in Section 3.5; a full list of measures is in Chapter 4. These will include, for example,

- provision of electric vehicle charge points (slow, fast and rapid) to enable the transition to low emission taxis and other vehicles,
- licensing policies,
- parking policies,
- development control policies to require provision of EV charge points and low emission boilers,
- improving provision of lower emission travel alternatives, such as low emission buses
- a Clean Air Zone

However, reducing emissions is only the first strand of the Air Quality Action Plan.

The second strand is to ensure that emissions remain at levels below the National Air Quality Objectives; the third is to improve public health by reducing air pollution levels and keeping them as low as possible. We will deliver these objectives by effective planning controls and ensuring that policies are in place to keep emissions low.

In this AQAP we outline how we plan to effectively tackle those air quality issues that are within our control. However, we recognise that there are a large number of air quality policy areas that are outside of our influence (such as vehicle emissions standards agreed in Europe), so Cambridge City Council officers will continue to work with regional and central government on policies.

2 Summary of Current Air Quality in Cambridge

The centre of Cambridge was designated as an Air Quality Management Area (AQMA) in 2004 because the level of nitrogen dioxide (NO₂) was, and remains, above the National Air Quality Objectives (NAQO). Air quality has been improving, slowly, in most parts of Cambridge in recent years, but there are parts of the city, including the busy central streets, where levels of nitrogen dioxide continue to be higher than the legal limits.

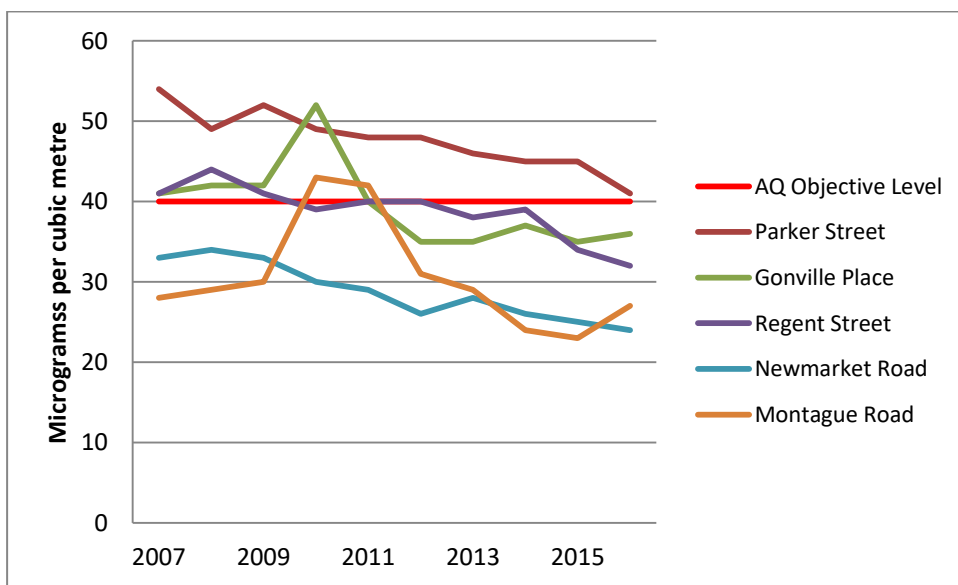


Figure One Trends in Annual Mean Nitrogen Dioxide Concentrations measures at Automatic Sites

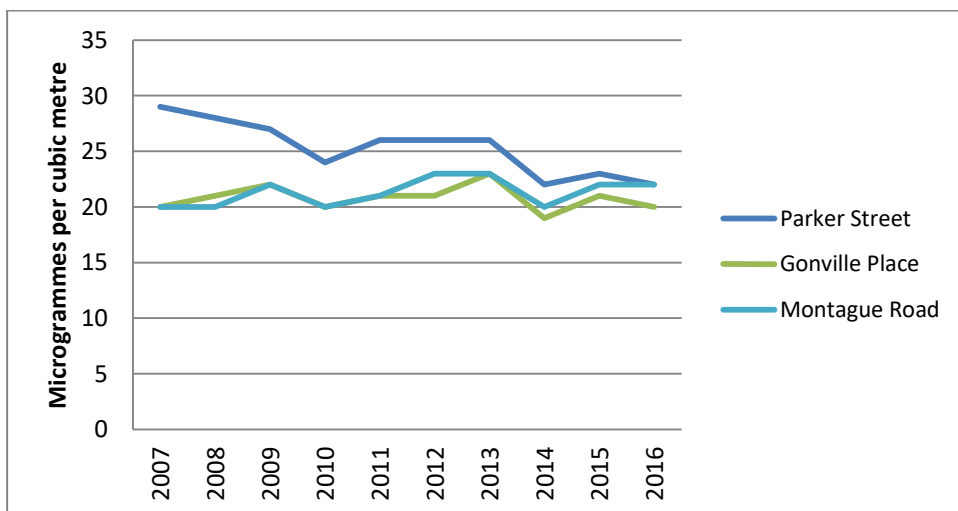


Figure Two Trends in Annual Mean PM₁₀ Concentrations

The main source of nitrogen dioxide in Cambridge is from vehicle emissions, so the Air Quality Action Plan will focus primarily on ways to reduce these emissions, as well as reducing other sources of air pollution. There are also legal limits for small particles, known as PM_{10} ⁸. The levels of PM_{10} in Cambridge are well below the legal limits (annual mean 40 micrograms per cubic metre), so this Plan focusses on reducing levels of nitrogen dioxide. (There are no UK legal limits for $PM_{2.5}$ ⁹ in England and Wales; the EU limit is 25 microgrammes per cubic metre annual mean and the objective is 12 microgrammes per cubic metre in Scotland.)

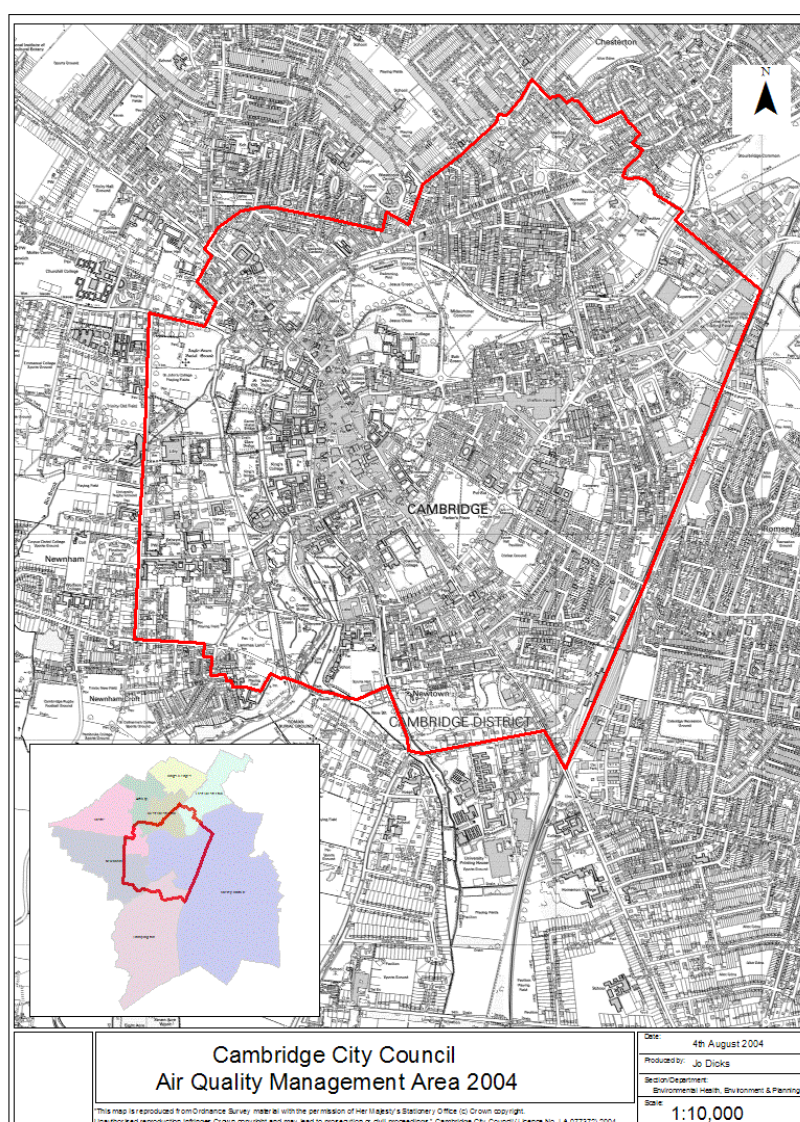


Figure Three Cambridge Air Quality Management Area¹⁰

⁸ PM_{10} denotes particulate matter of diameter less than or equal to 10 micrometers (microns)

⁹ $PM_{2.5}$ denotes particulate matter of diameter less than or equal to 2.5 micrometers (microns)

¹⁰ A high resolution map is available here: <https://www.cambridge.gov.uk/air-pollution-in-cambridge>

Air Quality in 2016

Air quality in Cambridge is measured at 5 locations with continuous analysers providing highly accurate data on levels of nitrogen dioxide (5 sites), PM10 (3 sites) and PM2.5 (2 sites). Diffusion tubes measure levels of nitrogen dioxide at 63 locations in Cambridge. Full details of the monitoring programme are set out in the Annual Status Report to Defra¹¹.

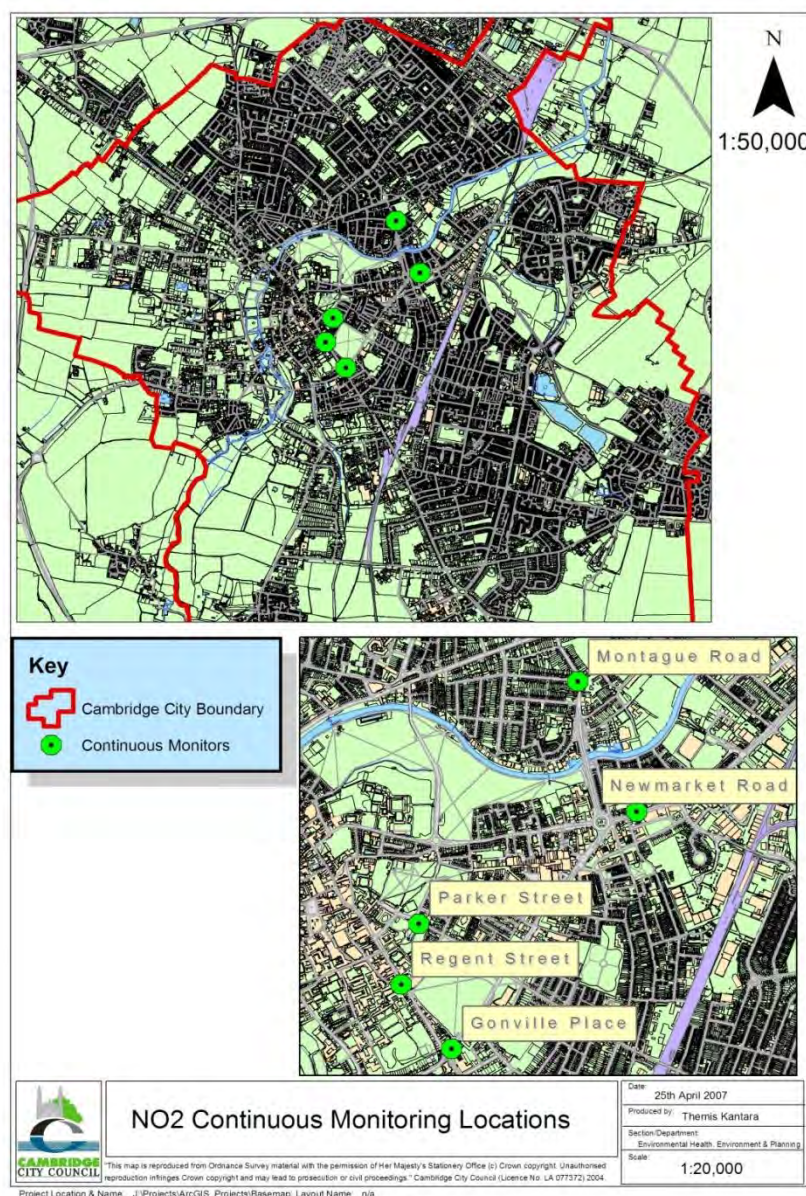


Figure Four Locations of monitors in Cambridge¹²

¹¹ https://www.cambridge.gov.uk/sites/default/files/2017_asr_final.pdf

¹² A higher resolution map is available here: <https://www.cambridge.gov.uk/monitoring-air-pollution>

The trends noted from the recorded levels of air pollution in 2016 were more variable than usual, with improvements in some areas and deterioration in others. Overall, the sites away from busy roads recorded slightly higher levels of nitrogen dioxide than in 2015 and the sites by busy roads recorded slightly lower levels than in 2015. Trends around the bus station and the railway station are mixed, and levels of air pollution in the south of Cambridge has recorded a small increase. Levels of PM₁₀, and PM_{2.5} continue to demonstrate a variable trend, with very slowly decreasing levels overall.

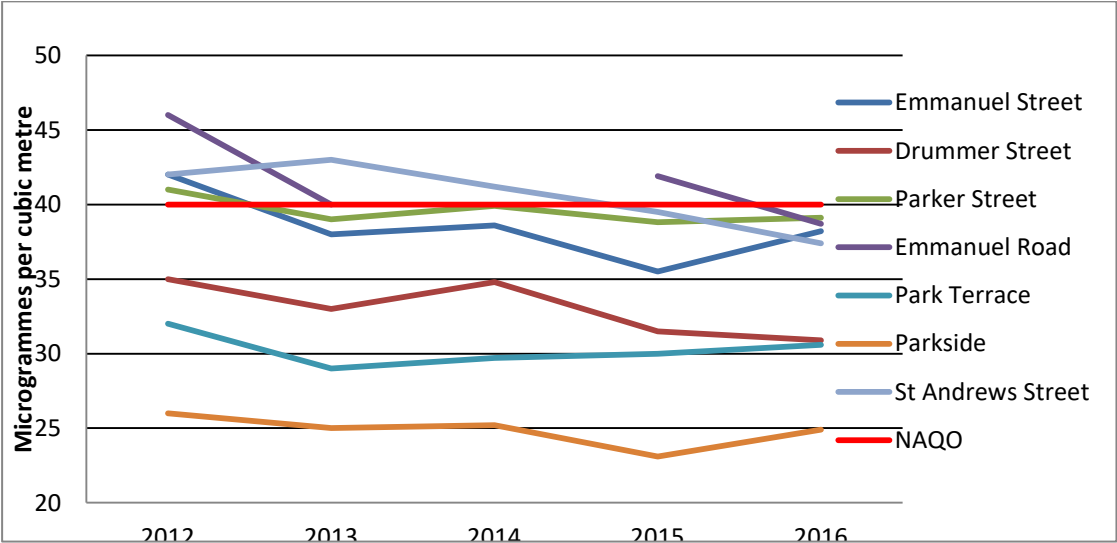


Figure Five Trend in averaged mean annual NO₂ for Bus Station area

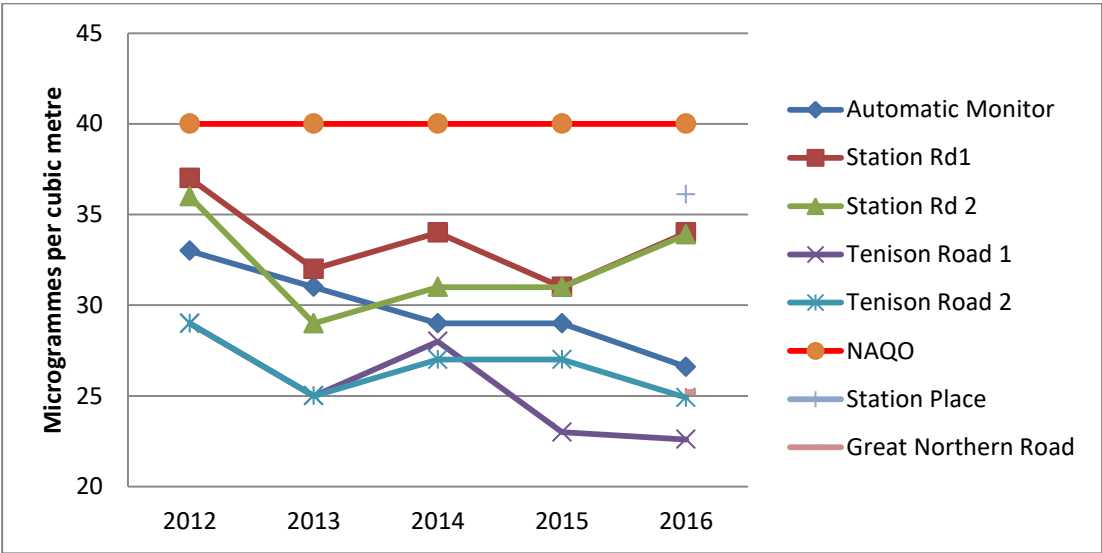


Figure Six Trend in averaged mean annual NO₂ for CB1¹³

¹³ The diffusion tube at Great Northern was in place before the road became the principal route into the Station. The measurements are now higher than the measurement recorded her for 2016. Data for 2017 is not yet available. It will be reported in the Annual Status Report in June 2018.

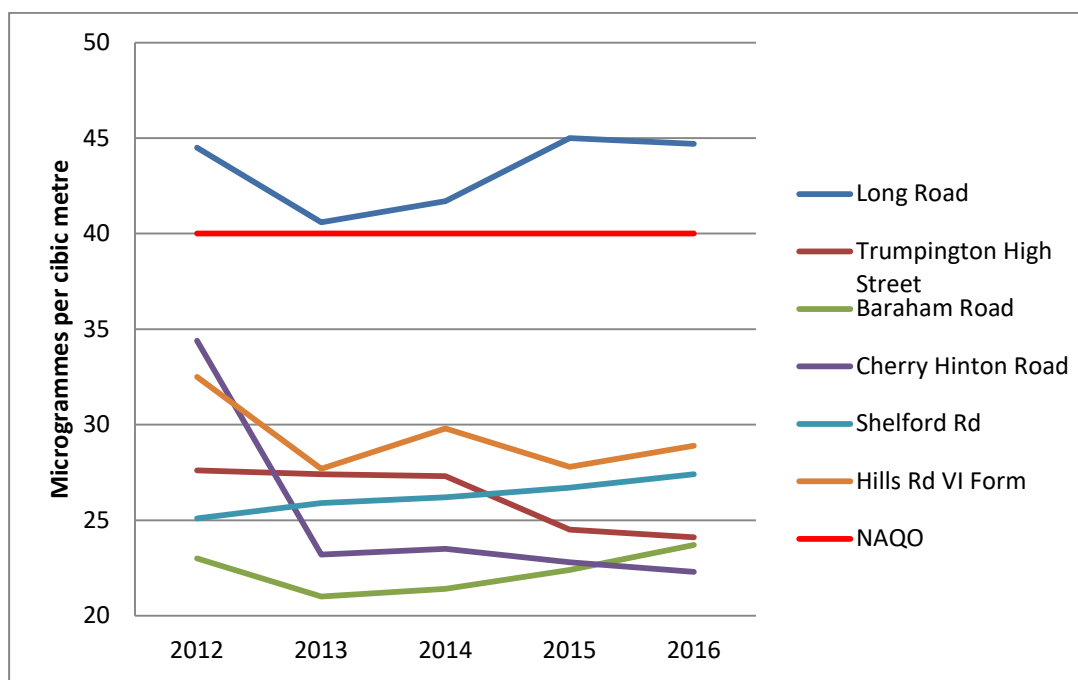


Figure Seven Trends in averaged mean annual NO₂ in South Cambridge

Whilst levels of air quality in Cambridge have been improving slowly overall, there is a real possibility that this will not continue and may even deteriorate unless measures are put in place to deliver further air quality improvements. Cambridgeshire has one of the fastest growing economies and populations in Britain, with 44,000 new jobs, 33,500 new homes and a 22% increase in population predicted between 2010 and 2031. In the past, much of the growth around Cambridge has been directed to the South Cambridgeshire villages beyond the Green Belt, resulting in a growth of commuting by car to Cambridge (50% of the Cambridge workforce commute into the city), as well as increasing congestion and pollution. While the new urban extensions to the edge of Cambridge have sought to redress the balance between homes and jobs, future increases in population of Cambridgeshire are predicted to continue in new communities outside of the city of Cambridge, including Northstowe (up to 10,000 dwellings) and Waterbeach (up to 12,000 dwellings) with associated, business, retail, community, leisure and sports uses; hotels; new primary and secondary school). These new communities will be delivered in parallel with improvement to public transport infrastructure as part of the range of proposals being developed by the Greater Cambridge Partnership (GCP) in order to promote more sustainable modes of transport and reduce the impact of private modes of transport.

These increases in economic and population will result in an increased demand for travel to, from and within the city. Therefore, a range of measures are required to ensure that air quality can continue to be delivered alongside the growth of Cambridgeshire. The keys to ensuring that levels of air pollution below the National Air Quality Objectives are achieved and maintained are to have the necessary transport infrastructure in place to enable sufficient uptake of lower emission transport modes, together with relevant supporting policies and strategies so that these will be maintained in the future. The GCP ambition of 10 - 15% less traffic within Cambridge may require further restrictions on access to the city centre, which could include restrictions based on emissions to reduce air pollution.

Funding and powers have been agreed for the Greater Cambridge Partnership, (GCP)¹⁴ from central government, to help address these issues. The implementation of GCP projects for public transport, active travel infrastructure improvements, integrated public transport provision, including rail and low emission bus, will be essential to protect the city from the adverse impacts of travel demand from these new communities.

The Annual Status Report to Defra will provide the latest information on the air quality in Cambridge; the most recent version is available on Cambridge City Council website¹⁵.

¹⁴ <https://www.greatercambridge.org.uk/>

¹⁵ <https://www.cambridge.gov.uk/air-pollution-levels-and-monitoring-them>

3 Cambridge City Council's Air Quality Priorities

In this chapter Cambridge City Council sets out its air quality priorities and drivers for action to improve air quality. These are set in the local public health and planning policy context in the Greater Cambridge¹⁶ area. This includes the technical supporting evidence with source apportionment of the main sources of air pollution, as well as the necessary reductions required to meet the air quality objectives.

The priorities for Cambridge City Council are to reduce emissions to below the National Air Quality Objectives, the second is to ensure that emissions remain at levels below the National Air Quality Objectives, and the third is to improve public health by continuously acting to reduce air pollution levels.

3.1 Public Health Context

Public health is a key driver for making improvements in air quality. Long term exposure to air pollution is a real health burden and it affects everyone. Air pollution causes diseases of the heart and lungs, contributes to poor public health and shortens life. Diesel engine exhaust, outdoor air pollution and particulate matter have all been classified by the World Health Organisation (WHO) as carcinogenic to humans^{17 18}. Air pollution affects our daily quality of life as it aggravates lung conditions such as Chronic Obstructive Pulmonary disease (COPD) and asthma. Additionally, air pollution can reduce lung development in children, which may increase symptoms in children who develop such conditions as asthma. There is also evidence that outdoor air pollution causes lung cancer¹⁹.

Children and older people are particularly affected. **Air pollution is harmful for human health at all concentrations, including below the legal limits**, so it is

¹⁶ The Greater Cambridge City region includes the districts of Cambridge City Council and South Cambridgeshire District Council.

¹⁷ IARC: Diesel engine exhaust carcinogenic, WHO International Agency for Research on Cancer, Press release No 213, June 12, 2012.

http://www.iarc.fr/en/media-centre/pr/2012/pdfs/pr213_E.pdf

¹⁸ IARC: Outdoor air pollution a leading environmental cause of cancer deaths, WHO International Agency for Research on Cancer, Press release No 221, October 17, 2013.

http://www.iarc.fr/en/media-centre/iarcnews/pdf/pr221_E.pdf

¹⁹ Defra and Public Health England (2017) Air Quality: A Briefing for Directors of Public Health <https://www.local.gov.uk/air-quality-briefing-directors-public-health>

important to do what we can to continue to improve air quality. This section sets out the public health context – the legal and policy framework, as well as the implications for health.

The Public Health Outcomes Framework indicator (3.01)²⁰ for air pollution is about raising awareness of the effect of air pollution on public health. It is intended to encourage promotion of the need for local, regional and national actions to reduce air pollution and to help form a partnership between all delivery partners in pursuit of this goal. The Public Health Outcomes Framework concentrates on two high-level outcomes to be achieved across the public health system - how long people live and how well they live at all stages of life.

Public Health data attributed 257 premature deaths in Cambridgeshire in 2010²¹ to Particulate Air Pollution. Over 5% of Cambridgeshire's population mortality is attributed to air pollution (based on ambient levels of PM_{2.5}). The percentage in Cambridge is 5.8% which equates to 47 premature deaths attributable to PM_{2.5} air pollution in 2010. These figures do not include the effect of air pollution on morbidity, the prevalence of illness.

Air quality is a 2018/19 priority for Cambridgeshire County Council Health Committee and an information sharing/awareness raising event is under discussion for 2018.

The Local Air Quality Management Policy and Technical Guidance²² on public health refers only to reducing emissions and/or concentrations of PM_{2.5}. There is clear evidence that PM_{2.5} has a significant impact on human health, including premature mortality, allergic reactions, and cardiovascular diseases. However, the public health impact of air pollution is wider than PM_{2.5}; the health impacts of nitrogen dioxide are also significant and therefore included in this discussion.

The published Public Health data does not include the effect of nitrogen dioxide. Recent evidence demonstrates that there are negative health impacts from nitrogen

²⁰ <https://fingertips.phe.org.uk/profile/public-health-outcomes-framework/data#page/3/gid/1000043/pat/6/par/E12000004/ati/102/are/E06000015>

²¹ This is the latest data available.

²² <https://laqm.defra.gov.uk/supporting-guidance.html>

dioxide at all levels, not just those above the National Air Quality Objectives. Studies²³ suggest that there is a 5 – 5.5% increase in mortality for each additional 10 micrograms per cubic metre exposure to nitrogen dioxide. The 2015 Committee on the Medical Effects of Air Pollution (COMEAP) working group on nitrogen dioxide noted²⁴ that it is possible that nitrogen dioxide acts as a marker of the effects of other traffic-related pollutants; it is unclear if nitrogen dioxide itself is the cause. However, COMEAP do state that any measures to reduce traffic-related pollutants will reduce mortality by 5 - 5.5% for each 10 micrograms per cubic metre.

The Air Quality Plan Technical Report published by Defra²⁵ notes that morbidity impacts have not been assessed, nor have other impacts such as damage to neurodevelopment, cognitive function and cardiovascular disease. The implication is that the health impact from air pollution has not yet been fully evaluated.

²³ For example, Hoek et al, 2013; WHO, 2013; Faustini et al, 2014 and references in these studies

²⁴ <https://www.gov.uk/government/publications/nitrogen-dioxide-interim-view-on-long-term-average-concentrations-and-mortality>

²⁵ [AQAP Technical Report](#)

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/632916/air-quality-plan-technical-report.pdf

3.2 Planning and Policy Context

This section has been updated from AQAP v1 to reflect national and local changes in development management.

Local planning and policy has several layers of strategy and policy so this section sets out a summary of the Cambridge/Cambridgeshire planning framework and comments on where there is an opportunity to improve air quality. The framework has changed since the previous Air Quality Action Plan.

The National Framework

The National Planning Policy Framework (NPPF) was updated in 2018 and minor changes were made in 2019²⁶. It sets out the Government's planning policies for England and how these should be applied and provides a framework within which locally-prepared plans for housing and other development can be produced. The NPPF states that the purpose of the planning system is to contribute to the achievement of sustainable development, with three overarching objectives – economic, social and environmental.

The updated NPPF has a stronger emphasis on environmental improvements that can be secured through the development control process.

Section 15, Conserving and Enhancing the Natural Environment, is the most directly related to the Air Quality Action Plan measures. It states that planning policies and decisions should **contribute to and enhance the natural and local environment** by preventing new and existing development from contributing to, being put at an unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. **Development should, wherever possible, help to improve local environmental conditions such as air and water quality.**

²⁶ <https://www.gov.uk/government/publications/national-planning-policy-framework--2>

Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development.

Planning policies and decisions should sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and Clean Air Zones, and the cumulative impacts from individual sites in local areas.

Opportunities to improve air quality or mitigate impacts should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement. So far as possible these opportunities should be considered at the plan-making stage, to ensure a strategic approach and limit the need for issues to be reconsidered when determining individual applications. Planning decisions should ensure that any new development in Air Quality Management Areas and Clean Air Zones is consistent with the local Air Quality Action Plan.

Section 9, Promoting Sustainable Transport, is also very relevant. For example, the NPPF states that issues should be considered from the earliest stages of plan-making and development proposals, so that opportunities to promote walking, cycling and public transport use are identified and pursued, the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account - including appropriate opportunities for avoiding and mitigating any adverse effects.

Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions, and improve air quality and public health.

Planning policies should provide for high quality walking and cycling networks and supporting facilities such as cycle parking (drawing on Local Cycling and Walking Infrastructure Plans).

If setting local parking standards for residential and non-residential development, policies should take into account the need to ensure an adequate provision of spaces for charging plug-in and other ultra-low emission vehicles. Applications for development should be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations.

Applications for development should give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;

Section 8, Promoting Healthy and Safe Communities, states that planning policies and decisions should aim to achieve healthy, inclusive and safe places where the street layouts that allow for easy pedestrian and cycle connections within and between neighbourhoods, enable and support healthy lifestyles. Increasing Active Travel has been identified as a measure with a significant public health impact.

The NPPF objective to support a prosperous rural economy may not seem to be immediately relevant but measures to ensure the “retention and development of accessible local services and community facilities, such as local shops, meeting places, sports venues, open space, cultural buildings, public houses and places of worship” will reduce the need to travel to Cambridge for these facilities. The introduction of measures to ensure that new developments are sensitive to their surroundings, do not have an unacceptable impact on local roads and exploit any opportunities to make a location more sustainable (for example by improving the scope for access on foot, by cycling or by public transport) will be helpful.

The Local Framework

There have been significant changes in the organisation of local government in the region recently, which will impact upon planning policy at the regional and local level. These changes are outlined here.

Local Plan Policies

The Local Plans for Cambridge and South Cambridgeshire make provision for 33,000 new homes and 44,000 additional jobs in the period to 2031. They were prepared for joint examination by the Planning Inspector in 2014; the plans were approved by the Inspector in 2018 and adopted by the respective councils in the autumn of 2018.

Policy 36 of the Cambridge Local Plan includes the policy that any development will not interfere with the implementation of the current Air Quality Action Plan (AQAP).

Policy 36: Air quality, odour and dust

Development will be permitted where it can be demonstrated:

- a. that it does not lead to significant adverse effects on health, the environment or amenity from polluting or malodorous emissions, or dust or smoke emissions to air; or
- b. where a development is a sensitive end-use, that there will not be any significant adverse effects on health, the environment or amenity arising from existing poor air quality, sources of odour or other emissions to air.

According to the end-use and nature of the area and application, applicants must demonstrate that:

- c. there is no adverse effect on air quality in an air quality management area (AQMA);
- d. pollution levels within the AQMA will not have a significant adverse effect on the proposed use/users;
- e. the development will not lead to the declaration of a new AQMA;
- f. the development will not interfere with the implementation of the current Air Quality Action Plan (AQAP);
- g. any sources of emissions to air, odours and fugitive dusts generated by the development are adequately mitigated so as not to lead to loss of amenity for existing and future occupants and land uses; and
- h. any impacts on the proposed use from existing poor air quality, odour and emissions are appropriately monitored and mitigated by the developer.

The full version of Policy 36 in in Appendix G.

Other policies in the Local Plan will also assist with the delivery of the Air Quality Action Plan, including:

Policy 5: Strategic transport infrastructure

Policy 80: Supporting sustainable access to development

Policy 81: Mitigating the transport impact of development

Policy 82: Parking Management.

The planning services of Cambridge City and South Cambridge district councils are being merged into a joint planning service. Work is due to commence on a joint Local Plan for the Greater Cambridge area in 2019, which will include consideration of future housing and jobs growth for the new area. The development strategy for the area is based on a sequential approach for the location and distribution of new development, which can be described as:

1. Within the existing urban area of Cambridge
2. Within the defined fringe sites on the edge of Cambridge
3. Within the six small-scale Green Belt sites proposed to be released from the inner Green Belt boundary
4. Within existing and newly identified new settlement locations at Cambourne, Northstowe, Bourn Airfield and Waterbeach; and
5. In identified villages in South Cambridgeshire

Local Transport Plans

At the Cambridgeshire and Peterborough Combined Authority Board meeting on 28th June 2017, it was agreed to adopt the previous separate Local Transport Plans of Cambridgeshire County Council and Peterborough City Council as a single Local Transport Plan as an interim measure, while a new CPCA LTP is prepared.

The new Local Transport Plan is expected to be adopted in November 2019. It will include high-level strategies to deliver policies and measures that can reduce emissions of air pollutants by encouraging and promoting the uptake of low emission fuels and technologies, as well as continuing with policies and measures to promote and encourage uptake of sustainable transport options.

The new Local Transport Plan will be supported by area strategies, such as the Transport Strategy for Cambridge and South Cambridgeshire²⁷, and mode-based strategies, such as Cycling and Walking strategies. Delivery plans will be developed to set out how programmes of schemes will be delivered and how Local Plans will be facilitated. The Greater Cambridge Partnership (GCP) will be involved with any forthcoming strategies for Cambridge City and South Cambridgeshire.

Greater Cambridge Partnership

The Greater Cambridge Partnership (GCP) is the local delivery body for a City Deal with central Government, bringing powers and investment, worth up to £1 billion over 15 years, to vital improvements in infrastructure, supporting and accelerating the creation of 44,000 new jobs, 33,500 new homes and 420 additional apprenticeships. The GCP brings key partners together to work with communities, businesses and industry leaders to support the continued growth of one of the world's leading tourism and business destinations. The partners are Cambridge City Council, Cambridgeshire County Council, South Cambridgeshire District Council and the University of Cambridge.

The Greater Cambridge Partnership vision is to make it easier to travel into, out of and around Cambridge and South Cambridgeshire by public transport, cycle or on foot, and to reduce and maintain lower traffic levels into and around the city to ease congestion, through the creation of better, greener transport networks that connect people to homes, jobs, study and opportunity, and investment in Smart Technology.

Around 206,000 vehicles travel in and out of Cambridge every day, with 50,000 workers travelling in alone. Without measures to deal with the increase in population and employment, by 2031 traffic in Cambridge is expected to increase by over 30% in the morning peak (and traffic in South Cambridgeshire is expected to increase by almost 40% in the morning peak).

Many of the key measures in the Air Quality Action Plan will be progressed through the Greater Cambridge Partnership, which holds some of the funding for local transport projects.

²⁷ <https://www.cambridgeshire.gov.uk/residents/travel-roads-and-parking/transport-plans-and-policies/cambridge-city-and-south-cambs-transport-strategy/>

A significant increase in provision of public transport will be required to accommodate the increased demand for travel in the Greater Cambridge area, as well as to enable the GCP ambition of 15% less traffic within Cambridge based on a 2011 levels, to allow vehicles, public transport in particular, to circulate more freely and become more reliable. Protection of the historic city centre and its surrounding area from the pressure of growth is a key ambition of the GCP, including the need to improve air quality.

GCP City Access

The City Access Strategy work has already started; this is a package of proposed measures to tackle congestion within Cambridge and encourage sustainable modal shift by the creation of a transport system that meets the needs of our city. It **plans to achieve and lock in a reduction in traffic levels in Cambridge by 10-15% from 2011 traffic levels by 2031**. It aims to help more people get into, out of and around the city by sustainable means, offer better alternatives to travel by car, and boost economic growth and quality of life.

The City Access team is developing a package of proposed measures, which may consider demand management measures (fiscal and/or physical) for Cambridge, along with improvement of air quality, potentially through a road-user charging mechanism and/or a Workplace Parking Levy following the recent 'choices for Better Journeys engagement exercise which also sought views regarding improvements in public transport provision..

1. Cycling provision

The City Access team will continue to work with partners on improving cycling routes, facilities and parking infrastructure to encourage enable further modal change to cycling.

2. Improved public space and air quality

In recognition of the strong public support for addressing air quality, the GCP has undertaken a feasibility study for a Clean Air Zone in Cambridge. The results of this study were included as part of the 'Choices for Better Journeys engagement activity undertaken in March 2019. The results of the engagement activity will be put to the

GCP Executive Board in summer 2019 with options to take forward for further work and consideration. This may include a type of Clean Air Zone...

A Spaces and Movement Supplementary Planning Document (SPD) will be produced to ensure that any new development and transport infrastructure considers the relationship between public spaces and travel movements as part of their planning.

3. Better bus services and expanded use of Park & Ride

By working closely with bus operators, the team will review and improve the bus network, potential through the provision of demand management measures and/or road space reallocation, additional Park & Ride capacity and smart ticketing, to speed up bus journeys and make them more reliable.

The GCP Transport Strategy aims to improve bus services through the better use of the limited road space in the city, such as by giving priority to public transport over private car trips, particularly those that can be substituted by other modes of transport. One aspect of encouraging this substitution is to provide attractive, green and reliable alternatives, for example electric buses, on part or all of the city's bus network. Therefore, the GCP commissioned a feasibility study into the provision of electric/hybrid public transport options. A pilot scheme is being undertaken on two routes in the Greater Cambridge area.

4. Travel planning

The City Access team will work with Travel for Cambridgeshire²⁸ and other partners in supporting employers and employees to adopt sustainable policies and practices for commuter and business travelling.

5. Smart technology

Work will continue with Smart Cambridge²⁹ to harness emerging technologies to find smart and innovative ways to tackle urban challenges, such as transport, air quality, energy and health care.

²⁸ Travel for Cambridgeshire (TfC) is Cambridgeshire's largest sustainable travel membership association, <http://www.travelcambs.org.uk/>

²⁹ Smart Cambridge is exploring how data, innovative technology and better connectivity can be used to transform the way people live, work and travel in the Greater Cambridge area and beyond. <http://www.connectingcambridgeshire.co.uk/smartcamb/>

The City Access team has also commissioned a traffic signals review, to look at the current infrastructure and consider the potential future of signal technology, with the long-term aim of optimising the movement of people and providing a reliable and attractive sustainable travel network, which it is anticipated should also realise air quality benefits.

6. Traffic management

Options are to be considered for tackling congestion within the city and improving sustainable transport. To support this, the team has carried out one of the largest Automatic Number Plate Recognition (ANPR) camera-based traffic surveys ever undertaken. Data from this will support a new traffic model to test emerging options within Cambridge including air quality data that will be able to be used to assess potential interventions and network changes.

7. A Workplace Parking Levy

Consideration is being given to the development and implementation of a Workplace Parking Levy (WPL). If a WPL is progressed, the City Access team would work closely with employers to develop and co-design a practical and effective scheme that works for businesses and organisations. Such a WPL would be intended to discourage commuter traffic and raise funds that could be re-invested into schemes that support traffic reduction measures while enabling and enhancing sustainable transport provision.

8. On-street parking controls (including Controlled Parking Zones)

The team are actively supporting projects, including the Cambridge City Joint Area Committee (CJAC) project to manage on-street parking in city residential areas.

A more comprehensive list of GCP projects is listed in Appendix H.

Combined Authority and a Mayor for the Devolved Area

In November 2016, all seven Cambridgeshire and Peterborough local authorities agreed to pursue the devolution deal made with central government, which means that the local Cambridgeshire and Peterborough Combined Authority³⁰ makes decisions on housing, transport and major infrastructure projects. The Combined

³⁰ CPCA website <http://www.cambspboroca.org/>

Authority is made up of eight founding members across Cambridgeshire and Peterborough. The first official meeting of the Cambridgeshire and Peterborough Combined Authority took place on 20th March 2017. A Mayor was elected in May 2017 to give the Combined Authority a focal point and will be the contact for Central Government.

Non-Statutory Spatial Plan

The Cambridgeshire and Peterborough Combined Authority (CPCA) approved for work to commence on a Non-Statutory Spatial Plan (NSSP) for Cambridgeshire and Peterborough in July 2017. The plan will focus on major additional sustainable and transport-linked sites for housing and jobs, with a focus also on infrastructure needs, affordable housing and assisting growth in disadvantaged areas.

The NSSP will be developed in two phases. Phase One sets out the existing development strategy from local plans (up to 2031/36), including strategic development locations and dependent strategic infrastructure. This first phase will include a particular emphasis on delivery of the existing planned strategy, linking to housing, investment and transport and infrastructure strategies. It had not been completed at the time of writing. Phase Two will look at growth from 2031/2036 to 2050. Work will start on Phase Two in 2019.

3.3 Source Apportionment

Source apportionment shows that traffic emissions are the main source of air pollution in the city, with the major contribution being from buses in the historic city centre and cars elsewhere. The measures presented in this report are targeted towards the predominant sources of Nitrous Oxides³¹ (NOx) emissions within Cambridge City Council's area.

A source apportionment exercise³² was carried out by Cambridge City Council in 2017, using a baseline year of 2015 (CERC, 2017).

³¹ Exhaust emissions are a mix of substances including the group nitrous oxides, a mix of nitrogen dioxide and nitric oxide (NO₂ and NO). NO can react with oxygen in the atmosphere to produce more NO₂.

³² Air Quality Source Apportionment for Cambridge City Council (2017), Cambridge Environmental Research Consultants

This identified that within the AQMA, the percentage source contributions were as follows:

City Centre NOx sources

81% of NOx emissions are from Roads, of which 45% NOx are emitted from buses, 31% from HGV, 9% from taxis, 8% from cars, and 6% from LDV(LGV).

Ring Road NOx sources

73% of NOx emissions are from Roads, of which 14% NOx are emitted from buses, 19% from HGV, 4% from taxis, 43% from cars, and 20% from LDV(LGV).

These data are presented in Table 1.1 and Table 1.2 in Appendix B, and Figures 8 – 13 on the following pages.

Figures 8 – 10 show the overall breakdown of sources of emissions, as well as the emission sources for the city centre and the ring roads.

Figures 11 – 13 show the breakdown of emissions source by vehicle type, the relative contributions of cars, buses, lorries, vans and taxis.

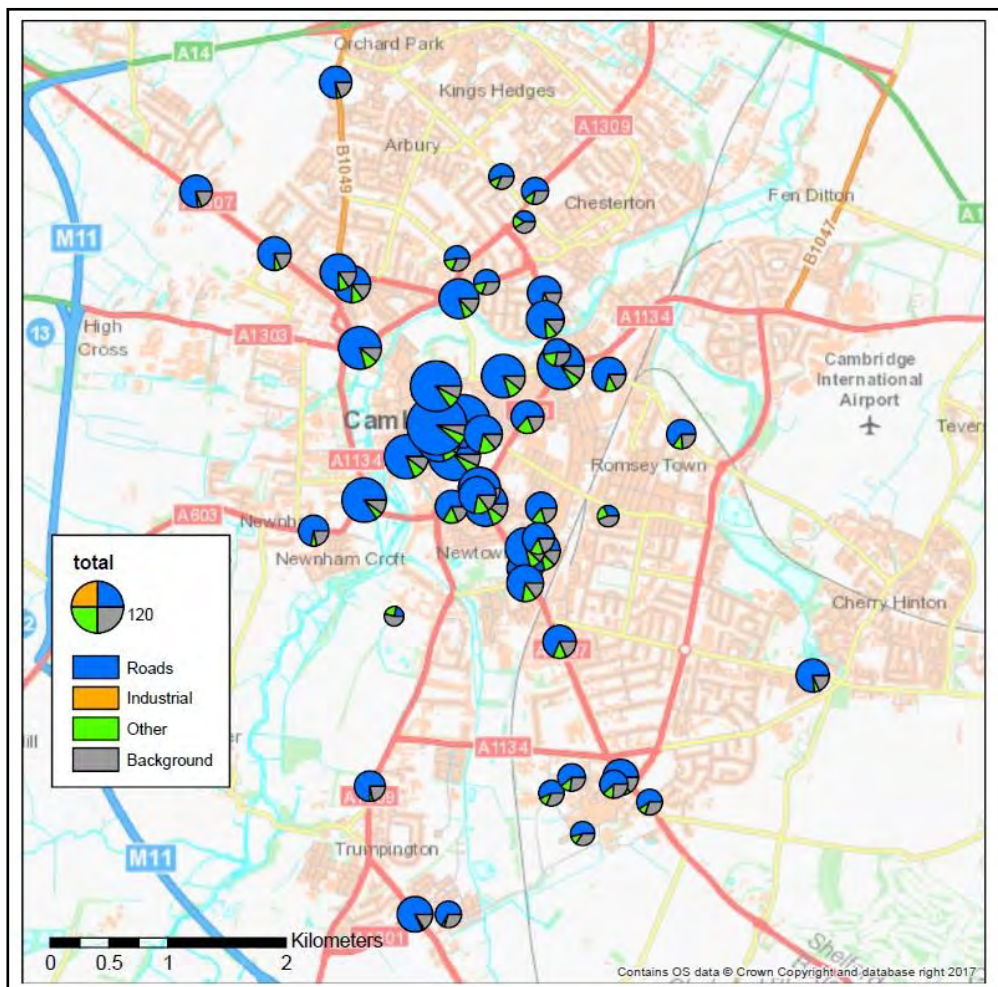


Figure Eight Source of NOx by source type (CERC, 2017)

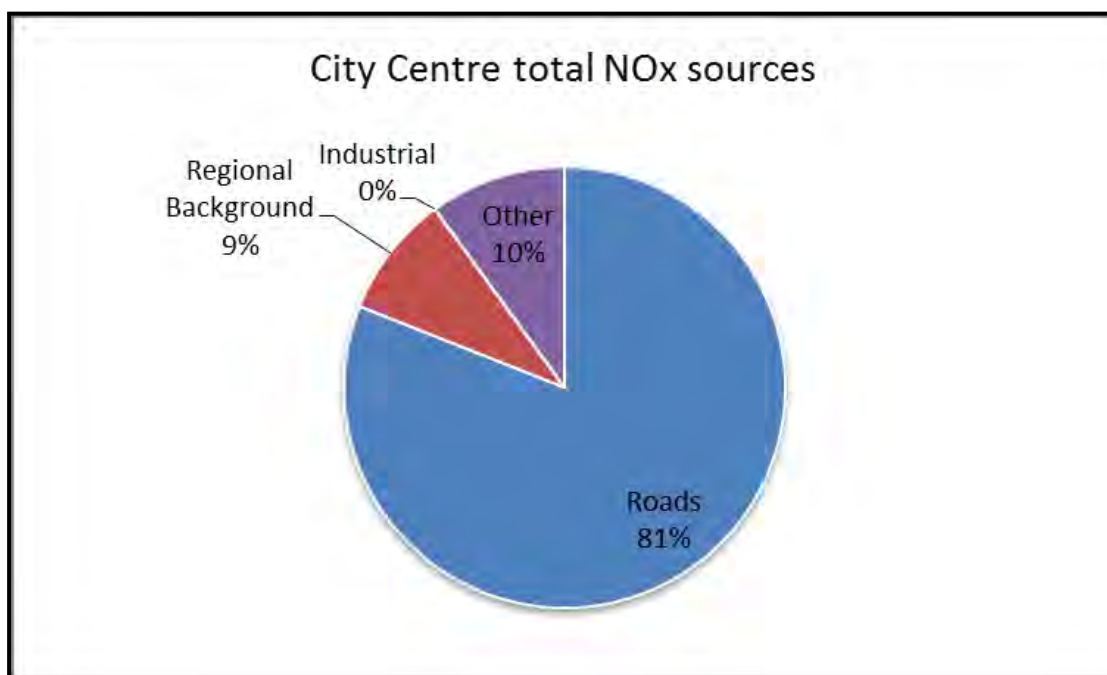


Figure Nine Sources of NOx in Cambridge City Centre

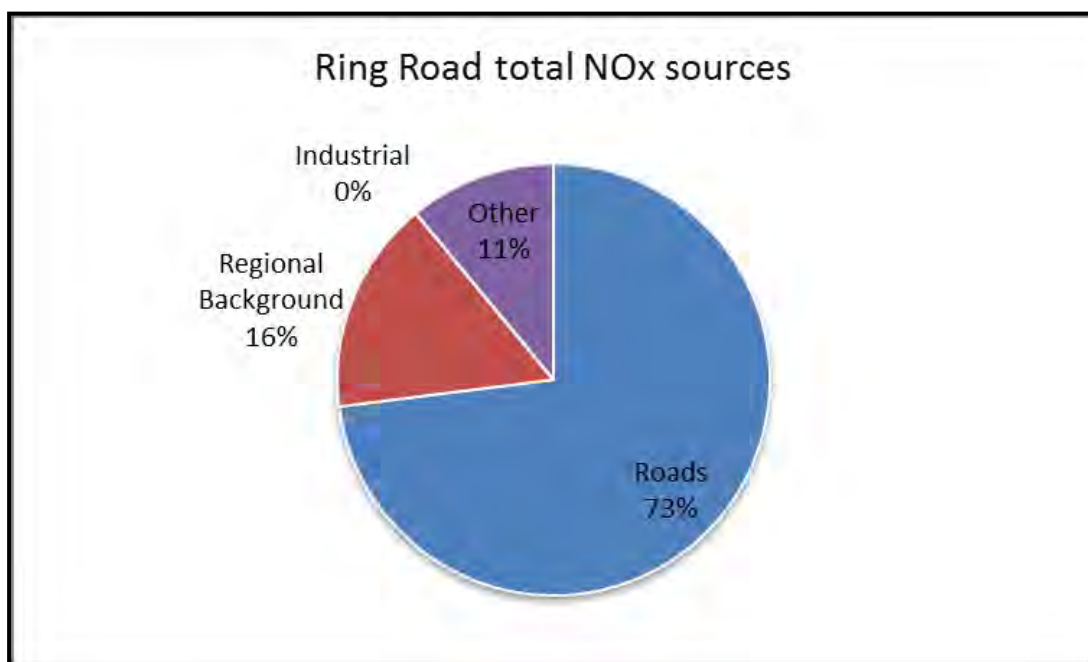


Figure Ten Sources of NOx on Cambridge Ring Road

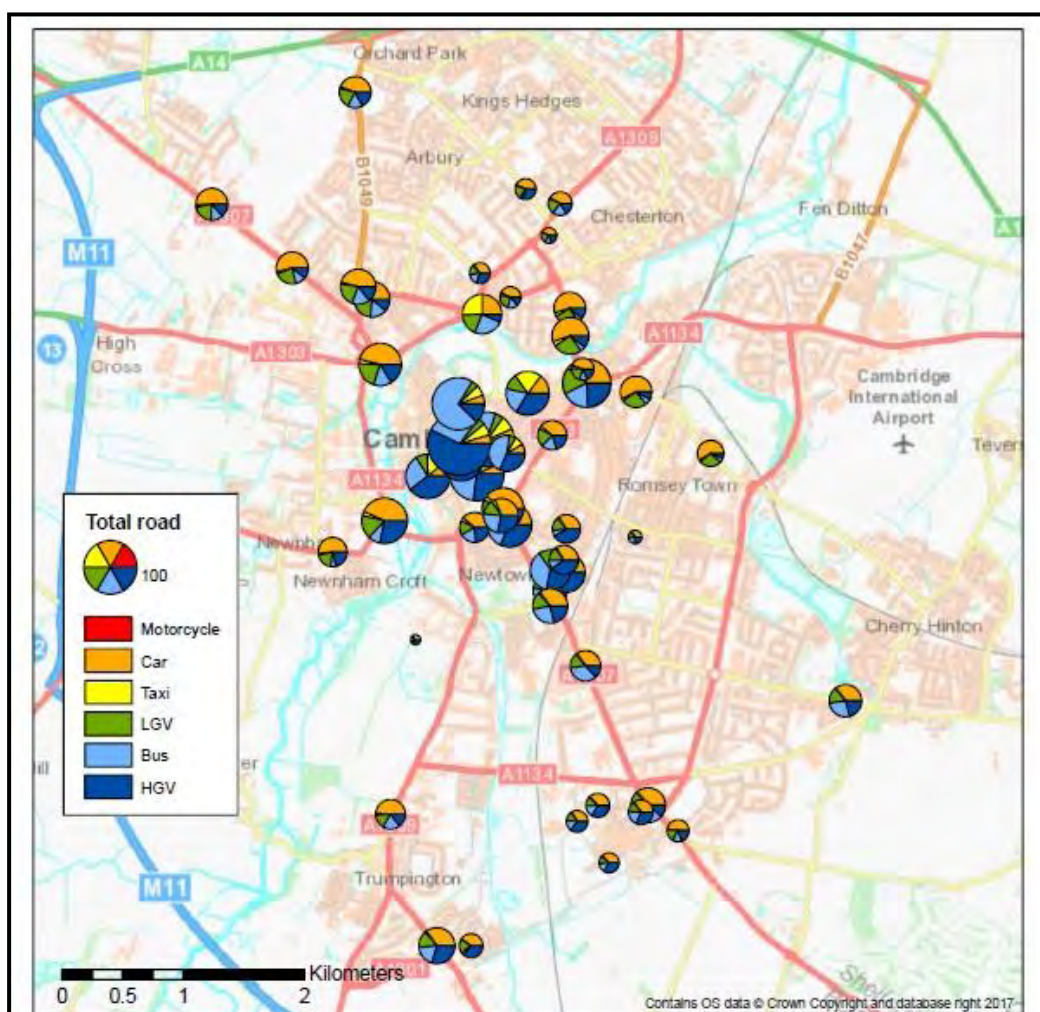


Figure Eleven Source of NOx by vehicle type across Cambridge (CERC, 2017)

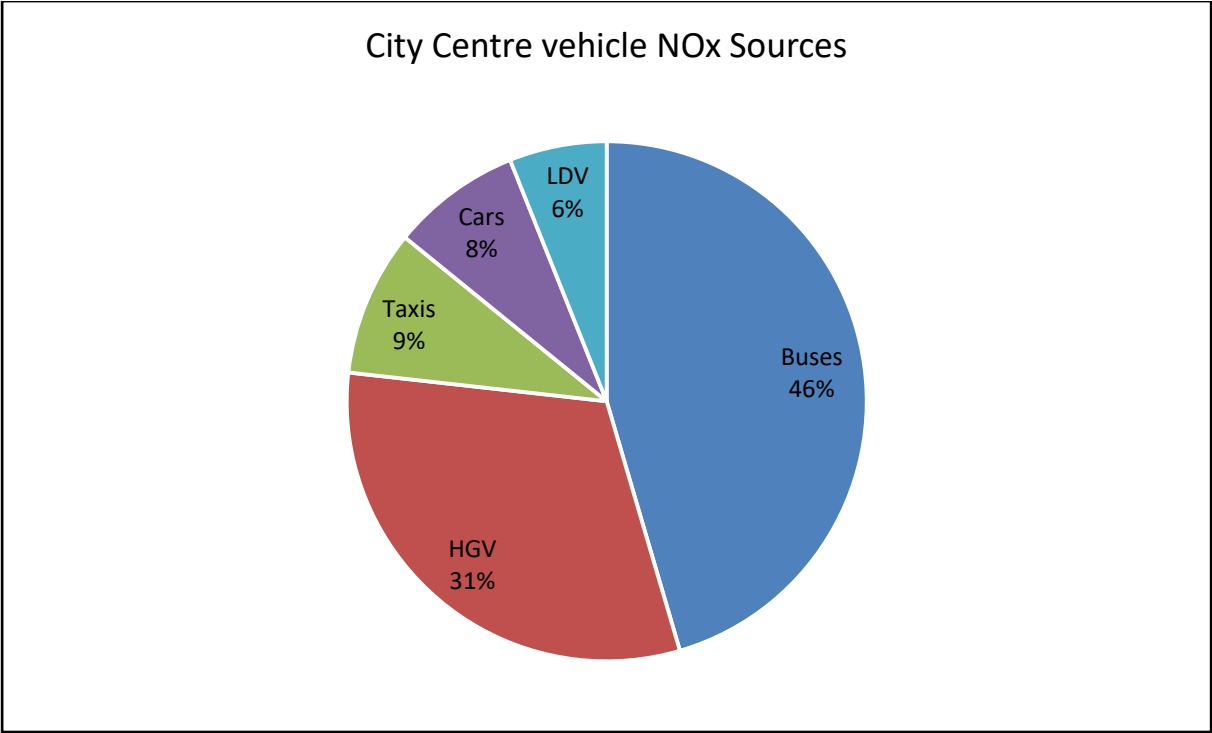


Figure Twelve Relative Vehicle contributions to NOx in Cambridge City Centre

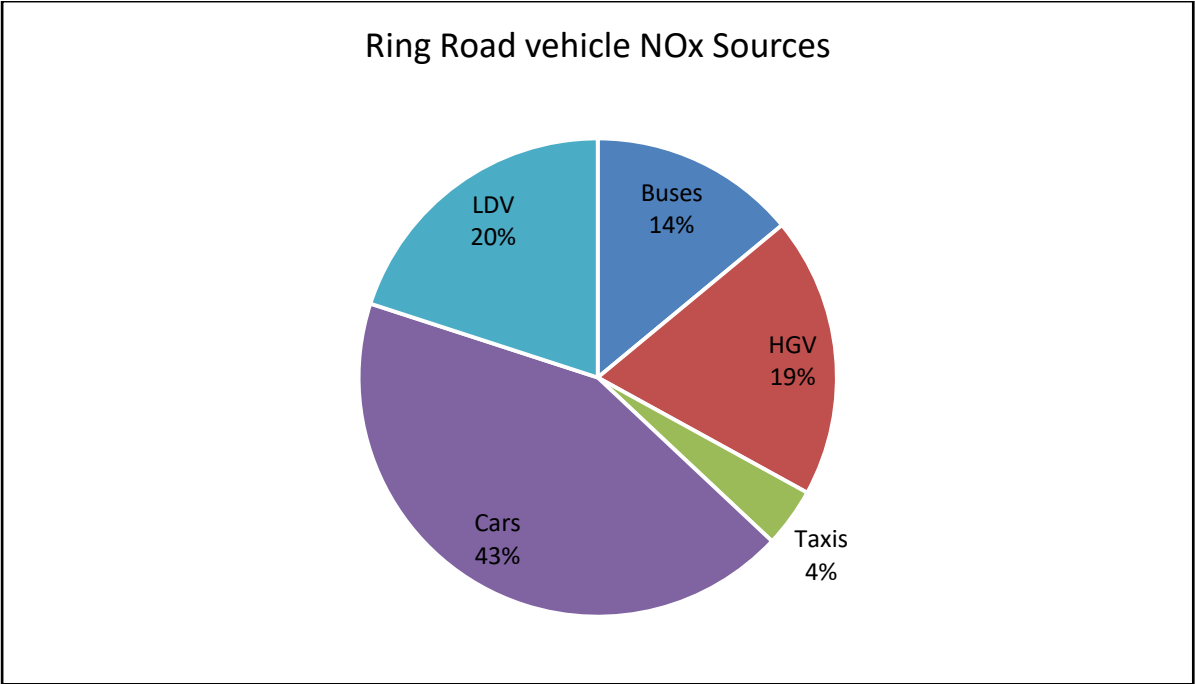


Figure Thirteen Relative Vehicle contributions to NOx on Cambridge Ring Road

Source apportionment of Particulates (including PM₁₀ and PM_{2.5})

Whilst the actions in the Air Quality Action Plan are targeted at reducing levels of nitrogen dioxide to below the legal limits, Cambridge City Council also recognises the importance of reducing levels of particulates, which are harmful to health at any concentration, as discussed above. Particulate levels are measured at four locations in Cambridge; they are currently all below the legal limits.

PM₁₀

Source apportionment using Defra Background maps³³ shows that most background PM₁₀ has a regional component (90%), that is, it does not have a local source. However, there is a small traffic related component.

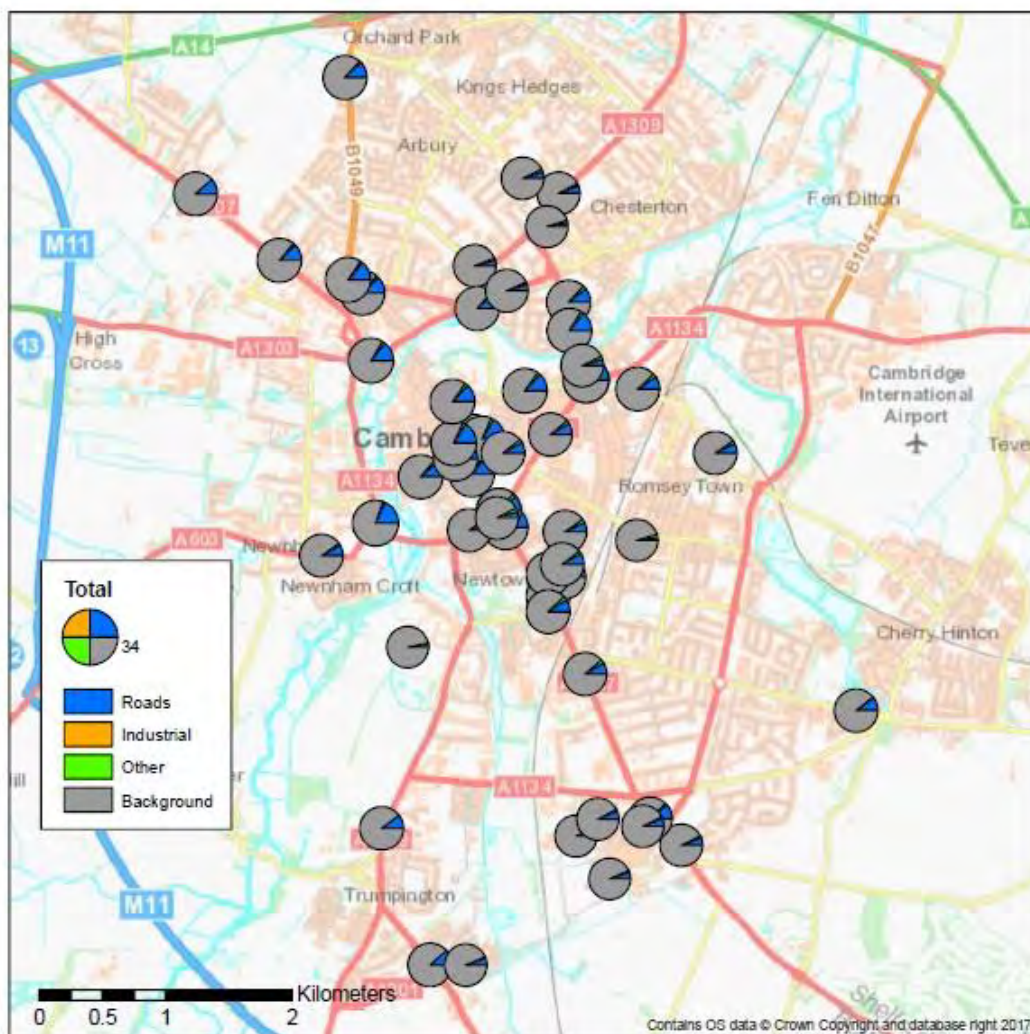


Figure Fourteen Source of PM by type (CERC, 2017)

³³ <https://laqm.defra.gov.uk/review-and-assessment/tools/background-maps.html>

The background estimates across Cambridge vary between 15 and 17 micrograms per cubic metre (2016), with an average of 16 micrograms per cubic metre.

PM₁₀ is measured at three locations in Cambridge – Gonville Place, Montague Road (adjacent to Elizabeth Way) and Parker Street. These stations recorded 20 – 22 micrograms per cubic metre annual mean in 2016³⁴, demonstrating that around 25% of PM₁₀ in Cambridge is locally derived.

The Source Apportionment study demonstrated that most of the additional PM₁₀ in Cambridge results from traffic, with a component from demolition and construction dust.

PM_{2.5}

Source apportionment using the Defra Background maps shows that most background PM_{2.5} has a regional component (95%). The background estimates across Cambridge vary between 11 and 12 micrograms per cubic metre (2016).

PM_{2.5} is measured at two locations in Cambridge – Gonville Place and Newmarket Road. Recent measurements of PM_{2.5} at Newmarket Road indicate that there is a very small roads component in this location (11 micrograms per cubic metre annual mean), but at Gonville Place there is an additional contribution of up to 3 micrograms per cubic metre PM_{2.5}³⁵ (15 micrograms per cubic metre annual mean). Most parts of Cambridge have ‘background’ levels of PM_{2.5} but it appears likely that hotspots are present in locations of high traffic density.

Particulate Matter specific measures

We have considered setting targets for PM_{2.5} reduction, although the potential to achieve significant reduction is limited by the high regional contribution. There are few measures that can be undertaken locally that will specifically reduce PM_{2.5}. These would need to be addressed by national and international measures.

³⁴ Annual Status Report,
<https://democracy.cambridge.gov.uk/ieListDocuments.aspx?CId=177&MIId=2570&Ver=4>

³⁵ Annual Status Report,
<https://democracy.cambridge.gov.uk/ieListDocuments.aspx?CId=177&MIId=2570&Ver=4>

The measures in this Action Plan that address the sources of nitrogen dioxide will also help to reduce particulate matter (PM₁₀ and PM_{2.5}); they include:

- Ensuring that any increase in public transport provision is offset, at least, by improvements in tail-pipe emissions.
- Ensuring that the Public Health perspective is integrated into all transport/traffic policies and Greater Cambridge Partnership plans.
- Ensuring that the Public Health perspective is integrated into planning policies; for example, by developing planning policies in the next iteration of the Local Plan that require a Health Impact Assessment for proposed developments over a certain size. This will ensure that new developments have health considerations at the heart of the scheme and lead to healthier communities.
- Publicity campaigns to provide information about impacts of wood burning/what type of wood to burn and how to burn it efficiently.
- Publicity campaigns about traffic idling.

Cambridge already takes the following measures to address particulate matter levels:

- Demolition and construction dust is controlled by planning conditions requiring demolition and construction management plans.
- Where appropriate, require planning conditions to control non-road mobile machinery emissions.
- Smoke Control Areas cover the central part of Cambridge.
- Control of wood/coal burning from boats via licence/permit mooring agreements.
- Emission standards for low carbon technologies such as gas Combined Heat and Power (CHP) are sought through the use of planning conditions.

3.4 Required Reduction in Emissions

A reduction of Nitrous Oxide emissions of $2.5 \mu\text{g}/\text{m}^3$, or 5.2% is required in Cambridge. This section explains what that means and how this figure has been calculated. Exhaust emissions are a mix of substances including the group nitrous oxides, a mix of nitrogen dioxide and nitric oxide (NO_2 and NO). NO can react with oxygen in the atmosphere to produce more NO_2 . Nitrous oxides (NO_x) define the emissions; nitrogen dioxide is the pollutant of concern. The National Air Quality Objective that Cambridge City Council is legally required to work towards is 40 micrograms Nitrogen Dioxide (NO_2) per cubic metre. Nitrogen dioxide is the specific pollutant that causes harm to human health.

The required reduction in emissions has been calculated in line with Technical Guidance LAQM.TG16³⁶ Chapter 7 (Box 7.6), using an Excel spreadsheet. It is based on the required reduction in the road NO_x concentration at the worst-case relevant exposure location. Details are provided in Appendix C.

The worst-case relevant exposure location in 2016 is $41 \mu\text{g}/\text{m}^3$ (Parker Street). The legally required reduction in the level of nitrogen dioxide is 1 microgram per cubic metre annual mean, from 41 micrograms per cubic metre (Parker Street) to 40 micrograms per cubic metre. From the spreadsheet, the recorded level of nitrogen dioxide in Parker Street equates to a roads NO_x concentration of 47.9 micrograms per cubic metre and a reduction in road NO_x emissions to 45.4 micrograms per cubic metre is required to bring the nitrogen dioxide level to 40 micrograms per cubic metre or less. Thus an emissions reduction of $2.5 \mu\text{g}/\text{m}^3$, 5.2% is required.

However, reducing emissions is only the first strand of the Air Quality Action Plan. The second strand is to ensure that emissions remain at levels below the National Air Quality Objectives (Section 3.2 Planning and Policy) and the third is improve public health by taking action to keep air pollution levels as low as they can possibly be (Section 3.1 Public Health Context).

³⁶ <https://laqm.defra.gov.uk/technical-guidance/>

3.5 Key Priorities

The priorities for Cambridge City Council are to reduce emissions so that concentrations of nitrogen dioxide are below the National Air Quality Objective, the second is to ensure that concentrations of nitrogen dioxide remain at levels below the National Air Quality Objectives; the third is to improve public health by taking action to keep air pollution levels as low as they can possibly be.

- Priority 1 – Reduce emissions in the central areas of Cambridge

The source apportionment shows that traffic emissions are the main source of air pollution in the city, with major contributions from buses and HGVs in the historic city centre and from cars elsewhere. Only a small reduction in emissions is required to meet the National Air Quality Objectives. Completion of the measures in this Plan is expected to ensure that these Objectives are met by the earliest possible date.

- Priority 2 – Reduce emissions across Cambridge

However, the planned growth in population and economic activity in the Greater Cambridge area could threaten the success of an Air Quality Action Plan just considering short term objectives, so this Plan will develop medium-term and long-term strategies and actions to ensure that air quality is considered for the future.

The evolving work currently being carried out by the GCP to tackle congestion in Cambridge will be key to the immediate, medium and long term success of the Air Quality Action Plan. Realisation of the measures being developed is expected to reduce the level of emissions from traffic in general, and from public transport in particular.

- Priority 3 – Keep emissions low in the future

Keeping emissions low, and reducing them further in the future will require ongoing involvement with development and delivery of relevant transport and planning policies, strategies and plans.

The Air Quality Action Plan measures to address the three priority areas have been grouped into seven main themes; these are detailed below.

4. AQAP Measures

The full set of Cambridge City Council AQAP measures (as defined by Defra) is listed in Table 4.1. The most useful measures that will contribute towards reducing air pollution in the shortest possible time have been grouped into thematic sets of measures which relate to the three priorities described above.

Priority 1 - Reducing Emissions in central areas of Cambridge

The source apportionment indicates that road traffic emissions are the main source of NO_x, with buses and HGVs dominant in the city centre, and cars dominant on the inner ring road. Therefore, the most important key actions in relation to this priority are to reduce emissions from traffic; buses and HGV in particular. A significantly lower emission passenger transport fleet will be required to make air quality improvements in central Cambridge and beyond.

There are three main themes for Priority 1; they are reducing emissions from taxis, reducing emissions from buses and coaches, and reducing emissions from HGVs.

Theme 1 – Reduce emissions from Taxis

Measures

46 “Clean Air Zone”

48 Installation of Taxi-only Rapid Charge Points

55 Licensing conditions to require Low Emission Taxis

54 Fee Reduction for Low Emission Taxis

Target – 30% electric or petrol hybrid taxi fleet in Cambridge by 2023 (100% electric or petrol hybrid taxi fleet in Cambridge by 2028).

Cost - £626,000 for Taxi-only Rapid Charge Points, of which £426,000 has been allocated from the Office for Low Emission Vehicles (OLEV), £100,000 has been allocated from Cambridge City Council funds and £100,000 from the Greater Cambridge Partnership. A further £140,245 has been agreed in principle and was committed (in the February 2018) for fee reductions over 5 years to incentivise low and ultra-low emission taxi uptake.

Benefit – 20 – 30% reduction in emissions from taxis; 1.5 – 4.5% reduction in NO_x

emissions from taxis.

A Feasibility Study undertaken by EST to inform the bid application to OLEV calculated that the installation of 18 Rapid Charge Points and 3 Fast Charge Points would reduce emissions of NOX and PM from Hackney Carriage Vehicles and Private Hire Vehicles by 20 – 30%. This assumes uptake of 67 Hackney Carriage Vehicles and 50 Private Hire Vehicles.

The fee reductions for low emission taxis (check this is detailed somewhere) will cost up to £140,245. This will stimulate the continuing transition to low emission taxis including hybrids and result in further emissions reductions.

Cambridge City Council taxi licensing policy was revised in 2016; the updated policy was agreed in principle by the Licensing Committee in October 2016. The new policy was agreed in March 2018; it offers fee discounts or exemptions for low emission taxis and consider extending the age limit. Dates will be set for newly registered taxis to be low or ultra-low emission.

Any “Clean Air Zone” type of arrangement will act as a further driver for uptake of lower emission vehicles. This project is subject to a feasibility study.

A 30% reduction in NOx emissions from taxis, which are 5 – 15% of the source of emissions in the city centre (Table 1.2) would lead to 1.5 – 4.5% reduction in NOx emissions in central Cambridge, a significant proportion of the 5% required reduction.

Timescale – The first rapid charge points will be in place by the end of the financial year 2017/18. The OLEV funded project runs for 3 years until 2020/21.

Responsibility – These projects will be undertaken by Cambridge City Council and GCP, with input from all partners.

Monitoring progress – Annual uptake targets have been set by OLEV and quarterly reporting is required. Progress will also be reported in the Annual Status Reports as well as to any relevant council Committees.

Theme 2 – Reduce emissions from Buses and Coaches

Measures

02 Quality Bus Partnerships

46 “Clean Air Zone”

56 Lowering emissions from buses and coaches

Target – 100% current regular bus and coach fleet in Cambridge Euro VI or better; all additional buses/coaches to be zero-emission capable.

Cost - TBC

Benefit – 75% reduction in NOx from buses and coaches; 33% reduction of total emissions in the central part of Cambridge.

Timescale –Year 4 onwards of the Air Quality Action Plan.

Responsibility – These projects will be progressed by Cambridgeshire County Council and GCP, with input from all partners. Bus and coach fleet renewals are without the control of the County Council and the GCP (but they may be a route to access funding).

Monitoring progress – Progress will also be reported in the Annual Status Reports.

Notes

An “Emissions Envelope” method of calculation has already been established and used to inform the Cambridge Bus Emissions Reduction Commitment. This method is used here to establish the reduction in emissions from buses and coaches that could be expected if all of the regular fleet were Euro VI. The current contribution to NOx emissions in the Core Area from the bus and coach fleet is 135 kg/week NOx. If all of the Euro V and Euro IV vehicles were replaced with Euro VI, then NOx emissions from the bus and coach fleet would be 35 kg/week, approximately a 75% reduction. Table 1.2 shows that buses contribute 45% of the NOx emissions in the city centre, so a reduction of 33% of total emissions could be achieved in the city centre and 15% reduction in NOx emissions on the ring road.

The continuing improvement of the bus fleet remains the most effective way of reducing emissions and improving air quality in Cambridge.

Notes: We continue to engage with local bus operators through the Quality Bus Partnership (QBP) who made significant fleet investment in 2016. In January 2017 34% of bus journeys kilometres in the Core Area were made with Euro VI, 63% Euro V and only Euro IV (3%). Benefits expected from these improvements in the fleet have not yet been observed in lower air pollution levels in the bus station area; this may be in part because we had under-estimated the volume of HGVs passing through the restricted access Core Area, possibly related to early morning, evening and night-time deliveries.

A replacement Quality Bus Partnership will be required to encourage operators to continue to make fleet improvements. The QBP agreement could also extend the 'Switch Off' policy for Drummer Street to Emmanuel Street and St Andrew's Street to reduce exposure in these locations.

Testing of heavy vehicles with Euro VI engines demonstrate lower emissions of nitrogen oxides (NOx) and exhaust particles (PM) for all types of test cycles, more than 90% lower compared with the emissions from previous, Euro V generations³⁷.

There are two current options to improve emissions from buses:

- Buses can be retrofitted with emission technology – accreditation support is provided by the Clean Vehicle Retrofit Accreditation Scheme (CVRAS) which will enable the existing buses to be fitted with proven emission control solutions.
- The Greater Cambridge Partnership City Access Study project has Better Bus Services as one of its measures. This Work Package includes an electric bus fleet options feasibility study and potentially a pilot study.

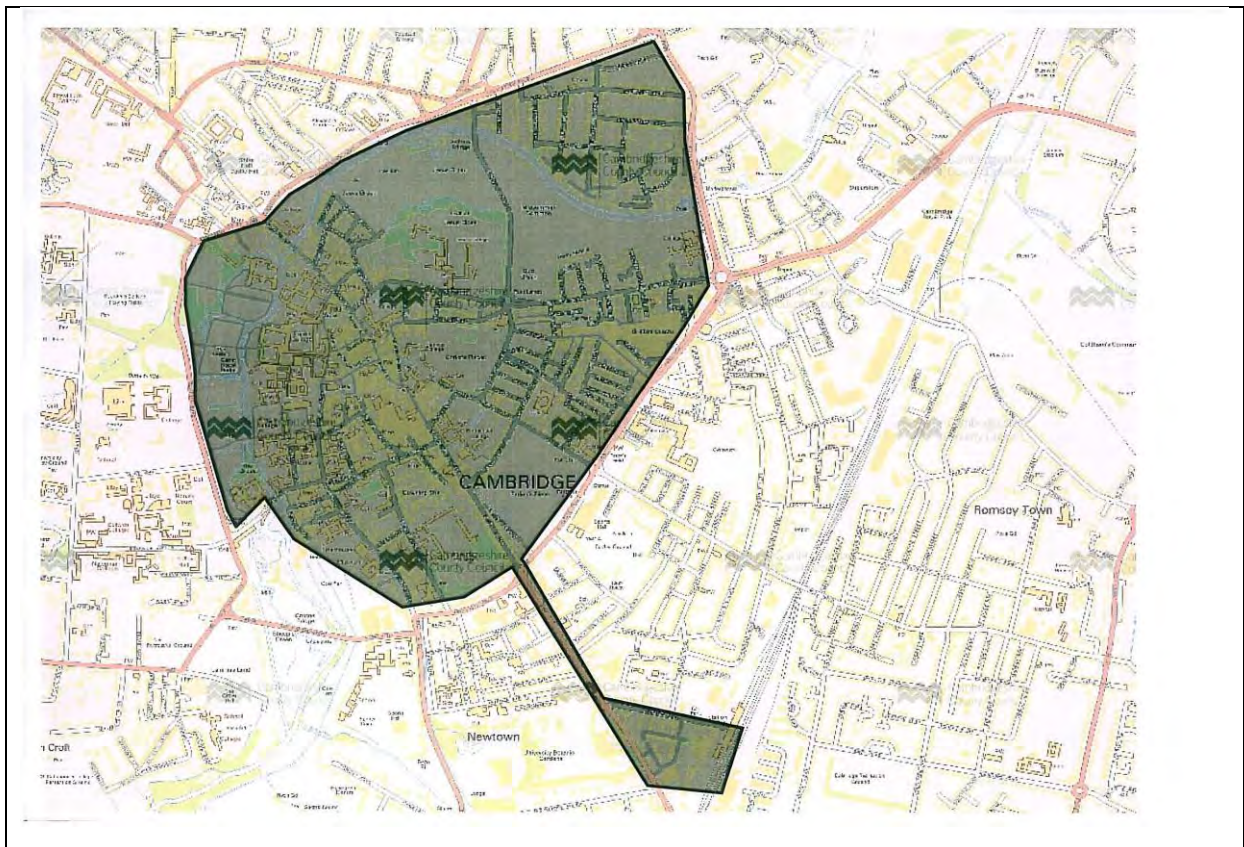
Emissions reductions will be costed and assessed as project clarity is developed.

The Greater Cambridge Partnership is also considering plans for partial electrification of the fleet/permitting new services to be electric only. These plans are under discussion and would be in place towards the end of this Air Quality Action Plan.

Any additional bus services will require a separate QBP agreement, which would cover air pollution/emissions reduction.

Map of extended Core Area

³⁷ <https://www.toi.no/getfile.php/Publikasjoner/T%C3%98I%20rapporter/2015/1407-2015/1407-2015-sum.pdf>



Theme 3 - Reduce emissions from HGVs

Measures

46 11 *“Clean Air Zone”/access restrictions*

17 18 *Last Mile/click and collect*

19 *Unified consolidation centres*

22 *Cycle deliveries*

Target – TBC

Cost - TBC

Benefit – We do not know the composition of the current HGV fleet that drives through Cambridge, so we have made some assumptions to provide an estimate. The benefit has been estimated by assuming that all current HGVs are Euro V and that with the introduction of a “Clean Air Zone”, all would have to be Euro VI, leading to a 90% reduction in emissions (see above). This assumes that there are no Euro VI currently in the fleet – all are Euro IV or lower. From Table 1.2, HGVs are the source of 15 – 60%, so a reduction 13.5% to 54% total NOx emissions could be expected in central Cambridge.

Although, the assumptions made for this estimate are very broad, it is clear that an improvement in the HGV fleet would have a significant impact on emissions in central Cambridge.

The calculations will be revisited when the data from the ANPR study becomes available for analysis. The assumptions will be retested when the form of any “Clean Air Zone” is proposed.

A shift from high emission vehicles to low or zero emission vehicles will also assist in reducing emissions.

Timescale - A “Clean Air Zone” is anticipated to be implemented from Year Three (2020) of this Plan.

Responsibility – These projects will be undertaken by the GCP, with input from all partners.

Monitoring progress - Progress will be reported in the Annual Status Reports.

Notes Greater Cambridge Partnership are actively looking at solutions to reduce the volume of freight deliveries in Cambridge and will seek collaboration with the business community. Important actions that are being evaluated for further investigation include the building of a strong evidence base, gaining understanding of how to incentivise cycle deliveries in the city, looking at P&R sites for Unified Consolidation Centre, Click & Collect opportunities, and working with large employment areas to support collaborative freight consolidation.

Priority 2 - Reducing Emissions across Cambridge

The source apportionment indicates that roads (traffic emissions) are the main source of NO_x, with cars dominant on the ring road. There is one main action for Priority 2; reducing emissions from all traffic.

Theme 4 - Reduce emissions from all traffic/other traffic

Measures

49 51 *Installation of EV charge points for Residents*

50 51 *Installation of EV Charge Points for Non-residents*

46 *“Clean Air Zone”*

Target – Install 6 EV charge points in residential areas in year one (2018), depending upon funding on:

Cost - TBC

Benefit - TBC

Timescale – 2018 onwards

Responsibility – These projects will be undertaken by Cambridgeshire County Council and GCP, with input from all partners.

Monitoring progress - Progress will be reported in the Annual Status Reports.

Notes

A range of measures are proposed to reduce traffic, and thus traffic emissions (that are potentially quantifiable) including:

- “Clean Air Zone” – potentially permitting access to low emission vehicles only. The Greater Cambridge Partnership is undertaking a feasibility study. Data from the ANPR survey will be used to determine the 2017 baseline, then potential options with and without a range of restrictions. (There is a standard traffic mix that could be used as alternative for baseline.)
- Traffic management measures to manage city centre access – potential Core Area extension, with consideration of vehicle displacement.
- Reduce city centre parking, with consideration of provision of alternative modes of access.

Other measures to reduce traffic emissions (that are not potentially quantifiable) are alternatives to private vehicles (such as car clubs), increased use of P&R, Freight and Delivery Management, promoting low emission transport, promoting travel alternatives, public information, traffic management, transport planning and infrastructure. These are all important contributors to the modal shift required to reduce traffic and air pollution in Cambridge; they are included in the list in Table 4.1.

Priority 3 - Keeping Emissions Low in the Future

These measures are not quantifiable, so a qualitative analysis has been undertaken. There are three main sets of measures; they come under the heading of planning policies, improving public health and leading by example.

Theme 5 - Maintaining Low Emissions

Measures

23 Air Quality Policy in Local Plan

24 Air Quality Policy in Joint Local Plan

26 Supplementary Planning Document on air quality and development control

27 28 33a, 33b, 34a, 34b, 35a, 35b, 35c 36a, 36b, 36c Development of new Air Quality/Planning policies for the Air Quality Action Plan, including EV provision

30 Develop policies in next Local Plan to require Health Impact Assessments (HIA) at Pre-application Stage

Target – Completion and agreement of policies and relevant supporting documents

Cost – not quantifiable

Benefit – not quantifiable

Timescale – 2018 onwards

Responsibility – These projects will be undertaken by Cambridge City Council Environmental Health and Planning officers.

Monitoring progress – will be reported annually in the ASR

Notes

Air Quality and other planning policies in the current Local Plan will continue to ensure that developments coming forwards are assessed for air quality impact and that mitigation is in place.

New policies will be adopted as new mitigation measures come forwards.

Future Local Plans will establish the Planning Policy framework for the good design of future development in the local area. Effective spatial planning will ensure that new communities in Greater Cambridge are well-designed to minimise the need or desire to travel. A clear understanding of excellent design principles will lead to people-focussed place-making and a high-quality, healthy environment. For example, requiring HIA at the pre-application phase for major developments will

ensure that health-based principles are enshrined at an early stage in the design of a development – better by design. The role of the forthcoming Joint Local Plan in improving air quality/public health is subject to ongoing discussions with the planning policy team and this will continue into the future.

Theme 6 - Improving Public Health

Measures

30 Develop policies in next Local Plan to require Health Impact Assessments (HIA) at Pre-application Stage

31 Continuing input into the Joint Strategic Needs Assessment (and any other strategies that come forwards)

58 Active Travel Infra-structure via GCP measures

76 Developing messaging about air quality for information campaigns

Target – Develop a series of articles for each Cambridge Matters edition about public health impacts of air quality

Cost – not quantifiable

Benefit – not quantifiable

Timescale – 2018 onwards

Responsibility – These projects will be undertaken by Cambridge City Council Environmental Health and Cambridgeshire County Council Public Health officers, with input from other relevant officers where required.

Monitoring progress – will be reported annually in the ASR

Notes

Public Health is the driver for air quality improvements. The Public Health role has several strands, with some specific actions, as well as an advisory role in development of plans and strategies.

The first measure will be to prepare a distillation of the extensive evidence base about the impacts of air pollution on public health and present this in an easy to use format. We will then use this information to develop a communications strategy with our communications teams, both for the general public and for local authority officers and decision-makers, to improve understanding of the importance of making changes to improve public health.

Particular emphasis will be made on encouraging a modal shift to active travel which has health benefits as well as reducing the impact of motorised traffic.

Theme 7 - Leading by Example

Measures

60 Travel Plan

53 Reducing emissions from own fleet

Target – increase number of staff not driving to/from work, increase number cycling to work, choosing healthy commuting options

Cost – not quantifiable

Benefit – not quantifiable

Timescale – 2018 onwards

Responsibility – These projects will be undertaken by Cambridge City Council officers.

Monitoring progress – will be reported annually in the ASR

Notes

Cambridge City Council recognises the importance of leading by example; the following measures are already in place and/or ongoing.

Travel Plan

The Cambridge City Council Travel Plan was updated in 2017. This package of measures aims to enable sustainable travel choices to be made, benefitting both the environment (less congestion, fewer emissions to air) and the health and fitness of the workforce. Measures include:

- Targets to increase number of staff not driving to/from work, increase number cycling to work, choosing healthy commuting options
- Public transport discounts
- Provision of pool bikes, including e-bikes
- Provision of pool car/car club membership for occasional travel for work
- Bicycle training
- Annual cycle purchase scheme
- Secure and covered cycle parking, wherever possible
- Annual Travel for Work surveys
- Assistance with travel planning to relocated workplaces

The Travel Plan also includes measures to enabling remote working/agile working (that is, to avoid unnecessary travel). This is an increasingly important strand of this

work because the rising housing costs in Cambridge have resulted in more and more employees travelling further to their workplace location. The ability to work from home is a valuable employee benefit for many staff, saving time and commuting costs. Measures include:

- Ability to work from home, where appropriate
- Technological support for remote working
- Provision of technology for agile working

Lowering Emissions from our own Fleet

Cambridge City Council has historically invested in low emission vehicles. Later vehicles have proven to be more reliable, as well as being ultra-low emission and cost-effective to run and maintain. Around 10% of the fleet, the smaller vehicles, are EV, including the Mayor's car. The Fleet Management Team continues to assess the requirements for vehicular travel and look for low emission transport alternatives wherever practical and realistically priced.

Table 4.1 shows the Cambridge City Council AQAP measures. It contains:

- a list of the actions that form part of the plan
- the responsible departments/organisations that will deliver this action
- expected benefit in terms of pollutant emission and/or concentration reduction, where applicable
- the timescale for implementation

The list is arranged in alphabetical order of EU Measure Category in Column Three, with sub-lists of EU Measure Classification in Column 4, for Defra's reporting purposes. Each EU category has a different background shade to aid inspection of the list. The key measures are highlighted in bold. The specific measures are in Column Two.

Note that not all measures are applicable for Cambridge, and measures will vary in their impact. They are all included for transparency and to demonstrate the breadth of activities across the councils that will help to improve air quality.

The Annual Status Reports will provide updates on implementation of these measures.

Table 4.1 – Air Quality Action Plan Measures (n/a = not applicable) – progress on these measures will be reported annually in the Annual Status Report

Measure No.	Measure	EU Category	EU Classification	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments
1	Expansion of Park & Ride services	Alternatives to private vehicle use	Bus based Park & Ride	Camb. County Council/ Greater Cambridge Partnership	Ongoing	Ongoing	TBC	n/a	5 P&R sites	Ongoing	More P&R due under Greater Cambridge Partnership arrangements (see text).
2	Quality Bus Partnerships	Alternatives to private vehicle use	Other	Camb. County Council/ Camb City Council/ Greater Cambridge Partnership	Ongoing	Ongoing	QBP agreement for current services and QBP agreements for all new services	No additional pollution	QBP agreement for current services pending; QBP agreements for new services accepted in principle	Dependant on Combined authority bus review	-
3	Camshare is one strand of the Travel for Cambridge-shire scheme	Alternatives to private vehicle use	Car and lift sharing schemes	TfC, Camb. County Council	In place	In place	n/a	n/a	5,000 members	Ongoing	http://www.travelcambs.org.uk/car-share/
4	Provision of car park places for car club vehicles	Alternatives to private vehicle use	Car Clubs	Parking Services, Camb. City Council	In place	In place	n/a	n/a	16 cars and 1 van in Zipcar club across Cambridge	Ongoing	More spaces will be available, subject to demand from car club providers. Car clubs are commercially viable

Measure No.	Measure	EU Category	EU Classification	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments
5	Provision of on-street car parking places for car club vehicles	Alternatives to private vehicle use	Car Clubs	Infrastructure Team, Camb. County Council	In place	In place	n/a	n/a	16 cars and 1 van in Zipcar club across Cambridge	Ongoing	More spaces to be available, subject to demand from car club providers. Car clubs are commercially viable.
6	Require a site-wide car club strategy for large-scale Major sites – detailing the location and phasing of the charge point installations	Alternatives to private vehicle use	Car Clubs	Environmental Health/ Planning Camb. City Council/ district councils	n/a	Ongoing	n/a	n/a	Not recorded.	Ongoing	Forward-thinking developers are already setting aside car club spaces.
7	Require 1 car club vehicle per 500 parking spaces in new residential development, 1 vehicle per 10,000 m2 in non-residential developments	Alternatives to private vehicle use	Car Clubs	Environmental Health/ Planning Camb. City Council/ district councils	n/a	Ongoing	n/a	n/a	Not recorded.	Ongoing	Forward-thinking developers are already setting aside car club spaces. Require to mitigate air quality impact.

Measure No.	Measure	EU Category	EU Classification	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments
8	Promotion of electric bike hire/hub schemes	Alternatives to private vehicle use	Other	Environmental Health/ Planning Camb. City Council/ district councils GCP	-	-	n/a	n/a	-	-	Nothing in place at the moment.
9	Develop policies to require electric bike charge hubs and parking in new residential areas without off street parking	Alternatives to private vehicle use	Other	Environmental Health and Planning, Camb. City Council/ district councils	-	-	n/a	n/a	-	-	Nothing in place at the moment. Will need to complement existing cycle parking requirements and space implications. Will need to consider if access is open or restricted.
10a	Develop policies to promote electric bike charge facilities in workplaces and car parks/ require in new workplaces	Alternatives to private vehicle use	Other	Environmental Health and Planning, Camb. City Council/ district councils	-	-	n/a	n/a	-	-	Nothing in place at the moment. Will need to complement existing cycle parking requirements and space implications. Will need to consider if access is open or restricted.

Measure No.	Measure	EU Category	EU Classification	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments
10b	Cambridge Area Metro (CAM)	Alternatives to private vehicle use	Other	Combined Authority of Cambridgeshire and Peterborough	In preparation	TBC	-	-	-	-	First phases may tie in with corridor busway projects
10c	Strategic Bus Review and Bus Reform Task Force	Alternatives to private vehicle use	Other	Combined Authority of Cambridgeshire and Peterborough	In discussion	Business case by 2021	-	-	-	-	Aim to improve public transport offer in Cambridgeshire and Peterborough areas to reduce need to travel by private vehicle
11	No measure proposed	Environmental Permits	Introduction/increase of environmental charges through permit systems and economic instruments	Camb. City Council	-	-	-	-	-	-	Not applicable in Cambridge. These charges are fixed by Defra.
12	No measure proposed	Environmental Permits	Introduction/increase of environmental funding through permit systems and economic instruments	Camb. City Council	-	-	-	-	-	-	Not applicable in Cambridge. These charges are fixed by Defra.
13	No measure proposed	Environmental Permits	Large Combustion Plant Permits and National Plans going beyond BAT	Camb. City Council	-	-	-	-	-	-	Not applicable in Cambridge

Measure No.	Measure	EU Category	EU Classification	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments
14	No measure proposed	Environmental Permits	Measures to reduce pollution through IPPC permits going beyond BAT	Camb. City Council	-	-	-	-	-	-	Not applicable in Cambridge
15	Tighter Emission Limit Values for Medium Combustion Plant located in AQMA	Environmental Permits	Other measures through permit systems and economic instruments	Environmental Health, Camb. City Council	under discussion	-	-	-	-	-	Where applicable
16	No measure proposed	Environmental Permits	Tradeable permit system through permit systems and economic instruments	Camb. City Council	-	-	-	-	-	-	Not applicable in Cambridge
17	Last Mile delivery based from P&R sites	Freight and Delivery Management	Delivery and service plans	GCP/ Camb. County Council	Under discussion	-	-	-	-	-	Last Mile deliveries using electric car/taxi and/or bikes
18	Click and Collect hubs at P&R sites	Freight and Delivery Management	Freight Consolidation Centre	GCP/ Camb. County Council	Under discussion	-	-	-	-	-	Useful for commuters
19	Unified Consolidation Centres	Freight and Delivery Management	Freight partnerships for city centre deliveries	GCP/ Camb. County Council	Under discussion	-	-	-	Under discussion	-	Initial phase

Measure No.	Measure	EU Category	EU Classification	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments
20	City Centre restrictions	Freight and Delivery Management	Quiet and Out of Hours delivery	Camb. County Council	In place	In place	n/a	n/a	Complete	Ongoing	HGV not permitted in Cambridge Core Area 10 - 4
21	No measure proposed	Freight and Delivery Management	Route Management Plans	Camb. County Council	-	-	-	-	-	-	Nothing in place at the moment
22	Cycle Delivery services	Freight and Delivery Management	Other	Camb. County Council	In place	In place	n/a	n/a	Complete GCP considering further incentives for cycle deliveries	Ongoing	Outspoken Delivery (Cambridge) use specialist cargo-bikes and Electric vehicles. Deliveroo use cycle deliveries for home-delivery of take-away food. These services are commercially viable.
23a	Air Quality Policy in Joint Local Plan	Policy Guidance and Development Control	Regional planning – Area-wide strategies	Environmental Health/ Planning Joint team City/SCDC	Ideas considered during 2019	Implementation start upon Local Plan adoption	Air Quality policies in joint Local Plan	n/a	Discussion phase	TBC	A joint Plan will be prepared following merger of planning teams, and policies will be aligned. See text.
23b	Air Quality Policy in Local Transport Plan	Policy Guidance and Development Control	Regional planning – Area-wide strategies	Environmental Health Combined Authority of Cambridge-shire and Peterborough	Combined Authority of Cambridge-shire and Peterborough developing new LTP in 2018/19	2019 onwards	n/a	n/a/	EH have had sight of early draft of Air Quality section, and have responded	5 year plan	Due for adoption in June 2019

Measure No.	Measure	EU Category	EU Classification	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments
24	Air Quality Policy in Local Plan	Policy Guidance and Development Control	Other Policy	Environmental Health/ Planning Camb. City Council	Complete	Implementation starts upon Local Plan adoption	n/a	n/a	Local Plans currently being examined	Ongoing from adoption of Local Plan	City and SCDC have separate Local Plans with Planning Inspector.
25	Adopt/ revise	Policy Guidance and Development Control	Low Emissions Strategy	Environmental Health/ Planning Joint team City/SCDC	2018	2020	Completion of new LES	-	In discussion	TBC	SCDC have a Low Emissions Strategy in place. City Council could adopt similar LES or work with SCDC on joint guidance. May be complemented by 'Clean Air Zone'
26	Supplementary Planning Documents	Policy Guidance and Development Control	Air quality Planning and Policy Guidance	Environmental Health/ Planning Joint team City/SCDC	2017	2018 onwards	Input into production of Sustainable Construction and Development SPD	n/a	In preparation	2018	Update of the 2007 Sustainable Design and Construction SPD to provide guidance for policies contained in the Local Plan
27	Air Quality and Planning guidance document	Policy Guidance and Development Control	Air quality Planning and Policy Guidance	Environmental Health/ Planning Joint team City/SCDC	2018	2018 onwards	Update of Air Quality in Cambridge: Developers Guide	n/a	Not yet started	2019	To provide clarity for developers. To be updated as required.
28	Develop guidance based on Defra cost-benefit approach to mitigation	Policy Guidance and Development Control	Air quality Planning and Policy Guidance	Environmental Health/ Planning Joint team City/SCDC	2017	2018 onwards	Production of new guidance to support Policy 36	n/a	Under discussion	2019	To provide a clear and simple procedure to ensure that all new developments are adequately mitigated.

Measure No.	Measure	EU Category	EU Classification	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments
29	Sustainable Procurement Guidance.	Policy Guidance and Development Control	Sustainable Procurement Guidance	District councils City/SCDC	In place	In place	n/a	n/a	Complete	Ongoing	Cambs City procurement team have produced a guide for employees "Buying Green in Cambridge City Council", which covers sustainable issues.
30	Develop policies to require Health Impact Assessments (HIA) at Pre-application stage	Policy Guidance and Development Control	Other	Planning and Public Health Districts/ Camb. County Council	In discussion	For the joint Local Plan/future planning policy	-	-	-	TBC	To ensure that Healthy Communities are part of the design, not an optional add-on
31	Air Quality input into Joint Strategic Needs Assessments for Transport and for Built Environment	Policy Guidance and Development Control	Other	Public Health/Environmental Health Districts/ Camb. County Council	In discussion	Ongoing	-	-	-	Ongoing	To ensure that Healthy Community strategies are embedded into the JSNA.

Measure No.	Measure	EU Category	EU Classification	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments
32	Public Health to be consulted on preparation of SPDs	Policy Guidance and Development Control	Other	Districts/ Camb. County Council	In discussion	For the joint Local Plan	-	-	In place	Ongoing	To ensure that positive health policies are enshrined in SPDs
33a	Require a site wide EV charging strategy for all large-scale Major sites	Policy Guidance and Development Control	Other	Environmental Health/ Planning			-	n/a		n/a	In line with NPPF, IAQM guidance and to be incorporated into building regulations.
33b	Require a minimum of one slow EV Charge Point for each dwelling with allocated parking (100% coverage)	Policy Guidance and Development Control	Other	Environmental Health/ Planning			-	n/a		n/a	In line with NPPF, IAQM guidance and to be incorporated into building regulations.

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34a	Require a minimum of one slow EV Charge Point for two dwelling with communal parking (50% coverage)	Policy Guidance and Development Control	Other	Environmental Health/ Planning	In progress	Upon adoption of AQAP	-	n/a	Forward-thinking developers are already installing EV charge points.	n/a	In line with NPPF principle and IAQM guidance. Require to mitigate air quality impact
34b	Require a minimum of one slow EV Charge Point for every two parking spaces in non-residential developments (50% coverage)	Policy Guidance and Development Control	Other	Environmental Health/ Planning	In progress	Upon adoption of AQAP	-	n/a	Forward-thinking developers are already installing EV charge points.	n/a	In line with NPPF principle and IAQM guidance. Require to mitigate air quality impact
35a	Require one fast EV Charge Point for 1,000m ² non-residential floor space	Policy Guidance and Development Control	Other	Environmental Health/ Planning	In progress	Upon adoption of AQAP	-	n/a	Forward-thinking developers are already installing EV charge points.	n/a	In line with NPPF principle and IAQM guidance. Require to mitigate air quality impact

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35b	Require one rapid EV Charge Point for 1,000m ² non-residential floor space	Policy Guidance and Development Control	Other	Environmental Health/ Planning	In progress	Upon adoption of AQAP	-	n/a	Forward-thinking developers are already installing EV charge points.	n/a	In line with NPPF principle and IAQM guidance. Require to mitigate air quality impact
35c	Require at least one rapid EV charge point for large-scale Major developments		Other	Environmental Health/ Planning	In progress	Upon adoption of AQAP	-	n/a	Forward-thinking developers are already installing EV charge points.	n/a	In line with NPPF principle and IAQM guidance. Require to mitigate air quality impact
36a	Any new or replacement car park to have EV charging points	Policy Guidance and Development Control	Other	Environmental Health/ Planning		Upon adoption of SPD		n/a		n/a	In line with NPPF principle and IAQM guidance. Require to mitigate air quality impact
36b	Require EV charge points where site use is intensified	Policy Guidance and Development Control	Other	Environmental Health/ Planning		Upon adoption of SPD		n/a		n/a	In line with NPPF principle and IAQM guidance. Require to mitigate air quality impact

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36c	Require installation of passive charge points at all parking spaces without active charge points	Policy Guidance and Development Control	Other	Environmental Health/ Planning		Upon adoption of SPD		n/a		n/a	In line with NPPF principle and IAQM guidance. Require to mitigate air quality impact
37	CHP emission standards	Promoting Low Emission Plant	Emission control equipment for small and medium stationary combustion plant	District Councils – shared planning policy team	In discussion	Upon adoption of AQAP	n/a	n/a	in place as and when required for mitigation, via planning condition	2018	All gas CHP to meet low emissions standards, Spark ignition engine: less than 150 mgNOx/Nm3 Compression ignition engine: less than 400 mgNOx/Nm3 Gas turbine: less than 50 mgNOx/Nm3
38	Low NOx boilers	Promoting Low Emission Plant	Emission control equipment for small and medium stationary combustion plant	District Councils – shared planning policy team	In discussion	Upon adoption of AQAP	n/a	n/a	in place as and when required for mitigation, via planning condition	2018	All developments to have low NOx boilers, defined as boilers that meet a dry NOx emission rating of 40mg/kWh.

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39	No measure proposed	Promoting Low Emission Plant	Low emission fuels for stationary and mobile sources in public procurement	-	-	-	-	-	-	-	Nothing in place at the moment
40	No measure proposed	Promoting Low Emission Plant	Other measures for low emission fuels for stationary and mobile sources	-	-	-	-	-	-	-	Nothing in place at the moment
41	No measure proposed	Promoting Low Emission Plant	Public Procurement of stationary combustion sources	-	-	-	-	-	-	-	Nothing in place at the moment
42	Extension of Smoke Control Area	Promoting Low Emission Plant	Regulations for fuel quality for low emission fuels for stationary and mobile sources	Camb City Council	Not at present	-	-	-	-	-	Not being considered - high cost and workload, for minimal impact See also Public Information
43	Restriction on fuel types used on dwellings moored on river	Promoting Low Emission Plant	Regulations for fuel quality for low emission fuels for stationary and mobile sources	Camb City Council	Not at present	-	-	-	-	-	Not being considered - regulations already in place to cover fuel use and smoke nuisance See also Public Information

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44	Encourage use of zero-emission heating sources such as electric heating, ground source and air source heat pumps	Promoting Low Emission Plant	Shift to installations using low emission fuels for stationary and mobile sources	-	-	-	-	-	-	-	Encouraged in SPD sustainable construction and development
45	No measure proposed	Promoting low emission transport	Company vehicle procurement	-	-	-	-	-	-	-	Councils unable to directly influence private business but can use access policies to incentivise change.
46	"Clean Air Zone"	Promoting low emission transport	Low Emission Zone	Camb City Council/ Camb County Council/ Greater Cambridge Partnership	In discussion phase	Following consultation and agreement on final area and permissions to enter.	CAZ in place	TBC	Feasibility study in progress	2019	See text
47	LEV discount offered as part of policy for residents parking permits	Promoting low emission transport	LEV priority parking	Cambs County Council	At committee stage	2018	Discount offered on residents parking permits to Low Emission Vehicles	n/a	Consultation in progress	2019	-

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48	Installation of Rapid and Fast EV charge points for taxis	Promoting low emission transport	Alternative refuelling infrastructure	Camb City Council/ South Cambs DC/ Camb County Council/ Greater Cambridge Partnership	2017	2018	Installation of 18 Rapid and 3 Fast EV chargepoints in Cambridge and South Cambridgeshire	1.5 – 4.5% reduction in NOx emissions	TBC First phase plans under way	2020	Funding from OLEV, Greater Cambridge Partnership, Cambridge City Council
49	Installation of EV charge points for residents	Promoting low emission transport	Alternative refuelling infrastructure	Camb City Council/ Camb County Council/ Greater Cambridge Partnership	2017	2018	Installation of 16 EV chargepoints in residential parking zones	n/a	Funding bid about to be submitted	2018	Will depend if funding bid is successful from OLEV
50	Installation of EV charge points for non-residents	Promoting low emission transport	Alternative refuelling infrastructure	Camb City Council/ Camb County Council/ Greater Cambridge Partnership	-	-	n/a	n/a	-	-	Some EV already in car parks Would require additional staff and funding to initiate new projects
51	Installation of EV charge points on lampposts, for residents and non-residents	Promoting low emission transport	Alternative refuelling infrastructure	Camb City Council/ Camb County Council/ Greater Cambridge Partnership	-	-	n/a	n/a	-	-	Consider as part of overall strategy to enable EV uptake. In discussion with Balfour Beatty re trials in Cambridge.
52	No measure proposed	Promoting low emission transport	Public vehicle procurement	Camb County Council	-	-	n/a	n/a	-	-	Nothing in place at the moment

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53	Procuring low emission vehicles for own fleet where possible	Promoting low emission transport	Public vehicle procurement	Camb. City Council and shared services	In place	Ongoing	n/a	n/a	Ongoing	Ongoing	10 vans and 2 cars on fleet, around 10%. Replacement with low emission versions of larger vehicles will come forwards when cost difference is closer.
54	Fee reduction for low emission taxis	Promoting low emission transport	Taxi emission incentives	Camb. City Council	2016	2018	Minimum of 9 HCV and 5 PHV per annum per annum from 2018/19	1.5 – 4.5% reduction in NOx emissions	Due 2018	-	See text
55	Licensing conditions to require low emission taxis	Promoting low emission transport	Taxi Licensing conditions	Camb. City Council	2016	From 2018	Minimum of 9 HCV and 5 PHV per annum from 2018/19	1.5 – 4.5% reduction in NOx emissions	2 EV and 30 petrol hybrid taxis	-	See text
56	Lowering emissions from public service vehicles (buses and coaches)	Promoting low emission transport	Other	Camb City Council/ Camb. County Council/ Greater Cambridge Partnership	Ongoing	Ongoing	100% buses E6 or better No increase in emissions from additional services	Could be significant	35% bus journey kilometres E6 in Cambridge Core Area	-	See text EV buses being considered

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56a	EV Charging Strategy	Promoting low emission transport	Other	Camb City Council/ Camb. County Council/ Greater Cambridge Partnership /CACP	In early planning stage	Planned for 2020	-	-	-	-	Environmental Health team preparing position statement as first phase of strategic planning; it sets out current status, responsibilities, future ambitions. Initially for city, but to incorporate Combined Authority area in future.
57	Home-working policies	Promoting Travel Alternatives	Encourage and facilitate home working	TfC Camb County Council Camb City Council	Ongoing	Ongoing	-	n/a	In place	ongoing	To reduce the need to travel to work
58	Active Travel Infrastructure via GCP measures	Promoting Travel Alternatives	Intensive Active Travel campaign and infrastructure	TfC Camb County Council Greater Cambridge Partnership	Not at present	-	n/a	n/a	-	-	Nothing specific in place at the moment
59	Travel for Cambridge-shire	Promoting Travel Alternatives	Personalised Travel Planning	Camb County Council	Ongoing	Ongoing	n/a	n/a	Not recorded.	Ongoing	Can be required for major sites at point of residents moving in to ensure they are aware of all travel options/ options for travel other than private car.

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60	Refresh Cambridge City Council Travel Plan	Promoting Travel Alternatives	Other	Cambridge City Council	In discussion	Winter 2017/2018	Adoption of new Travel Plan	n/a	-	Winter 2017/2018	To work and for work
61	Workplace Travel Plan	Promoting Travel Alternatives	Promote use of rail	TfC Camb County Council	In place	ongoing	n/a	n/a	-		Discounts available for TfC partners
62	Cycle parking provision in Local Plan	Promoting Travel Alternatives	Promotion of Cycling	Environmental Services/ Planning District councils	In place	Ongoing	n/a	n/a	-	-	To be carried forward to future Local Plans, with standards reviewed where appropriate.
63	S106 agreements for cycling and walking infrastructure	Promoting Travel Alternatives	Promotion of Cycling	Environmental Services/ Planning District councils	In place	Ongoing	n/a	n/a	Ongoing	Ongoing	Part of development/ planning contributions
64	Cycle parking design guide	Promoting Travel Alternatives	Promotion of Cycling	Environmental Services/ Planning District councils	In place	Ongoing	n/a	n/a	In place	In place	https://www.cambridge.gov.uk/sites/default/files/docs/CycleParkingGuide_std.pdf
65	Schemes and grants	Promoting Travel Alternatives	Promotion of Cycling	Camb City Council/ Camb. County Council/	Ongoing	Ongoing	n/a	n/a	-	-	https://www.cambridge.gov.uk/cycling-and-walking

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66	Schemes and grants	Promoting Travel Alternatives	Promotion of walking	Camb City Council/ Camb. County Council/	Ongoing	Ongoing	n/a	n/a	-	-	https://www.cambridge.gov.uk/cycling-and-walking
67	Travel for Cambridge shire Travel Plan Services	Promoting Travel Alternatives	School Travel Plans	TfC Camb County Council	Ongoing	Ongoing	n/a	n/a	Not recorded.	Ongoing	Travel Plan Services offer help with writing, developing, maintaining and monitoring as well as support for Travel Plan implementation
68	Travel for Cambridge shire Travel Plan Services	Promoting Travel Alternatives	Workplace Travel Plans	TfC Camb County Council	Ongoing	Ongoing	n/a	n/a	Ongoing	Ongoing	Travel Plan Services offer help with writing, developing, maintaining and monitoring as well as support for Travel Plan implementation
69	Travel for Cambridge shire (TfC)	Promoting Travel Alternatives	Other	TfC Camb County Council	Ongoing	Ongoing	n/a	n/a	Ongoing	Ongoing	<p>TfC offers employers a range of services, tools and resources to support sustainable travel choices and commuting behavior, to help save time and money and improve staff health and wellbeing.</p> <p>The aim is to implement effective travel initiatives that promote cycling, walking, public transport and car sharing to work.</p>

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70	Cambridge Matters magazine	Public Information	Leaflets	Environmental health and Media Team, Camb City Council	Ongoing	Ongoing	n/a	n/a	Ongoing	Ongoing	Delivered to every household in the district. Air quality articles in each quarter
71	Twitter and Facebook	Public Information	Social media	Environmental health and Media Team, Camb City Council	Ongoing	Ongoing	n/a	n/a	Ongoing	Ongoing	As required
72	Provide information on request	Public Information	Radio	Environmental health and Media Team, Camb City Council	As requested	Ongoing	n/a	n/a	Ongoing	Ongoing	As required
73	Provide information on request	Public Information	TV	Environmental health and Media Team, Camb City Council	As requested	Ongoing	n/a	n/a	Ongoing	Ongoing	As required
74	Website	Public Information	Internet	Environmental health and Media Team, Camb City Council	Ongoing	Ongoing	n/a	n/a	Ongoing	Ongoing	Plenty of information and updates on the City Council website ³⁸

³⁸ <https://www.cambridge.gov.uk/air-pollution>

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75	Publicity campaign	Public Information	Other	Environmental health and Media Team, Camb City Council	In discussion	2018 onwards	n/a	n/a	n/a	-	Ongoing campaign to provide information about air quality and actions
76	Cam-paigns to provide information about impacts air pollution on health	Public Information	Other	Environmental health and Media Team, Camb City Council, PH Camb County Council	Ongoing	2018 onwards	n/a	n/a	n/a	-	Prepare and disseminate information about health impacts
77	Text Alerts when air quality is poor	Public Information	Other	Environmental health, Camb City Council, PH Camb County Council	In discussion	2018 onwards	n/a	n/a	n/a	-	Will require resource to set up
78	Campaign to provide information about impacts of wood burning, what type of wood to burn and how to burn it efficiently	Public Information	Other	Environmental health and Media Team, Camb City Council	Ongoing	2017 onwards	n/a	n/a	n/a	ongoing	Defra have recently produced information leaflets; these are available from the website and publicised in Cambridge Matters

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79	Publicity campaign	Traffic Management	Anti-idling enforcement	Environmental health and Media Team, Camb City Council	Ongoing	Ongoing	n/a	n/a	-	Ongoing	Anti-idling information in Cambridge Matters
80	Penalty notices for non-compliance	Traffic Management	Anti-idling enforcement	Camb City Council	In discussion	-	n/a	n/a	-	-	Would need additional resource for enforcement Additional by-laws may be required.
81	Expansion of residents' parking schemes	Traffic Management	Emission based parking and permit charges	Highways Team, Camb County Council	2017	2018	Number of parking spaces in schemes	n/a	Discussion phase	Rolling programme	Will limit commuter traffic
82	Wider expansion of residents' parking schemes	Traffic Management	Emission based parking and permit charges	Highways Team, Camb County Council	2017	2019	Number of parking spaces in schemes	n/a	Discussion phase, tentative	Rolling programme	Will further limit commuter traffic
83	Congestion charging or road user	Traffic Management	Road-User charging/ congestion zones	Infrastructure Team, Camb County Council, Greater Cambridge Partnership	Not currently under discussion	TBC	n/a	-	-	-	May be part of a Clean Air Zone.

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84	Reconfiguration of road space in Cambridge	Traffic Management	Strategic highways improvements	Infrastructure Team, Camb County Council, Greater Cambridge Partnership	In discussion	TBC	Agreement and implementation of schemes	n/a at this stage	n/a	TBC	County/City/ GCP scheme. See text
85	Creation of better cycling and walking on key routes	Traffic Management	Re-prioritisation of road space	Infrastructure Team, Camb County Council, Greater Cambridge Partnership	In discussion	TBC	n/a	n/a	n/a	TBC	County/City/ GCP scheme. See text Also see Transport and Planning Infrastructure
86	Extension of Core Area schemes – limiting access to city centre	Traffic Management	Access management	Infrastructure Team, Camb County Council, Greater Cambridge Partnership	In discussion	TBC	n/a	Could be substantial in Core Area	n/a	TBC	County/City/ GCP scheme. See text
87	No measure proposed	Traffic Management	Testing vehicle emissions	-	-	-	-	-	-	-	Not required.
88	Review of traffic signals in Cambridge	Traffic Management	UTC, congestion management, traffic reduction	Greater Cambridge Partnership	Review in progress	TBC	n/a	n/a	Report due	n/a	GCP study to review existing infrastructure and consider future technology which may improve traffic flow and reduce idling, and could include bus prioritisation.

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89	Workplace Parking Levy for employers with more than 300 employees in an area to be specified	Traffic Management	Workplace Parking Levy	Camb County Council/ Greater Cambridge Partnership	In discussion	TBC	TBC	n/a	n/a	n/a	County/City/ GCP scheme. See text
90	No new measures planned	Traffic Management	Parking enforcement	Camb County Council	In place	In place	n/a	n/a	n/a	Ongoing	No further action required unless the civil enforcement team take up penalty notices for idling.
91	Improvements to bus routes	Transport Planning and Infrastructure	Bus route improvements	Camb County Council/ Greater Cambridge Partnership	In discussion	TBC	n/a	n/a	Ongoing	Ongoing	County/City/ City Deal scheme. See text A1307 Three Campuses/ Cambourne to Cambridge/Histon Road/Milton Road/City Access
92	New and/or improved cycle routes	Transport Planning and Infrastructure	Cycle network	Camb County Council/ Greater Cambridge Partnership	In discussion	TBC	TBC	n/a	Chisholm Trail plans agreed	TBC	County/City/ City Deal scheme. See text. A10 Royston to Cambridge/A1307 Three Campuses/ Cambourne to Cambridge/Histon Road/Milton Road/City Access/Chisholm Trail/Cross City Cycling/Greenways project

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93	New and/or improved walking routes	Transport Planning and Infrastructure	Cycle network	Camb County Council/ Greater Cambridge Partnership	In discussion	TBC	TBC	n/a	Chisholm Trail plans agreed	TBC	County/City/ City Deal scheme. See text. A10 Royston to Cambridge/A1307 Three Campuses/ Cambourne to Cambridge/Histon Road/Milton Road/City Access/Chisholm Trail/Cross City Cycling/Greenways project
94	Bike Hire schemes	Transport Planning and Infrastructure	Cycle hire scheme		In place	n/a	n/a	n/a	n/a	n/a	Ofo is trialling a bike hire scheme in Cambridge. This is viable without intervention from local authorities.
95	Improvements to P&R sites	Transport Planning and Infrastructure	Public transport improvements – interchanges and stations	Camb County Council/ Greater Cambridge Partnership	In discussion	TBC	TBC	n/a	n/a	TBC	Greater Cambridge Partnership scheme. See text
96	Piloting rural hubs	Transport Planning and Infrastructure	Public transport improvements – interchanges and stations	Camb County Council/ Greater Cambridge Partnership	In discussion	TBC	n/a	n/a	n/a	TBC	Greater Cambridge Partnership, see text
97	New station to serve the hospital and bio-medical campus	Transport Planning and Infrastructure	Public transport improvements – interchanges and stations	Greater Cambridge Partnership with CBC2020 campus	In discussion	TBC	n/a	n/a	n/a	TBC	Unlikely to be completed in the lifetime of this Plan but important for future.

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98	No measure proposed	Vehicle fleet efficiency	Driver training and ECO aids	-	-	-	-	-	-	-	Nothing in place at the moment
99	No measure proposed	Vehicle fleet efficiency	Fleet efficiency schemes	-	-	-	-	-	-	-	Nothing in place at the moment
100	No measure proposed	Vehicle fleet efficiency	Promoting Low Emission Public Transport	-	-	-	-	-	-	-	Nothing in place at the moment
101	No measure proposed	Vehicle fleet efficiency	Vehicle retrofitting	-	-	-	-	-	-	-	See under public transport improvement
102	Improve air quality by increasing tree cover	-	-	Camb City Council	In discussion	TBC	-	-	Part of arboricultural policy to increase canopy cover.	TBC	Disruption of air flow intercepting particles as well as absorption into leaf tissue. Favour hypo-allergenic species