

Cambridge Waste Water Treatment Plant Relocation Project  
Anglian Water Services Limited

# Environmental Statement

## Chapter 11: Community

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## Summary

### Introduction

This chapter of the Environmental Statement (ES) presents the findings of the Environmental Impact Assessment (EIA) with specific relation to Community. Its purpose is to inform how the surrounding communities may be affected by the relocation of the Cambridge Waste Water Treatment Plant. This community assessment fulfils the requirement to consider potential ‘population’ effects whilst human health is assessed in Chapter 12: Health.

### Assessment approach

There is no set industry guidance which outlines how to assess community effects. The Highways England Design Manual for Roads and Bridges (DMRB) LA 112 (Design Manual for Roads and Bridges, 2019) provides guidance on ‘population and human health’ assessments. Although DMRB LA 112 is primarily applied to linear transport schemes, some aspects of the guidance are applicable for community assessments of infrastructure in other sectors. Where appropriate, DMRB LA 112 has been followed to guide the assessment to assess potential effects on private property and housing, community facilities, businesses and areas of open space and recreation. However, professional judgement has been used so that the assessment is proportionate and uses criteria specific to this type of infrastructure.

The study area has been defined by analysing potential community effects as a result of construction, operation and decommissioning (as described in Chapter 2 of the ES (App Doc Ref 5.2.2) in relation to the existing Cambridge WWTP) of the Proposed Development. This included analysing the study areas of the technical disciplines which inform the community chapter, namely: Air Quality, Noise and Vibration, Odour, Landscape and Visual Amenity, Traffic and Transport assessments. Baseline information within the study area was collected through a detailed desktop review of existing relevant studies and datasets, including a site walkover and recreational user count surveys.

Key communities in the study area are Waterbeach, Horningsea, Milton, Chesterton and Fen Road, Fen Ditton and Stow cum Quy. The chapter assesses changes within these areas associated with the construction, operation and decommissioning phases of the Proposed Development. It does so through an impact methodology, which determines whether or not a community impact is significant. It sets how people living, working and undertaking recreational activities in these locations would be affected during construction, operation and decommissioning and describes how these effects can be mitigated.

### Summary relevant mitigation

In developing the Proposed Development through an iterative process, including consultation and engagement with consultees, and via the Environmental Impact Assessment (EIA) process, the Applicant has identified and incorporated suitable measures and mitigation for potentially significant adverse effects, as well as maximising beneficial effects where possible.

Some measures are 'embedded' in the design of the Proposed Development for which consent is included in Schedule 1 to the Development Consent Order (DCO) and the accompanying Works Plans. These are considered primary mitigation. For example, adjustment of Order Limits to avoid sensitive features, amending the sizing and location of temporary access routes and compounds.

Secondary measures may be detailed activities for example the preparation of detailed Archaeological Investigation Mitigation Strategy (AIMS) in accordance with the CoCP, the preparation and delivery of a monitoring plan for specific matters (air quality, water quality) or the preparation and delivery of specific environmental management plans (for example air, noise, water), and the preparation and implementation is secured through the CoCP. These secondary measures are differentiated from the good practice measures.

Tertiary measures comprise good practice measures (such as measures within Considerate Contractors Scheme) and measures integrated into legal requirements secured through environmental permits and consents (least flexible as either the legislation exists to create the mitigation or does not (i.e. Protected Species Licensing)).

### **Summary construction effects**

#### Temporary changes to employment

During construction of the proposed WWTP and Waterbeach pipeline, there would be a beneficial impact on the economy through the provision of employment opportunities through supply chain benefits to the economy. The effects on employment during the construction phase are assessed to be minor beneficial, which is not significant.

#### Temporary requirement for land to install the Waterbeach pipeline

CBS Automotive is a vehicle installation business located on Clayhithe road to the south of the village of Clayhithe. The construction of the proposed Waterbeach pipeline would potentially temporarily require land from CBA Automotive. Access to the business will be maintained and the temporary use of land will not inhibit CBS Automotive from being able to continue to operate. Therefore, no further mitigation is required, and the likely significance of effect would be slight adverse.

#### Temporary changes to access affecting residents on Low Fen Drove Way

There are residents who live on Low Fen Drove Way in Stow cum Quy to the north east of the Proposed Development. These residents may experience temporary delays to access during the construction of the proposed WWTP from the increased number of construction vehicles on Low Fen Drove Way. As access would be maintained, and only one property is impacted, the significance of effect is minor adverse and not significant.

#### Temporary changes to recreational resources and open spaces

Recreational users of the River Cam will experience temporary changes due to the construction of the outfall structure to the River Cam. This will temporarily reduce the width of the navigation for river users such as rowers, punters, boaters, and canoers.

Measures to control the construction of the outfall are set out within section 3.1 of Code of Construction Practice (CoCP) Part B (Appendix 2.2, Application Document Reference 5.4.2.2). These include defining a minimum river width that must be retained throughout the duration of the construction. In addition, there are specific measures set out to provide advance warning to potentially affected river users on the duration and type of works within the river. Although mitigation measures are applied to reduce the impact, a temporary reversible major effect on river users remains which is significant.

The public right of way (PRoW) 85/6 along the east bank of the River Cam would be temporarily diverted for a period of up to 11 months for approximately 770m around the land temporarily required for construction of the outfall. It is assessed that there would be a temporary moderate adverse effect on the users of (PRoW) 85/6 owing to the combination of distance and duration of the temporary diversion.

Recreational users of Low Fen Drove Way, including byway 85/14 and PRoW 130/17, will experience temporary disruption during the construction of the temporary access road from Low Fen Drove Way into the land required for the construction of the permanent access to the proposed WWTP. The construction of the permanent access to the proposed WWTP has been scheduled at the start of the construction programme so that it can be used for the remainder of the construction period to minimise the time that Low Fen Drove Way is used to access land required for the construction of the proposed WWTP. In addition, measures within section 7.6 (Traffic and transport) of the CoCP Part A (Appendix 2.1, App Doc Ref 5.4.2.1) would be applied in relation to the management of works temporarily affecting PRoW. This includes maintaining access for pedestrians, walkers and cyclists along Low Fen Drove Way for the duration of the construction period. Taking into account the application of mitigation measures, it there would be a temporary slight adverse effect recreational user of Low Fen Drove Way.

Recreational users of Horningsea Road to the south of Horningsea to Fen Ditton during construction of the proposed WWTP will experience temporary disruption during the construction of the final effluent pipeline across Horningsea Road, construction of the improved shared cyclist / pedestrian footway and construction of the new ghost island, the construction of the new arm to the existing signalised junction between Horningsea Road and the A14 and use of Horningsea Road by construction vehicles to access land required for the construction of the proposed WWTP. As with PRoW mentioned above, section 7.6 (Traffic and transport) of the CoCP together with the Construction Traffic Management Plan (CTMP) (Appendix 19.7, App Doc Ref 5.4.19.7) sets out the measures applied for the management of affected routes including footways/ cycleways. Although this disruption is not likely to adversely impact people from being able to travel between communities or access recreational opportunities, the duration of construction is for approximately 40

months which is a substantial period of time. It is assessed that there would be a slight adverse effect on the users of Horningsea Road which is not significant.

Construction impacts on recreational receptors are also associated with the use of land required for the construction of the Waterbeach pipeline. Recreational users of PRoW (130/16, 130/10, 130/12, 130/30, 247/10 and 130/13) to the east of Waterbeach may experience temporary disruption to use of these routes which provide access to a wider network of PRoW to the north and south. The Scheme Order Limits have been modified to avoid interface with footpath 130/10 Horningsea. There are six PRoW which would be temporarily affected in construction. For these routes, safety gates will be put in place and users allowed to safely cross the working area. Taking into account mitigation measures there would be a temporary neutral effect on the users of PRoW, which is not significant.

### **Summary operation effects**

No adverse community effects associated with the operation of the proposed WWTP are anticipated during operation. There are no anticipated residual significant adverse noise, air quality, landscape and visual effect, impacts on access or any temporary or permanent land requirements. Furthermore, the operation of the proposed WWTP will be subject to emission limits and operational obligations within the environmental permit required for operation.

A new bridleway connection will be provided as part of the Proposed Development, formalising connections for walkers, cyclists and horse riders to the existing PRoW network, providing new circular routes and improving accessibility between communities. There will also be an extension of the footway on the eastern side of Horningsea Road to Low Fen Drove Way and widening of the shared pedestrian/cyclist on the western side of the carriageway. A publicly accessible permissive path will run through the new landscaped area, which will be of a suitable width to be shared by pedestrians and recreational cyclists. Within the new space for the landscaping proposals, interpretation boards, finger posts and scattered informal bench seating will be provided as part of the new setting. The effects of the Proposed Development on community receptors during operation are slight beneficial, as a result of these new recreational opportunities.

People residing and working in the community study area will experience permanent minor beneficial effects from the provision of the discovery centre. The operation of the discovery centre will provide a multi-use space which will provide awareness and educational opportunities on the topics such as the circular economy, the water life cycle and wider environment and sustainability issues.

### **Summary decommissioning effects**

No community effects associated with the existing Cambridge WWTP are anticipated during the decommissioning phase. There are no anticipated residual significant adverse noise, air quality, landscape and visual effect, impacts on access or any temporary or permanent land requirements.



# 1 Introduction

## 1.1 Purpose of this chapter

- 1.1.1 This chapter of the Environmental Statement (ES) presents the findings of Environmental Impact Assessment (EIA) completed in relation to the potential impacts of the Proposed Development on Community.
- 1.1.2 The ES has been prepared as part of the application to the Planning Inspectorate (PINS) for development consent. This chapter considers the potential on population, employment and economic activity, private property and housing, businesses, community facilities and open space and recreational impacts of the Proposed Development during its construction (including commissioning), operation and maintenance, and decommissioning phases.
- 1.1.3 This chapter summarises information from supporting studies, technical reports and the questions asked within the interviews with community receptors, businesses and recreational groups and organisations are detailed in the Consultation Report (App Doc Ref 6.1), and Community Questionnaires (Appendix 11.1, App Doc Ref 5.4.11.1).
- 1.1.4 This chapter is intended to be read as part of the wider ES, with particular reference to:
- Chapter 6: Agricultural Land and Soils (the assessment of effects on farm businesses are covered in this chapter;
  - Chapter 7: Air Quality;
  - Chapter 14: Land Quality;
  - Chapter 15: Landscape and Visual Amenity;
  - Chapter 17: Noise and Vibration;
  - Chapter 18: Odour;
  - Chapter 19: Traffic and Transport;
  - Recreation user counts (Appendix 19.4, App Doc Ref 5.4.19.4); and
  - The Landscape Ecology and Recreation Management Plan (LERMP) (Appendix 8.14, App Doc Ref 5.4.8.14).

## 1.2 Competency statement

- 1.2.1 Summaries of the qualifications and experience of the Chapter authors are set out in Table 1-1.

**Table 1-1: Competent experts**

Author	Qualification / Professional Membership	Years of experience	Project experience summary
█	Member of the Institute of Environmental Management and Assessment MSc Environmental Assessment BSc Geography	20 years	Lead Author of the health components of a large aviation project in the UK. Lead Author of health and community components of a nationally significant rail project. Lead Author of Community and Health topic for hybrid bill rail scheme.
█	BSc Geography and Environmental Science Bachelor of Laws	7 years	Authored the Population and Human Health Chapter for a National Highways Scheme going through the Development Consent Order (DCO) process. Co-Authored the Socio-economics Chapter for an energy development that went through the DCO process. Co-Authored the Socio-economics Chapter for an energy development which obtained DCO consent.
█	MSc Economics (Development Economics) MA (hons) Economics and International Relations	8 years	Co-authored the community, health and equalities components of a nationally significant rail project Authored the Population and Human Health chapter for a National Highways scheme going through the Development Consent Order (DCO) process. Lead author of the Population and Human Health chapter and Social Performance component as part of an EIA energy project
█	BA Environmental Management	4 years	Assisted with the Socio-economics Chapter for a large alternative raw materials project. Assisted with the Population and Human Health Chapter of a Waste Water treatment site. Assisted with the Socio-economics Chapter for two flood defence schemes.

## 1.3 Planning policy context

### National Planning Statement (NPS) Requirements

- 1.3.1 Planning policy on waste water Nationally Significant Infrastructure Projects (NSIPs), specifically in relation to community, is contained in the National Policy Statement (NPS) for Waste Water (Department of Environment, Food and Rural Affairs, 2012).
- 1.3.2 Table 1-2 sets out how the scope proposed in this chapter complies with the NPS for Waste Water.

**Table 1-2: Scope and NPS compliance**

NPS requirement	Compliance of EIA scope with NPS requirements
<p>Section 3.2 states that the Applicant needs to set out information on the likely significant social and economic effects of the development, which could include receptors such as employment, equality, community cohesion and well-being.</p>	<p>The scope of the community assessment includes potential likely social and economic effects on private property and housing (including residential amenity), businesses, community facilities, employment and economic activity surrounding the Proposed Development.</p> <p>Factors influencing wellbeing are considered in Chapter 12: Health. Equality effects are considered in a separate Equality Impact Assessment (EqIA) (App Doc Ref 7.12) which is submitted as part of the Development Consent Order application.</p>
<p>Section 4.8 sets out the Government’s commitment to ensure adequate provision of open space and sports and recreation facilities to meet the needs of local communities. Applicants are required to consult the local community on their proposals to build on open space, sports or recreation facilities.</p>	<p>The scope of the community chapter includes an assessment of potentially significant effects on existing community facilities, open space and recreational land surrounding the Proposed Development.</p>
<p>Section 4.15 suggests the types of socio-economics impacts that could be assessed during the construction, operations and decommissioning phases. They include:</p> <ul style="list-style-type: none"> <li>● The creation of jobs and training opportunities;</li> <li>● Changes to PRowS, including footpaths, bridleways and byways;</li> <li>● The changing influx of workers which may alter the demand for services and facilities in the areas surrounding the Proposed Development;</li> <li>● The equalities impact on people living, working or owning businesses who</li> </ul>	<p>The scope of the community chapter includes an assessment of potentially significant effects on jobs, training opportunities, and changes to Public Rights of Way (PRow).</p> <p>Potential effects on amenity resulting from a combination of other effects (air quality, landscape and visual amenity, noise and vibration, traffic and transport and odour) at the same location are considered within the scope of the assessment.</p> <p>The demand for local accommodation and public services has been scoped out of the assessment due to the large local and regional labour market so the construction workforce will be partially home based Therefore there is</p>

NPS requirement	Compliance of EIA scope with NPS requirements
<p>may be displaced as a result of the development.</p> <p>Socio-economic impacts may be linked to other impacts, such as visual impact.</p> <p>Section 4.15 also suggests that applicants assess existing socio-economic conditions in the areas surrounding the Proposed Development.</p>	<p>not expected to be an influx of workers. Additionally, the specialist workforce that may be required for part of the construction period are not anticipated to alter the demand for services and facilities given the low number and likelihood that they will be primarily home based.</p> <p>Equality effects are considered in a separate EqIA (App Doc Ref 7.12). The existing socio-economic conditions in the areas surrounding the Proposed Development have been set out in Section 3 Baseline Environment of this chapter.</p>

## National Planning Policy

1.3.3 National planning policy of relevance to community, and pertinent to the Proposed Development, are listed below.

- Section 6: Building a strong, competitive economy (paragraphs 82-83);
- Section 12: Achieving well designed places (paragraphs 127-128); and
- Section 8: Building health and safe communities (paragraphs 92, 96 and 98) (Ministry of Housing, Communities and Local Government, 2021).

## Local Planning Policy

1.3.4 Local planning policy of relevance to the Proposed Development includes:

- South Cambridgeshire Local Plan 2018 Policy SC/2 (South Cambridgeshire District Council, 2018):
  - Policy SC/8: Protection of Existing Recreation Areas, Playing fields Allotments and Community Orchards;
  - Policy SC/9: Lighting Proposals which requires new external lighting to not adversely impact on the local amenity of neighbouring or nearby properties, or on the surrounding country; and
  - Chapter 8: Building a strong and competitive economy (paragraphs 8.3, 8.5, 8.6) is also relevant.
- Cambridge City Council Local Plan (Cambridge City Council, 2018) with particular reference to:
  - Section Five: Supporting the Cambridge Economy;
  - Section Seven: Protecting and enhancing the character of Cambridge; and

- Section Eight: Services and local facilities. (Cambridge City Council, 2018).
  - Cambridgeshire and Peterborough Minerals and Waste Local Plan 2021 (Cambridgeshire County Council and Peterborough City Council, 2021) with particular reference to:
    - Policy 18: Amenity Considerations, which outlines the importance of health and wellbeing within the community.
  - Draft Active Travel Strategy for Cambridgeshire (March 2022) with particular reference to:
    - Policy AT07: Accessible and inclusive provision;
    - Policy AT10: Improving and support infrastructure of the existing network;
    - Policy AT16: Creating a quality active travel network; and
    - Policy AT19: Cycling and walking in rural areas.
- 1.3.5 The Greater Cambridge Local Plan is intended to replace both the adopted Cambridge City and South Cambridgeshire Local Plans 2018 and covers the period to 2041. In November/December 2021 public consultation was held on the Greater Cambridge Local Plan First Proposals. ‘Great places’ is highlighted as a key element of the First Proposals in order to ‘Sustain the unique character of Cambridge and South Cambridgeshire, and complement it with beautiful and distinctive development, creating a place where people want to live, work and play’.
- 1.3.6 Proposed policy from the Great Cambridge Local Plan of relevance to the Proposed Development are:
- Policy WS/HD: Community, sports and leisure facilities;
  - Policy WS/IO: Creating inclusive employment and business opportunities through new developments;
  - Policy GP/PP: People and place responsive design; and
  - Policy GP/QP: Establishing high quality landscape and public realm.
- 1.3.7 Cambridgeshire and Peterborough Minerals and Waste Local Plan 2021 (Cambridgeshire County Council and Peterborough City Council, 2021) with particular reference to:
- Policy 18: Amenity Considerations, which outlines the importance of health and wellbeing within the community.
- 1.3.8 Draft Active Travel Strategy for Cambridgeshire (March 2022) with reference to:
- Policy AT07: Accessible and inclusive provision;
  - Policy AT10: Improving and support infrastructure of the existing network;

- Policy AT16: Creating a quality active travel network; and
- Policy AT19: Cycling and walking in rural areas.

## 1.4 Legislation

- 1.4.1 The Infrastructure Planning (Environmental Impact Assessment) Regulations (Department for Communities and Local Government, 2017), states that the EIA must identify, describe and assess in an appropriate manner, in light of each individual case, the direct and indirect significant effects of the Proposed Development on population and human health. The population aspect is outlined within this chapter. Health aspects are outlined in Chapter 12: Health.
- 1.4.2 An Equality Impact Assessment, which is included in the application (App Doc Ref 7.12), specifically considers the impact of these potential changes on the needs of groups with protected characteristics under the Equality Act 2010 (Government Equalities Office, 2010) and should be read in conjunction with this chapter and its associated figures and appendices.

## 1.5 Consultation

### Scoping

1.5.1 Table 1-3 provides a summary of key points raised during scoping. The responses from PINS where issues have agreed to being scoped out, and no further information is required to justify the potential effect being scoped out are included in Section 2.7.

**Table 1-3: Key points raised during scoping**

ID	Consultee	Points raised	Response
3.6.3	PINS	<p>The Applicant notes that since the Proposed Development will replace the existing Cambridge WWTP there will not be a significant change in operational employment. The Scoping Report states that “most additional jobs during the Operational Phase will be filled by people living within commuting distance” and Table 21-8 states that “there may be a small number of additional permanent jobs” but Chapter 2 suggests that there will be no additional jobs during operation.</p> <p>Although it is not clear whether the proposal will / will not result in additional operational employment (and its quantum is yet to be fully defined), the Inspectorate agrees that this matter can be scoped out of the ES as significant effects in terms of operational employment are not likely with the purported small increases. The Applicant should explain the quantum of these staff increases in their description of development in supporting this position.</p>	<p>The potential effects of operational employment and training is scoped out of the assessment. The quantum of staff required during construction is described in Chapter 2: Project Description.</p>

ID	Consultee	Points raised	Response
N/A	South Cambridgeshire District Council and Cambridge City Council Greater Cambridge Shared Planning	There is no doubt that the Proposed Development is going have a significant short, medium and potentially long-term impact on the surrounding communities and we would be interested to see what mitigation measures will be put in place for those measures deemed to be “scoped in”.	Planned mitigation measures for the impacts scoped in are set out in Section 1.1 (Design/mitigation measures adopted as part of the Proposed Development), Section 4 (Assessment of Effects) and are summarised in Section 0 (Conclusion and Summary).
N/A	South Cambridgeshire District Council and Cambridge City Council	Paragraph 11.4.4 (point 5) states that an Equality Impact Assessment (EqIA) will be included in the documents submitted for the Development Consent Order. We would recommend that the assessment of community impact should encompass all communities within the study area which are likely to be impacted. It should not be left to the EqIA to pick up those groups that were not covered in the EIA, rather the EqIA should look into any differential impacts that are identified within the EIA. Therefore, it is imperative that all communities are engaged and impacts they will experience are fully assessed as part of the EIA in the first instance.	This chapter is being undertaken in conjunction with the EqIA. The authors of each have collaborated to ensure community impacts are accurately assessed across both documents.
N/A	South Cambridgeshire District Council, Cambridge City Council Greater Cambridge Shared Planning	Paragraph 11.8.1 states that “potential impacts to community facilities will be identified and analysed via a desk study...and informed by a site visit”, we would encourage the Applicant to engage with as many of the bodies/organisations/facilities listed in 11.5.11 and 11.5.12 to obtain this data rather than base any assessment exclusively on a desk study. This should be considered across all zones.	Community interviews were undertaken as part of the assessment with the aim of identifying all potential community impacts. These were undertaken alongside stakeholder engagement as part of the EqIA to ensure all potential community impacts are captured.  Fen Ditton Primary School, Waterbeach Primary School, Shirley Community Primary School, Hatley Court Care Home and Little Stars Nursery were contacted and offered a meeting to understand the existing environment and potential impacts as a result of the Proposed Development.



ID	Consultee	Points raised	Response
			<p>Fen Ditton Primary School responded and a meeting was held which has informed the assessment. The other community facilities either did not respond or declined to be interviewed. Further detail is provided in Community Questionnaires (Appendix 11.1, App Doc Ref 5.4.11.1).</p>
N/A	<p>South Cambridgeshire District Council and Cambridge City Council Greater Cambridge Shared Planning</p>	<p>There is no mention of the Fen Rd gypsy traveller community and the potential impact the Proposed Development will have on this protected community. We will expect this matter to be ‘scoped in’ in the EIA. We would also expect processes to be put in place to engage and capture the views of this community.</p>	<p>The potential impacts on the Fen Road traveller community have been considered within the assessment detailed in Section 4.2 (Construction phase) of this chapter. As Fen Road gypsy traveller community are a group with protected characteristics, the differential and disproportionate impacts on this community will be considered as part of the EqIA which is being submitted as part of the DCO application.</p>
N/A	<p>South Cambridgeshire District Council and Cambridge City Council</p>	<p>The following two scenarios must be ‘scoped in’ for the community aspect of the EIA:</p> <ul style="list-style-type: none"> <li>● The potential impacts of the existing site being decommissioned (as currently proposed) but not redeveloped.</li> <li>● The potential impacts of construction lasting longer than anticipated.</li> </ul>	<p>The potential effects of the existing Cambridge WWTP being decommissioned for the purpose of permit rescinding has been included as part of this assessment detailed in Section 4.44.4 (Decommissioning the existing Cambridge WWTP). The redevelopment of land at the existing Cambridge WWTP would be subject to a separate planning application and associated environmental impact assessment (EIA) and is not covered in the ES for this application. The durations for construction are outlined in Chapter 2: Project Description, which form the basis of the assessment.</p>
N/A	<p>Greater Cambridge Shared Planning</p>	<p>We are aware of ongoing discussions regarding the lack of mains sewage connections to the Fen Road traveller community and if a solution to this is brought forward that is reliant on the proposed transfer tunnel then the scope of the EIA should be drawn accordingly.</p>	<p>Under the framework of the DCO process there is no mechanism to provide this feature. The Fen Road Traveller site does not satisfy the first time sewerage criteria for new connections which do not connect sites for static caravans.</p>

ID	Consultee	Points raised	Response
N/A	Greater Cambridge Shared Planning	We welcome the appointment of a Community Liaison Officer, and would request that, once in post, this person contact the case-officer to be put in touch with the relevant Communities teams at SCDC and City.	The Code of Construction Practice (CoCP) Part A (Appendix 2.1, App Doc Ref 5.4.2.1) Section 2 requires the preparation for a Community Liaison Plan (App Doc Ref 7.8). This defines the roles and responsibilities of the Community Liaison Officer (CLO). It is intended that this person will contact the case officer with the relevant Communities teams at SCDC and City.
N/A	Cambridgeshire County Council	Paragraph 11.5.2. and Table 11-3 – this lists the key communities within the Community LIA. This list of settlements in para 11.5.2 should also include Waterbeach and the population data in Table 11-3 and the subsequent paragraphs should be adjusted accordingly.	Communities within the community study area (based on the Order Limits for the DCO) includes settlements within this area and the population data for these settlements. The referenced paragraphs which outlined the proportion of children, young people, the working age population and older people, have been updated accordingly.
N/A	Cambridgeshire County Council	Section 11.8 – The resources and receptors listed in paragraph 11.8.1 as being scoped in are agreed. Likewise, the resources and receptors in Table 11-9 (scoped out) are also agreed.	No response required. The Applicant agrees with the comments made by the stakeholder.
N/A	Cambridgeshire County Council	Paragraph 11.10.7 and Table 11-11 – The magnitude of the effect will be determined in part by its Extent, i.e. how many community resources and receptors are likely to experience impacts. Whilst noting paragraph 11.01.9, care needs to be taken to ensure that the effects at particular receptors are not missed as a consequence of this cumulative approach.	This feedback is noted and care has been taken to ensure that receptors are not missed.
N/A	Fen Ditton Parish Council	FDPC suggests the Planning Inspectorate directs AW as to whether recreational users of the proposed new footpaths/tracks to be created immediately around the new works site should be treated as receptors of equal importance and sensitivity as recreational users on Low	The sensitivity of recreational users on Low Fen Drove Way and other existing PRoW have been given a sensitivity based on the existing use of these recreational routes. Table 2-2 outlines the methodology which was used to assign sensitivity to receptors. The potential sensitivity for

ID	Consultee	Points raised	Response
		Fen Drove and other existing PROW who should be considered as most sensitive	recreational users of the proposed new recreational routes was also assigned utilising this methodology.
N/A	Fen Ditton Parish Council (FDPC)	<p>FDPC submits that information collated by residents must be included as follows:</p> <ul style="list-style-type: none"> <li>● Table 11.3 Community allotments at the end of Priority Road, Horningsea should be included</li> <li>● Clause 11.5.11 - Community Facilities should include Horningsea Adult and Toddler Group</li> <li>● Table 11.3 Laney Meadow, west side of Horningsea Road in Horningsea village, public open space should be included. This is also missing text listing at 11.5.12 Open Space &amp; Recreational Areas.</li> <li>● Cemeteries are missing from listing - Horningsea Parish Council Cemetery on Horningsea Road, Fen Ditton Parish Council Cemetery on Plough Hill/Church Chur and City Cemetery on Newmarket Road</li> <li>● Table 11.3 should include various community amenities in Fen Ditton. The church is not marked, playground, village halls are not included.</li> <li>● Clause 11.5.3 and Table 11-3 and projections there from should be updated with 2021 Census data in future Project documents.</li> </ul>	<p>The comments from Fen Ditton Parish Council have been included when describing the baseline environment. Those community facilities and areas of open space that are within the study area have been included in Section 3 (Baseline Environment). All data included within the assessment is the most up to date based on what is available from the Office of National Statistics (ONS). Where possible, 2021 Census data has been included.</p>

## Technical Working Groups

1.5.2 Table 1-4 provides a summary of key points raised during engagement with Technical Working Groups.

**Table 1-4: Key points raised during engagement with Technical Working Groups**

Date	Consultee	Points raised	How and where addressed
June 2022	Public Health and Communities Statement of Common Ground (SOCG) Meeting  Representatives from the following organisations attended: <ul style="list-style-type: none"> <li>Cambridgeshire County Council;</li> <li>Greater Cambridge Shared Planning Services; and</li> <li>South Cambridgeshire District Council</li> </ul>	The Draft Active Travel Strategy for Cambridgeshire is currently out for consultation. Requested that it be considered within the assessment.  The potential anti-social behaviours at Low Fen Drove Way were discussed. It was agreed that there needs to be a common understanding within the SOCG as to how the project impacts Anti-Social Behaviour.	The relevant objectives and policies in the Draft Active Travel Strategy for Cambridgeshire are outlined in Section 2.3 (Study area) of this chapter.

### Statutory s42 consultation

1.5.3 Table 1-5 provides a summary of key points raised during statutory s42 consultation.

**Table 1-5: Key points raised during statutory consultation**

Date	Consultee	Points raised	How and where addressed
April 2022	Central Bedfordshire Council	No comments to make in relation to the Community Chapter.	The stakeholder's comment is noted.
April 2022	North Hertfordshire Environmental Health Team	The North Hertfordshire Environmental Health Team were consulted and had no concerns relevant to the Community Chapter.	The stakeholder's comment is noted.
April 2022	Peterborough City Council	No comments to make in relation to the Community Chapter.	The stakeholder's comment is noted
April 2022	Uttlesford District Council	No comments to make in relation to the Community Chapter.	The stakeholder's comment is noted

Date	Consultee	Points raised	How and where addressed
April 2022	Cambridgeshire County Council	The Council welcomes the recognition that a number of PROW will be temporarily affected by the scheme, as identified on pages 25-28 of this PEI. The County Council as the LHA would request that the detail as to how these will be managed is agreed through the Access Technical Working Group in advance of the DCO submission and documented as part of the Traffic Management Plan. This is because it is helpful for all traffic management issues for all classes of highway to be held together in one place for ease of reference. The Council asks that this is cross-referenced in the Rights of Way Management Plan.	The location and effect on users of PROW due to diversions and the delay to users is provided in Chapter 18: Traffic and Transport.  Secondary mitigation, where required, is detailed within section 6.7 (Traffic and transport) of the CoCP Part A (Appendix 2.1, App Doc Ref 5.4.2.1), App Doc Ref 4.6 Rights of Way Plans, and Construction Traffic Management Plan (CTMP) (Appendix 19.7, App Doc Ref 5.4.19.7).
April 2022	Natural England	Natural England supports these proposals; however, we also support recognition within the PEIR that these enhancements could increase visitor footfall and recreational pressures within Stow-cum-Quy Fen SSSI, in addition to Low Fen Drove CWS. We agree with the statement in the PEIR that impacts should be avoided. In our view the proposed mitigation measures set out in the LERMP underplay the severity of current visitor pressure at Stow-cum-Quy Fen SSSI and the likely combined effects of future development on this site and the wider area.	The landscape masterplan contained with the LERMP (Appendix 8.14, App Doc Ref 5.4.8.14) illustrates the purpose of the landscape is to improve recreational connectivity and connectivity to surrounding landscape and proposed nature networks rather than to create a visitor destination.  Cumulative Effects are reported in Chapter 22: Cumulative Effects.
		In view of the scale of the project and potential for in combination effects with the Local Plan development, NE believe recreational effects and greater benefits for people nature and climate change should be addressed through a separate collaborative strategy.	Cumulative effects arising from the Proposed Development and the Local Plan development are addressed in Chapter 22: Cumulative Effects.
		Natural England’s view is that the Proposed Development should take a collaborative approach, in partnership with relevant developers and other stakeholders, to fully explore opportunities for delivery of strategic landscape scale enhancements that will contribute towards the Nature Recovery Network and the Strategic Green Infrastructure Initiatives of the emerging Greater Cambridge	Measures proposed for landscaping contained within the LERMP (Appendix 8.14, App Doc Ref 5.4.8.14) support Nature Recovery Network with new and enhanced vegetated areas supporting local species in their movements in the local area.

Date	Consultee	Points raised	How and where addressed
		<p>Local Plan. Together with the National Trust we have identified potential opportunities between the development site, SSSIs, CWSs, Anglesey Abbey and the Wicken Vision Area for these developments to deliver greater benefits for wildlife, people and climate change, including mitigating the adverse effects of recreational pressure on more sensitive sites.</p>	
		<p>We believe there is a major opportunity here to create a new area/s of multifunctional accessible green space, as part of the Applicant’s proposals to enhance public access. Natural England’s advice is that appropriately designed and managed ‘alternative natural greenspace’ could provide a new destination for visitors which could help to intercept and divert additional pressure away from more sensitive sites.</p>	<p>The landscape masterplan contained with the LERMP (Appendix 8.14, App Doc Ref 5.4.8.14) mitigates the potential impacts of the Proposed Development on existing recreational facilities, including the use of Low Fen Drove Way, by formalising access and linking to the existing footpath network. It also provides public access to enhanced green space, creating positive experiences for both visitors to the proposed WWTP and to recreational users of the wider landscape. The effects of the Proposed Development on existing conservation sites are covered in Chapter 8: Biodiversity.</p>
		<p>A commitment by AWSL to contribute towards a strategic approach could support the findings of the ES. Alternatively, bespoke visitor surveys should be undertaken to inform the assessment of recreational pressure impacts through the ES. These will need to assess the likely increase in visitors, and potential effects on the SSSI, associated with the Proposed Development, in combination with adjacent development.</p> <p>Surveys will need to be undertaken by specialist consultants to ensure a robust and rigorous assessment of visitor impacts and mitigation requirements underpinned by comprehensive and representative data.</p>	<p>Details and findings of recreational user counts along PRow is provided in Chapter 19: Traffic and Transport. Survey findings indicate 789 users across the survey period, the majority of which were identified on Saturday and as a result of on-river activities (accounting for 219 users on the day).</p>

Date	Consultee	Points raised	How and where addressed
April 2022	South Cambridge District Council	It is noted Anglian Water has identified potential employment opportunities associated with the Proposed Development. The District Council considers that more details around the opportunities for all members of society to engage in and benefit from the project should be provided – with a particular emphasis on underrepresented groups. This would enable the District Council to assist in the weighing up of the positive and negative effects of the proposals. There is reference to changes to the visual environment and the adverse effects on the elderly, disabled and particularly children with autism. This is also true for noise exposure so this should be included in the assessment.	More details around employment opportunities associated with the Proposed Development will be made available as construction planning develops.  Potential changes to the visual environment and adverse noise impacts on the elderly, disabled and children with autism have been considered as part of the Equalities Impact Assessment (EqIA) (App Doc Ref 7.12).

## **Statutory s47 local community consultation**

1.5.4 The Consultation Report (App Doc Ref 6.1) details the responses to all comments made during the public consultation. Matters raised in relevance to the community topic include:

- building on the green belt;
- the linking of new footpaths with existing ones and provision of appropriate signage;
- access to recreational space;
- notifying the members of the public about any planned closures of footpaths and providing details of diversions in advance;
- night-time lighting;
- construction traffic;
- visual impacts; and
- odour.

1.5.5 Table 1-6 summarises matters raised during community resource, recreational and business questionnaires undertaken in June 2022. The following businesses and recreational organisations provided a response to consultation:

- Fen Ditton Community Primary School, Fen Ditton;
- Cambridge Country Cottages, Eye Hall, Horningsea;
- The Bridge Public House, Clayhithe Road, Waterbeach;
- Gayton Farm Camping and Glamping, Gayton Farm, Horningsea;
- CBS Automotive - Grange Farm Clayhithe Road, Horningsea;
- Cambridge Boat Club;
- Cambridge Rowing Association; and
- The Conservators.



**Table 1-6: Key points raised during engagement with businesses and recreational organisations**

Theme	Response
Customer/user travel preferences	Organisations advised that customers and users access their location by a variety of public transport, taxis, private vehicles (by road) and public footpaths (on foot).
Nature of customer/user base	All but one business relied solely on pre-bookings only, with the remaining business relying on a combination of pre-booked and footfall. However, none relied on footfall alone. One business also highlighted an open day on the 1st Saturday of each month. A recreational facility noted that roughly half users live locally, whilst the remaining 50% may travel over an hour to access the facility.
Seasonal variation in your business/facility activity/recreational resource?	<p>Seasonal variation in business activity amongst businesses was mixed. Those providing hospitality noted busier periods in the summer months and around the Christmas Period. Accommodation based businesses noted either no seasonal variation (nearly fully booked throughout the year) or being busier in the summer months and bank holidays.</p> <p>Recreational facilities were busiest in spring, summer, and autumn. Rowing race days occurred on Saturdays and Sundays throughout the season. Major river based events are held over weekends during the summer months.</p>
Scheme impacts on the business/facility	<p>Businesses expressed concerns around noise and visual impact, particularly in reference to not being able to deliver on the tranquil setting advertised, which may result in requests for reduced rates during the construction phase</p> <p>There were also concerns around adverse publicity which could lead to reputational damage in the long term.</p> <p>There were additionally concerns that traffic issues during the peak business times could cause a reduction in custom.</p> <p>One business was concerned about collisions with construction vehicles and damage to vehicles by stones and dust. This could damage customer’s vehicles as well as damage the reputation as a clean and smart rural location.</p> <p>It was noted that some recreational activities on the River Cam depend on consistent water quality without any raw sewage discharges and that unpleasant odours would negatively impact activities.</p>
Suggestions of measures to avoid/reduce or mitigate impacts	<p>Suggestions were made to limit the vehicle movements near to businesses, especially at busiest times and opening times (for example, where regular or specific events are planned), maintain a 5mph speed limit and manage pinch points. It was also suggested that barriers be erected between business and customer vehicles and construction vehicles, as well as deploying a road sweeper to clear dirt and debris.</p> <p>To shield businesses acoustically and visually from the works, it was suggested that topsoil could be bunded on the Eye Hall side of the working strip. Minimised use of the track that follows the north boundary of Eye Hall was also suggested.</p>

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**Theme**

**Response**

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To reduce impact on recreational activities which rely on good water quality, it was suggested that measures were put in place to prevent sewage and odour pollution.

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## 2 Assessment Approach

### 2.1 Guidance

- 2.1.1 There is no set industry guidance which outlines how to assess community effects. The Highways England Design Manual for Roads and Bridges (DMRB) LA 112 (Design Manual for Roads and Bridges, 2019) provides guidance on ‘population and human health’ assessments. This community assessment fulfils the requirement to consider potential ‘population’ effects, whilst human health is assessed in Chapter 12: Health.
- 2.1.2 Although DMRB LA 112 is primarily applied to linear transport schemes, some aspects of the guidance are applicable for community assessments of infrastructure in other sectors. For example, DMRB LA 112 provides a framework for assessing, mitigating and reporting the effects of infrastructure development projects on population, introducing significance criteria to aid consistent and proportionate assessment to support the reporting of significance effects. Where appropriate, DMRB LA 112 has been followed to guide the assessment to assess potential effects on private property and housing, community facilities, businesses and areas of open space and recreation. However, professional judgement has been used so that the assessment is proportionate and uses criteria specific to this type of infrastructure.
- 2.1.3 The assessment is also guided by Public Health England's 'Health Impact Assessment in spatial planning – ‘A guide for local authority public health and planning teams' (Public Health England, 2020), which outlines human health assessment methods for England.

### 2.2 Assessment methodology

- 2.2.1 The general approach to assessment described in Chapter 5: EIA Methodology.
- 2.2.2 Primary mitigation for the Proposed Development has been identified as part of an iterative design process and is described in Chapter 2: Project Description and Chapter 3: Site Selection and Alternatives. The preliminary assessment of the likely significant environmental effects has been undertaken with the assumption that primary and tertiary mitigation will be implemented.
- 2.2.3 Following the preliminary assessment of the likely significant effects of the Proposed Development, any further mitigation measures (secondary mitigation) are identified and described. These mitigation measures would further reduce an adverse effect or enhance a beneficial one. The assessment of likely significant effects is then carried out taking into account the identified secondary mitigation measures to identify the ‘residual’ environmental effects.
- 2.2.4 This section provides specific details of the community methodology applied to the assessment of the Proposed Development.

## Impact assessment criteria

2.2.5 The assessment has considered both direct and indirect effects on community receptors arising as a result of the construction, operation and decommissioning of Proposed Development. The scope and method used as part of this assessment is described further below:

- Changes to employment from construction of the scheme. A change in the number of people employed as a result of the construction of the Proposed Development and subsequent job creation will be compared to the existing economic activity in the local authority and comparing this to the new jobs which are created.
- Private property and housing:
  - Direct effects from land requirements.
  - Indirect effects as a result of changes to access and amenity (method described further below).
- Community land and assets:
  - Direct effects from land requirements.
  - Indirect effects as a result of changes to access and amenity (method described below).
- Amenity effects occur if there are two significant adverse effects occurring at the same location at the same time. These potential effects are noise, air quality, visual, odour or traffic effects. Only if an in-combination effects occurs will it be reported.
- Businesses:
  - Direct effects from land requirements.
  - Indirect effects as a result of changes to access.
- Changes to recreational resources and open spaces.
  - Direct changes to access to PRow and other recreational routes. The focus is on routes used for recreational purposes. The assessment will be based on how changes to accessibility, usability and journey lengths impact on recreational opportunities.
  - Direct changes to access to areas of open space and recreation resources.

2.2.6 The significance of an effect is determined based on the magnitude of an impact and the sensitivity of the receptor affected by the impact of that magnitude. This section describes the criteria applied in this chapter to characterise the magnitude of potential impacts and sensitivity of receptors. The terms used to define magnitude

and sensitivity are based on the guidance outlined above in Section 2.1 (Assessment methodology) and professional judgement.

2.2.7 The characteristics of the impacts being assessed may not fall entirely into one of the categories for sensitivity and magnitude criteria. Professional judgement and justifications have been used for assigning sensitivity and magnitude categories to each impact.

2.2.8 The assessment criteria used to assess the potential effects on community arising from the Proposed Development differs from the generic EIA methodology and are described below.

### Magnitude of impact

2.2.9 To assess the magnitude of impact, each impact has been assessed in terms of the following indicators:

- spatial scope – whether impacts are likely to be felt within the study area, or more widely;
- extent – how many community resources and receptors are likely to experience impacts;
- duration – whether the impacts would be short or long-term; and
- reversibility – whether the impact is permanent or temporary.

2.2.10 The criteria for defining magnitude for the assessment of impacts to community are defined within Table 2-1.

**Table 2-1: Impact magnitude criteria**

Magnitude of impacts	Criteria	Examples
<b>Negligible</b>	A very small proportion of the study area is impacted.	Under 5% of the study area.
	Impact is very short-term.	Impact lasts for less than three months.
	Impacts a very few number of receptors.	Less than approximately five receptors are impacted.
	Baseline remains consistent.	There is no change in the ability for communities to access resources such as community facilities or housing.
<b>Minor</b>	A small proportion of the study area is impacted.	Between 10% and 20% of the study area.
	The duration over which the impact is experienced is short-term.	Impacts last between three and six months.
	Affects a small number of receptors.	Between 10-20 receptors are impacted.
	Baseline returns without intervention or with only limited intervention.	There is disruption for communities to access resources such as community

Magnitude of impacts	Criteria	Examples
		facilities or housing, but mitigation measures facilitate access.
<b>Moderate</b>	A moderate proportion of the study area is impacted.	Between 25% and 40% of the study area.
	The duration over which the impact is experienced is medium-term.	Impacts last between six months and a year.
	Impacts a moderate (e.g. over 100) number of receptors.	Over 100 receptors.
	May require some intervention to return to the baseline.	A permanent or temporary diversion to a recreational route that is of similar length and location.
<b>Major</b>	A large proportion of the study area is impacted.	Approximately over 50%.
	The impact is permanent or long-term (e.g. more than a year).	More than a year.
	Impacts many (e.g. over 1000) receptors.	Over 1000 receptors are likely to be impacted.
	Requires considerable intervention to return to the baseline.	Permanent replacement of a community resource or residential property.

Source: Mott MacDonald, 2022, DMRB, 2020

## Sensitivity of receptor

2.2.11 The criteria for defining receptor sensitivity for the assessment of impacts to community are defined within Table 2-2.

**Table 2-2: Receptor sensitivity criteria**

Sensitivity	Criteria	Examples
Low	A non-vulnerable receptor with sufficient capacity and means to absorb changes.	Walking and cycling routes will have fallen into disuse through severance or which are scarcely used because they do not currently offer a meaningful route between communities or for recreational purposes.
	A wide range of alternative resources, access arrangements or opportunities are available within an easily accessible distance.	Alternative community facilities, such as a school or healthcare service, are available at a local level within the wider community.
	An infrequently accessed resource.	The level of use of the community facility is infrequent (monthly or less frequent).
Medium	A receptor with limited capacity and means to absorb changes.	Public routes of way and other routes close to communities which are used for recreational purposes, but purposes but for which alternative routes can be taken. These routes are likely to link to a

Sensitivity	Criteria	Examples
High		wider network of routes to provide options for long recreational journeys.
	A limited range of alternative resources, access arrangements or opportunities are available within and easily accessible distance.	Limited alternative community facilities, such as a school or healthcare service, are available at a local level within adjacent communities.
	A moderately, or semi-frequently accessed resource.	The level of use of the community facility is reasonably frequent (monthly).
	A vulnerable receptor with very little capacity and means to absorb changes.	Regional trails and routes (e.g. promoted circular walks) likely to be used for recreation and to a lesser extent commuting, that record frequent (daily) use.
	No alternative resources, access arrangements or opportunities are available within an easily accessible distance.	Alternative facilities, such as a school or healthcare facility, are only available in the wider local planning authority area.
	A highly or frequently accessed resource.	The level of use of the community facility is frequent (weekly or daily).
	A very highly accessed resource.	The level of use is very frequent (daily).

Source: Mott MacDonald, 2022; DMRB, 2020

### Significance of effect

2.2.12 The significance of the effect upon identified community receptors is determined by assigning an impact magnitude and sensitivity to the receptor. Table 2-3 sets out the significance matrix used to determine significant effects. Where a choice of significance is presented, the final assessment for each effect is based upon expert judgement.

2.2.13 For the purpose of this assessment, any effects with a significance level of minor or less are considered to be not significant.

**Table 2-3: Significance matrix**

Magnitude of impacts	Sensitivity/value of receptor			
	Low	Medium	High	Very High
Negligible	Neutral	Neutral	Slight	Slight
	Not significant	Not significant	Not significant	Not significant
Minor	Neutral	Slight	Slight	<b>Moderate</b>
	Not significant	Not significant	Not significant	<b>Significant</b>
Moderate	Slight	<b>Moderate</b>	<b>Moderate</b>	<b>Major</b>
	Not significant	<b>Significant</b>	<b>Significant</b>	<b>Significant</b>
Major	Slight	<b>Moderate</b>	<b>Major</b>	<b>Major</b>
	Not significant	<b>Significant</b>	<b>Significant</b>	<b>Significant</b>

## Residual effect

2.2.14 The assessment of effects follows the approach set out within Chapter 5: EIA Methodology. Effects have been assessed to take into account for both embedded (primary) mitigation and legal requirements (tertiary mitigation), and after the application of further mitigation measures (secondary mitigation). Effects after mitigation are referred to as ‘residual effects’.

## 2.3 Study area

2.3.1 The maximum area of land within which the construction, operation, and maintenance of the Proposed Development and decommissioning of the existing Cambridge WWTP, including land required for permanent and temporary purposes, is within the Scheme Order Limits.

2.3.2 The study area has been defined by analysing potential significant effects on community receptors and resources as a result of construction and operation of the Proposed Development. The location of these potential significant effects were mapped against Output Areas<sup>1</sup> so that a comprehensive set of data about the impacted communities could be obtained for the baseline information.

<sup>1</sup> Output areas are defined as the ‘building blocks’ for Census data. They are based on data from the 2001 Census and were built from postcode units. Output Areas are used not only for Census output but also as the basis of Super Output Areas which have been introduced as stable and consistently sized areas for Neighbourhood Statistics. More information is available at: <https://www.ons.gov.uk/census/2001censusandearlier/dataandproducts/outputgeography/outputareas>



2.3.3 The study area is shown in Figure 11.1 within the Book of Figures – Community (App Doc Ref 5.3.11) and is at least 500m from the Scheme Order Limits. The Study Area has been used to assess potential effects on the following receptors:

- private property and housing;
- community facilities;
- open space and recreational areas;
- PRoW and walking and cycling routes; and
- businesses.

2.3.4 Potential effects such as job creation and impacts on supply chains may occur across a broader population. Therefore, information from South Cambridgeshire, East Cambridgeshire and Cambridge City local authorities has been used to provide context for this element of the assessment.

## 2.4 Temporal scope of assessment

### Construction

- 2.4.1 For the assessment, these effects will be taken to be those for which the source begins and ends during the construction and commissioning stages prior to the proposed WWTP becoming fully operational as set out in Chapter 2: Project Description.
- 2.4.2 The assumed assessment years for construction are from Year 1 to Year 4 (currently assumed to be 2024 until 2028).

### Operation and maintenance

- 2.4.3 For the assessment, these are the effects that start once the proposed WWTP is commissioned and fully operational and includes the effects of the physical presence of the infrastructure, its operation, use and maintenance, including the permanent change in land use.
- 2.4.4 The assessment of operational effects will be the first full 12 months of operation (excluding any commissioning period for the proposed WWTP as this is part of the Construction Phase). The proposed WWTP is expected to become operational in 2028, therefore the assessment year for the Operational Phase is 2028. Phase 2 of operation associated with the construction of an additional PST and FST at year 7 of operation (as described in Chapter 2) would not materially alter community impacts. This is related to the relatively small increases or variations in plant and equipment would not result in different effects or new significant noise, air, traffic, odour, landscape or water effects).

### Duration of effects

- 2.4.5 Timescales associated with these effects, regardless of phase are as follows:

- Short-term – endures for up to 12 months after construction or decommissioning
- Medium-term – endures for 1-5 years
- Long-term – endures for 5-15 years
- Permanent effects – endures for more than 15 years and / or effects which cannot be reversed (e.g. where buried archaeology is permanently removed during construction).

## 2.5 Baseline study

### Desktop data

- 2.5.1 Baseline information within the community study area was collected through a detailed desktop review of existing studies and datasets. These are summarised in Table 2-4.
- 2.5.2 A desk study, utilising AddressBase<sup>2</sup>, has also been carried out to identify private property and housing, and community land and assets. The AddressBase data has been supplemented with findings from consultation and engagement with the community and stakeholders and site walkover conducted in January 2022. Baseline data has been calculated for the community study area based on guidance and professional judgement.

**Table 2-4: Summary of baseline information sources**

Item or feature	Year	Source
Mid-year population estimates - Population (by age) -	2020	Census data, Office National Statistics
English Indices of Deprivation	2019	Office National Statistics
Annual Population Survey - Economic activity	2020/21	Office National Statistics
Employment by industry	2020	Office National Statistics – Business Register and Employment Survey
Private property and housing, businesses, community facilities, recreation and open spaces	2020	Addressbase
Public Rights of Way, cycle ways and bridle ways	2021	Cambridgeshire County Council
Information obtained from engagement community receptors, businesses	2022	Community receptors, recreational groups and organisations – detailed further in Section 1.5 (Consultation) and Community

<sup>2</sup> AddressBase data comes from Ordnance Survey and every address geo data record provides Royal Mail address information from PAF(Postcode Address File is a database that contains all known "Delivery Points" and postcodes in the United Kingdom), the Unique Delivery Point Reference Number (UDPRN).

Item or feature	Year	Source
recreational groups and organisations		Questionnaires (Appendix 11.1, App Doc Ref 5.4.11.1).

## Surveys

- 2.5.3 User count surveys of key recreational routes within the Study Area were undertaken in July and August 2022. The details of these surveys are provided in Pedestrian Counts (Appendix 19.4, App Doc Ref 5.4.19.4).
- 2.5.4 A site walkover and engagement with community receptors (primary schools in the study area and representatives of recreational groups) has been used to supplement this data collection. Surveys relevant to community such as noise, visual receptors and odour are reported in the relevant environmental topic assessments in this ES.

## 2.6 Maximum design envelope (Rochdale) parameters for assessment

- 2.6.1 The design parameters and assumptions presented are in line with the 'maximum design envelope' approach (base scheme design) as described in introductory chapters of the ES (2 and 5). For each element of this chapter the maximum design envelope parameters detailed within Table 2-5 have been selected as those having the potential to result in the greatest effect on an identified receptor or receptor group.
- 2.6.2 The assessment parameters are based on the design of the proposed WWTP and access, transfer tunnel route and outfall location, Waterbeach pipeline route and connections within the existing Cambridge WWTP as described in Chapter 2: Project Description. The assessment considers a realistic maximum design envelope based on the maximum scale of the elements and as a result no effects greater significance than those assessed are likely.

**Table 2-5: Maximum design envelope (Rochdale) for community assessment**

Potential impact	Maximum design scenario	Justification
<b>Construction</b>		
Temporary changes to access of private property and housing, community facilities and businesses from construction traffic generation.	Maximum design scenario for construction traffic generation as specified in Chapter 19: Traffic and Transport.	The maximum design scenario parameters for construction traffic generation have been specified for this assessment.
Temporary changes to amenity: during construction which affect communities from a combination of noise, air quality, traffic and visual effects at a particular location such as at private property and housing, community facilities and businesses.	Maximum design scenario for construction noise generation as specified in Chapter 17: Noise and Vibration, air quality as specified in Chapter 7: Air Quality, odour as specified in Chapter 18: Odour, traffic and transport as specified in Chapter 19: Traffic and Transport and visual effects as specified in Chapter 15: Landscape and Visual Amenity.	The maximum design scenario parameters for construction noise, air quality, traffic and visual effects have been specified in these assessments.
Temporary changes to recreational resources and open spaces from temporary or permanent closures or diversions of PRow, restrictions to use and enjoyment of other recreational routes, areas of open space and recreational resources.	Maximum design scenario for construction disruption to walking and cycling routes as specified in Chapter 19: Traffic and Transport.	The maximum design scenario parameters for walking and cycling disruption have specified for this assessment.
	Maximum design scenario for construction of the outfall structure at the River Cam is based on in river construction for up to 4 months affecting up to 55m of river bank with a temporary narrowing of the navigation do that a minimum navigable width of 12m is maintained.	The maximum design scenario parameters for disruption to river users have specified for this assessment.
	Trenchless construction methods for pipelines crossing the River Cam with construction pits set back from river bank by a minimum of 8m.	

Potential impact	Maximum design scenario	Justification
Temporary changes to employment: a result of job creation, the supply chain and employment opportunities during construction.	Construction workforce is predicted with an average peak of 75 supervisory and administrative staff, and 300 operatives required across all areas including the existing Cambridge WWTP, the shafts on the transfer main, the treated effluent main and the proposed WWTP. The peak is likely to occur towards the end of year 1 and through year 2 of the construction programme. The majority of workforce will come from across the UK and potentially Europe.	Represents reasonable employment generation predicted by the Applicant, which would have potential for beneficial employment impacts.
<b>Operation</b>		
Potential impact on access to private property and housing, community facilities and businesses from operational traffic generation.	Maximum design scenario for operational traffic generation as specified in Chapter 19: Traffic and Transport. This is 92 Large Good Vehicles (LGVs)/cars daily.	The maximum design scenario parameters for construction traffic generation have been specified for this assessment.
Permanent changes to amenity: during operation which affect communities. from a combination of noise, air quality, traffic and visual effects at a particular location such as at private property and housing, community facilities and businesses.	Maximum design scenario for construction noise generation as specified in Chapter 17: Noise and Vibration, air quality as specified in Chapter 7: Air Quality, odour as specified in Chapter 18: Odour, traffic and transport effects as specified in Chapter 19: Traffic and Transport and visual effects as specified in Chapter 15: Landscape and Visual.	The maximum design scenario parameters for operational noise, air quality, odour, traffic, and visual effects have been specified in these assessments.
<b>Decommissioning</b>		
Temporary changes to amenity: during decommissioning which affect communities. from a combination of noise, air quality, traffic and visual effects at a particular location such as at private property and housing, community facilities and businesses.	Maximum design scenario for construction noise generation as specified in Chapter 17: Noise and Vibration, air quality as specified in Chapter 7: Air Quality, odour as specified in Chapter 18: Odour, traffic and transport effects as specified in Chapter 19: Traffic and Transport and visual effects as specified in Chapter 15: Landscape and Visual.	The maximum design scenario parameters for construction noise, air quality, traffic and visual effects have been specified in these assessments.

<b>Potential impact</b>	<b>Maximum design scenario</b>	<b>Justification</b>
Temporary increase in road traffic and changes in access impacting business owners, employees and customer bases.	Maximum design scenario for construction traffic generation as specific in Chapter 19: Traffic and Transport.	The maximum design scenario parameters for traffic generation during decommissioning have been specified for this assessment.

## 2.7 Impacts scoped out of the assessment

2.7.1 Potential impacts scoped out of the community assessment are outlined in Table 2-6.

**Table 2-6: Impacts scoped out of the community assessment**

Potential impact	Justification
Requirement for land from residential properties and displacement of local residents.	The Proposed Development does not require the acquisition of residential properties and there would be no displacement of local residents. The Planning Inspectorate agreed with this justification and scoped out this potential impact.
Requirement for buildings and land used by community facilities.	The Proposed Development does not require land from community facilities. The Planning Inspectorate agreed with this justification and scoped out this potential impact.
Operational employment and training.	The Proposed Development is intended to replace the existing Cambridge WWTP. Given that the proposed WWTP would operate at a similar capacity and given the proximity of the existing site, it is not considered likely that there will be a notable change in operational employment. The Planning Inspectorate agreed with this justification and scoped out this potential impact.
Demand for local accommodation and public services due to the permanent workforce.	Given the large size of local and regional labour markets and housing markets, it is assumed that most additional jobs during the operational phase will be filled by people living within commuting distance. There is unlikely to be a significant increase in demand for accommodation and public services due to temporary workers or a permanent workforce. The Planning Inspectorate agreed that this matter can be scoped out of the ES as significant effects on terms of operational employment are not likely with the purported small increases. As requested by the Planning Inspectorate, the quantum of these changes is provided in Chapter 2: Project Description to support scoping out this impact.
Changes to crime levels, such as from theft and disturbance to areas where there is proposed to be construction activity	It is assumed that site security arrangements for the Proposed Development will be in line with the requirements set out the Construction (Design and Management) Regulations 2015 and appropriate levels of security (personnel / CCTV) will be provided.

## 2.8 Mitigation measures adopted as part of the Proposed Development

- 2.8.1 This section refers to the mitigation types, as defined in section 5.3.40 of Chapter 5: EIA Methodology, and how they apply to the assessment of community.
- 2.8.2 In developing the Proposed Development through an iterative process including consultation and engagement with consultees, and through the Environmental Impact Assessment, (EIA) the Applicant has sought to identify and incorporate suitable measures and mitigation for potentially significant adverse effects, as well as maximising beneficial effects where possible.
- 2.8.3 Some measures are ‘embedded’ in the design of the Proposed Development for which consent is sought by virtue of the scope of the authorised development as set out in Schedule 1 to the DCO and the accompanying Works Plans. These are considered primary mitigation. For example, adjustment of Order Limits to avoid sensitive features, amending the sizing and location of temporary access routes and compounds.
- 2.8.4 Secondary measures may be detailed activities for example the preparation of detailed AIMS in accordance with the CoCP, the preparation and delivery of a monitoring plan for specific matters (air quality, water quality) or the preparation and delivery of specific environmental management plans (for example air, noise, water), and the preparation and implementation is secured through the CoCP. These secondary measures are differentiated from good practice measures
- 2.8.5 Tertiary measures comprise good practice measures (such as measures within Considerate Contractors Scheme) and measures integrated into legal requirements secured through environmental permits and consents (least flexible as either the legislation exists to create the mitigation or does not (i.e. Protected Species Licensing).
- 2.8.6 Section 1.5 of Chapter 5: EIA Methodology sets out required permits and consents related to the Proposed Development.
- 2.8.7 Where beneficial effects are voluntarily introduced without the requirement to mitigate an effect, these are termed ‘enhancement measures’.
- 2.8.8 The remainder of this section sets out the embedded measures (primary) and tertiary, and secondary/additional measures and enhancements relevant to the assessment of community.

### **Primary (embedded) and tertiary measures**

- 2.8.9 Primary and tertiary mitigation form part of the Proposed Development and therefore, the preliminary assessment of effects takes account of these measures.
- 2.8.10 Table 2-7 sets out the embedded mitigation measures that will be adopted during the construction, operation, maintenance and decommissioning (as described in



Chapter 2 of the ES (App Doc Ref 5.2.2) in relation to  
the existing Cambridge WWTP) of the Proposed Development.

**Table 2-7: Primary and tertiary measures relating to community adopted as part of the Proposed Development**

Mitigation measures	Type	Applied to	Justification
<b>Construction</b>			
Potential changes to the local environment during construction which affect the amenity of communities	Primary	Waterbeach pipeline Proposed WWTP	Represents the measures that would be applied for the avoidance or reduction of impacts in relation to air quality, landscape and visual amenity, noise and vibration, odour and traffic and transport.
Temporary disruption to PRoW	Primary	Proposed WWTP – outfall	Provides temporary connectivity during construction of the outfall.
Temporary disruption to the River Cam navigation	Primary	Proposed WWTP (outfall structure)	Ensure that the River Cam, upstream of Baits Bite Lock, remains navigable.  Measures embedded into programme to avoid peak usage times for the river (rowers)
<b>Operation</b>			
Potential changes to the local environment during operation which affect the amenity of communities	Primary	Proposed WWTP	Design measures that mitigation odorous emissions to meet commitment of negligible odour effects.

Mitigation measures		Type	Applied to	Justification
	<p>Design of proposed WWTP to operate in accordance with emission limit values (defined in Environmental Permit)</p> <p>Design incorporates ability to modify to accommodate technological changes in the future that may be required to meet changing regulatory limits</p> <p>Design of proposed WWTP process technology to operate within condition limits (defined in Environmental Permit)</p>	Tertiary	Proposed WWTP	Control of emissions to air and water to operate in compliance with environmental permit limits designed to avoid and or minimise adverse changes to the environment.
<b>Decommissioning</b>				
Draining and cleaning of Waste Water storage tanks and equipment to manage effects from potential short term odour release	Best practice measures as specified in Chapter 18: Odour which details the processes for removing and treating sludge.	Tertiary	Existing Cambridge WWTP	<p>To manage the effects from short term odour release during the decommissioning of the existing Cambridge WWTP</p> <p>Measures that limit odorous emissions in compliance with the environmental permit for the existing Cambridge WWTP</p>
Potential changes to the local environment during decommissioning which affect the amenity of communities	<p>Best practices measures for the control of dust and temporary emissions to air as specified in Chapter 7: Air Quality,</p> <p>Best practice measures as specified in Chapter 18: Odour which details the processes for removing and treating sludge.</p> <p>Best practicable means for managing noise as described in Chapter 17: Noise and Vibration,</p> <p>Best practices measures for the control of temporary lighting as described in visual effects as specified in Chapter 15: Landscape and Visual.</p>	Primary	Proposed WWTP	Represents the measures that would be applied for the avoidance or reduction of impacts in relation to air quality, landscape and visual amenity, noise and vibration, and odour.

## Secondary mitigation

2.8.11 Secondary measures will be applied to provide further controls to avoid or reduce impacts. Those applied during construction, decommissioning, operation and maintenance for community are indicated below.

### **Construction**

#### *Code of Construction Practice*

2.8.12 During the construction phase, the Code of Construction Practice (CoCP) Part A (Appendix 2.1, App Doc Ref 5.4.2.1) and B (Appendix 2.2, App Doc Ref 5.4.2.2) and associated management plans specify the range of measures to avoid and minimise impacts that may occur in construction. This plan will detail the controls and protection measures and safety procedures adopted during construction which will include measures to mitigate potential effects on the community, including but not limited to:

- maintaining access to property and community facilities;
- provision of appropriate signage and safety controls; and
- control of lighting, noise and dust from construction areas.

2.8.13 One of the associated management plans would be an Outfall Management Plan related to measures applied to avoid or minimise impacts associated with the construction of the outfall including works to the ditch parallel to the River Cam. This plan will be a live document and updated to integrate requirements specified by related permits and consents including:

- Environmental permit (flood risk activities)
- Environmental permit (Discharges to surface water)
- Land drainage consent (for works to the ordinary watercourse)
- Conservation licence (water vole)

#### *Construction Traffic Management Plan*

2.8.14 The Construction Traffic Management Plan (CTMP) (Appendix 19.7, App Doc Ref 5.4.19.7) and the CoCP (Appendix 2.1 & 2.2, App Doc Ref 5.4.2.1 and 5.4.2.2) and associated management plans specify the range of measures to avoid and minimise impacts that may occur in construction.

2.8.15 The outline CTMP sets out the commitments in relation to the management of construction vehicle movements. The outline CTMP (Appendix 19.7, App Doc Ref 5.4.19.7) will be developed into a final plan post grant of the DCO and prior to commencement of development. The final CTMP will set out the detailed management measures, procedures and best practices required for managing the impact of construction traffic on the local and strategic road networks during the construction period.

2.8.16 Specific controls applicable to discrete works (for example enabling works) will be finalised post grant and prior to commencement of works.

2.8.17 The following sets out measures within the CTMP associated with different settlements.

*Horningsea and Horningsea Road*

2.8.18 Section 4.2 (Access route strategy) which:

- identifies the off and on slip of the A14 as a potential conflict area which may require traffic marshalling during peak hours;
- recognises the potential conflict of site access points CA2/CA3 which will cross the existing footway / cycleway on the west side of Horningsea Road which may require marshalling during peak hours and/or traffic management measures to provide a safe crossing point for site traffic and pedestrians and cyclists; and
- requires that all deliveries will be made outside of peak hours (8am-9am and 3-4pm) (unless it is determined to be essential that the delivery is to be completed during peak hours).

2.8.19 Section 6.9 (Facilitate safe movement of users of the highway (including NMUs)) which:

- refers to site access point COA3, CA6, CA2/CA3 which indicates the majority of the highway works can be carried out under TM that maintains vehicular access on Horningsea Road, under temporary signal control. And requires that the existing footway / cycleway to the west of the Horningsea Road carriageway will be maintained at all times with suitable barriers separating the footway from the works; and
- requires that speed restrictions to Horningsea Road will be put in place for the duration of the works in accordance with the Temporary Traffic Regulation Order (TRO) (the detail of which will be subject to agreement with Cambridgeshire County Council and any other relevant stakeholders).

2.8.20 Section 7.2 (Monitoring Strategy) requires that the Principal Contractor(s) implement a system for monitoring the movement of vehicles associated with the construction of the Proposed Development, which includes ANPR cameras along Horningsea Road.

*Fen Ditton*

2.8.21 Section 6.9 (Facilitate safe movement of users of the highway (including NMUs)) which:

- indicates that for the temporary site access point COA3, CA6, CA2/CA3 (to access land required for the construction of the Transfer tunnel, shafts 4 and 5 and the southern section of Waterbeach pipeline) the majority of highway

works will be carried out under traffic management that maintains vehicular access on Horningsea Road, under temporary signal control;

- requires the existing footway / cycleway to the west of the Horningsea Road carriageway to be maintained at all times with suitable barriers separating the footway from the works; and
- recognises that there is no viable alternative route for pedestrians and cyclists from Horningsea to Fen Ditton (important as this is a route to Fen Ditton Primary School), and that any site crossing points on the footway will need to be controlled with suitable traffic management and traffic marshals where appropriate.

#### *Waterbeach and Clayhithe*

2.8.22 The following measures are of particular relevance to roads in Waterbeach (Burgess's Drove, Bannold Drove, Bannold Road, Clayhithe Road):

- section 6.9 (Facilitate safe movement of users of the highway (including NMUs)) which includes:
  - a requirement for speed restrictions to Burgess's Drove, Bannold Drove and Bannold Road as well as Clayhithe Road will be put in place in accordance with a temporary TRO which will be set out within the DCO;
  - a requirement to avoid HGV movements through Waterbeach during school drop-off and pick-up hours throughout term time; and
  - a temporary parking restriction on Bannold Road junction with Denny End Road / Car Dyke Lane.

#### *Cowley Road*

2.8.23 The following measure is of particular relevant to Cowley Road, section 4.2 (Access route strategy) which identifies the potential for conflict with the footpath/cycleway along Cowley Road which may require diversion and traffic management measures (subject to agreement with the Local Highway Authority (LHA) for pedestrians and other NMUs.

#### Community Liaison Framework Plan

2.8.24 The CoCP Part A Section 3 (Community Consultation and Engagement) requires a proactive approach to communication with the local community and stakeholders. Through a Community Liaison Plan the local community and stakeholders will be informed of the works taking place, including durations, particularly where these will involve works outside of the core working hours or impact community facilities and business and local infrastructure such as Public Rights of Way (PRoW)/cycleways.

2.8.25 A draft Community Liaison Plan (CLP) (App Doc Ref 7.8) sets out the approach to ongoing communication with residents, the community, and businesses, including communication in relation to traffic and transport matters. Post grant of the DCO

and prior to commencement of development a detailed plan will be prepared and agreed with the local authority. This will remain a 'live' document and periodically modified throughout the duration of construction.

#### Soil Management Plan

- 2.8.26 The requirement to reinstate land along the Waterbeach pipeline corridor to its original use is provided in the outline Soil Management Plan (SMP) (Appendix 6.3, App Doc Ref 5.4.6.3). The outline SMP has been prepared in a manner specific to the site in accordance with the guidance in the Construction Code of Practice (CCoP, Defra 2009). The CCoP (Defra 2009) provides general measures that are required to be in place to ensure that soil is appropriately managed during construction and suitable for its final use.
- 2.8.27 The outline SMP (Appendix 6.3, App Doc Ref 5.4.6.3) provides the basis for detailed SMP which will be prepared by the Principal Contractor prior to construction. A detailed SMP will include the measures applicable to particular soil types of the particular area/works that should be adhered to during and after the construction phase. The detailed SMP will be approved by the Employer prior to the start of the works.

#### Operation

- 2.8.28 An Operational Logistics Management Plan and Operational Workers Travel Plan (OWTP) (Appendix 19.8, App Doc Ref 5.4.19.8) will set out mitigation measures relating to vehicle movements associated with the operation of the proposed WWTP. The purpose of these is summarised below:
- Operational Logistics Management Plan: details the overall traffic management strategy for operational traffic; and
  - Outline Workers Travel Plan: details operation work and programme, site access requirements for staff, staff travel patterns and expected workforce locations.
- 2.8.29 Post grant of the DCO and prior to commencement of operation the framework OWTP will be updated. This will remain a 'live' document and periodically modified in line with the review cycles set out in the plan, including but not limited to an updated to incorporate the findings of a travel survey to be completed 6 months after the commencement of operation. The updated OWTP will be shared with CCC highways.
- 2.8.30 Post grant of the DCO and prior to commencement of operation An Operational Logistics Management Plan will be prepared and shared with local highway authority.

#### Landscape Ecology and Recreational Management Plan

- 2.8.31 The Landscape Ecology and Recreational Management Plan (LERMP) (Appendix 8.14, App Doc Ref 5.4.8.14) sets out how landscape, recreational features and ecological habitat and enhancements (vegetation and habitats) would be protected and

managed following construction for a period of 30 years. Post grant of the DCO and prior to commencement of landscaping works an updated plan will be prepared and agreed with the local authority. The LERMP includes the creation of new walking routes and connections to the wider network of PRoW. It provides information on the ongoing management of this area.

#### Environmental Management System (EMS)

2.8.32 Operation and maintenance activities would be subject to operational management plans and procedures. The management plans and procedures will sit within the EMS required under the environmental permitting regime. These would be 'live' documents that identify the environmental risks and legal obligations associated with the operations of the Proposed Development once construction has been completed. These specify the management measures the operator will implement in order to prevent or minimise the environmental effects associated with the Proposed Development.

#### Outfall Management Plan (Operation)

2.8.33 During operation the Outfall Management and Monitoring Plan (Operation) will be prepared implemented to:

- monitor and manage habitats created and relied upon to deliver river units
- monitoring habitats created / reinstated along the river margin as mitigation to fulfil the 5 year post construction commitment set out in the CoCP Part A)
- monitor and respond to environmental changes resulting in operation i.e. scour as a result of the outfall operation
- Monitor created water vole habitat and integrate the requirements of the conservation licence that relate to post habitat creation

#### **Decommissioning**

##### Decommissioning Management Plan

2.8.34 Decommissioning of the existing Cambridge WWTP would be subject to a Decommissioning Management Plan which is to be agreed with the Environment Agency. An Outline Decommissioning Plan (Appendix 2.3, App Doc Ref 5.4.2.3) describes measure applied to this activity. Post grant of the DCO and prior to commencement of decommissioning a detailed plan will be prepared and agreed with the Environment Agency.

## **2.9 Assumptions and limitations**

### **Data limitations and assumptions**

2.9.1 This assessment has been carried out based on currently available information and using professional judgement.



- 2.9.2 The assessment has been carried out against current population baseline conditions prevailing around the Order Limits. As with any dataset, these may be subject to change over time, which may influence the findings of the assessment.
- 2.9.3 The assessment identifies effects down to the lowest defined population group available according to the ONS.

### **Assessment assumptions**

- 2.9.4 The assessment of the pedestrians, cyclists and horse-riders route amenity relies on qualitative descriptions and evidence of significant effects within the Chapter 7: Air Quality, Chapter 15: Landscape and Visual Amenity, Chapter 17: Noise and Vibration, Chapter 19: Traffic and Transport, and Chapter 18: Odour.
- 2.9.5 Amenity is very important to communities and other stakeholders at local, district, regional and national level. Amenity is assessed in terms of in-combination effects of two or more residual significant effects. A single significant effect on, air quality for example, would be reported in the air quality section and as such is not duplicated when considering amenity of an area. But if noise and air quality both have a significant effect then it is considered if these impacts effect the amenity of an area.
- 2.9.6 This is a community level assessment. Communities with a minimum of 30-50 properties have formed part of this assessment.

## 3 Baseline Environment

### 3.1 Current baseline

3.1.1 There are several communities within the Community study area which have been included as part of the assessment based on the potential effects during construction, operation and decommissioning (as described in Chapter 2 of the ES (App Doc Ref 5.2.2) in relation to the existing Cambridge WWTP) of the Proposed Development.

3.1.2 These communities are:

- Chesterton;
- Fen Ditton;
- Stow cum Quy;
- Milton;
- Horningsea;
- Clayhithe; and
- Waterbeach.

3.1.3 Whilst individual residents may self-identify with another community, this assessment has identified communities based on geographical extents within Lower Super Output Areas.

#### **Population**

3.1.4 The total population for the study area is approximately 25,458 as of 2020. Key communities in the study area are Horningsea and Milton, located to the west of the Proposed Development, Chesterton and Fen Ditton located to the south of the Proposed Development, Waterbeach, located to the northern extent of the Proposed Development and Stow cum Quy located to the east of the Proposed Development.

3.1.5 Table 3-1 shows the population numbers and proportions according to age groups within the study area, region and nation (Figures 11.2 – 11.5, Book of Figures – Community, App Doc Ref 5.3.11).

**Table 3-1: Population and age structure**

Area	Total population (2020)	Children (under 16) %	Young people (16 to 24) %	Working age population (16 to 64)%	Older people (65 and over) %
<b>Chesterton</b>	6,703	19%	19%	65%	16%
<b>Fen Ditton</b>	3,823	24%	11%	62%	14%
<b>Horningsea</b>	306	11%	8%	56%	33%
<b>Milton</b>	4,259	18%	8%	66%	16%
<b>Stow cum Quy</b>	510	15%	9%	61%	24%
<b>Waterbeach</b>	4,779	21%	7%	62%	16%
<b>Study area</b>	25,458	19%	12%	65%	16%
<b>South Cambridgeshire</b>	160,904	20%	8%	60%	20%
<b>East Cambridgeshire</b>	90,172	19%	8%	60%	21%
<b>Cambridge</b>	125,063	18%	23%	69%	13%
<b>England</b>	56,550,138	19%	11%	62%	19%

Source: ONS mid-year population estimates, 2020

3.1.6 Table 3-1 shows that children make up 19% of the population in the study area. This figure is consistent with Cambridge (18%), East Cambridgeshire (19%), South Cambridgeshire (20%), and England (19%) proportions. There are a lower proportion of children living in Horningsea and Stow cum Quy compared to surrounding communities.

3.1.7 The proportion of young people in the study area (12%) is lower than the proportion in Cambridge City (23%), but higher than East Cambridgeshire (8%) and South Cambridgeshire (8%). The figure is consistent with proportions in England (11%).

3.1.8 The proportion of the working age population in the study area (65%) is lower than Cambridge (69%), but higher than East Cambridgeshire (60%) and South Cambridgeshire (60%). The figure is consistent with proportions in England (62%).

3.1.9 The proportion of older people in the study area (16%) is higher than Cambridge average (13%). The communities of Horningsea and Stow cum Quy have a particularly high number of older people residing in them.

## Deprivation

3.1.10 The English Indices of Multiple Deprivation (IMD) 2019 are commonly used for the measurement and comparison of relative levels of deprivation (poverty). Table 3-2 outlines the deprivation data by quintile (from most deprived to least deprived), and Figure 11.6: Index of Multiple Deprivation (Book of Figures – Community, App Doc Ref 5.3.11) shows the communities within the study area and the quintile which they are located in. The deprivation of the existing community is also relevant to the

Equality Impact Assessment (EqIA) (App Doc Ref 7.12) and Chapter 12: Health. These two documents also report existing levels of deprivation.

**Table 3-2: Deprivation quintiles**

	1 - Most deprived quintile	2- Second most deprived quintile	3- Third most deprived quintile	4- Second least deprived quintile	5 - Least deprived quintile
<b>Chesterton</b>	0%	20%	75%	4%	0%
<b>Fen Ditton</b>	39%	32%	29%	0%	0%
<b>Horningsea</b>	0%	0%	100%	0%	0%
<b>Stow cum Quy</b>	0%	0%	0%	100%	0%
<b>Milton</b>	0%	0%	23%	41%	36%
<b>Waterbeach</b>	0%	0%	5%	20%	75%
<b>Study area</b>	4%	12%	40%	24%	20%
<b>South Cambridgeshire</b>	0%	1%	10%	33%	57%
<b>East Cambridgeshire</b>	0%	4%	32%	29%	35%
<b>Cambridge</b>	3%	9%	30%	32%	25%
<b>England</b>	20%	21%	20%	20%	19%

Source: 2019 English Indices of Deprivation, MHCLG and 2020 mid-year population estimates, ONS

3.1.11 Table 3-2 shows that the proportion of population falling within the most deprived quintile in the study area (4%) is in line with Cambridge (3%). It is considerably higher than the proportion of the population living within the most deprived quintile in South and East Cambridgeshire (both 0%).

3.1.12 Approximately 24% of the population in the study area falls within the 2<sup>nd</sup> least deprived quintile, which is considerably lower than Cambridge (32%), East Cambridgeshire (29%) and South Cambridgeshire (33%).

3.1.13 Approximately 20% of the population of the study fall within the least deprived quintile. This is in line with figures for England (20%) but is lower than figures for Cambridge (25%) and East Cambridgeshire (35%) and considerably lower than figures South Cambridgeshire (57%),

### Employment and economic activity

3.1.14 Table 3-3 shows the economic baseline for the South Cambridgeshire, East Cambridgeshire and Cambridge City local authorities. Data is not available at community study area level.

**Table 3-3: Economic activity**

	Economic activity rate (%) - aged 16-64	Employment rate (%) - aged 16-64	Unemployment rate (%) - aged 16-64
<b>South Cambridgeshire</b>	85	81	4

	Economic activity rate (%) - aged 16-64	Employment rate (%) - aged 16-64	Unemployment rate (%) - aged 16-64
<b>East Cambridgeshire</b>	87	84	4
<b>Cambridge</b>	83	81	3
<b>England</b>	81	78	4

Source: Annual Population Survey, Jan 2021-Dec 2021, ONS

3.1.15 Data on economic activity from the Annual Population Survey suggests that employment and economic activity rates are relatively high in Cambridge City, East Cambridgeshire and South Cambridgeshire local authority areas, higher than rates in England.

3.1.16 Table 3-4 shows the employment estimates by industry for the study area, regional and national comparators. The Business Register and Employment Survey (BRES) provides data on employment estimates by industry<sup>3</sup>. This data is from 2019 and some sectors may have seen a large change from this as a result of the pandemic, for example retail, transport and entertainment. Where this baseline information influences the assessment, the consequences of potential changes to this data as a result of the Covid-19 pandemic will be described within the EIA.

**Table 3-4: Employment by main industries**

Industry type	Cambridge	East Cambs	South Cambs	England
Agriculture, forestry & fishing	0.0%	4.6%	1.5%	0.7%
Mining, quarrying & utilities	0.4%	1.5%	0.8%	1.2%
Manufacturing	1.2%	10.7%	11.6%	7.7%
Construction	1.4%	6.9%	5.8%	4.7%
Motor trades	0.7%	2.1%	2.0%	1.8%
Wholesale	1.0%	3.8%	3.5%	3.9%
Retail	6.5%	7.6%	4.7%	9.3%
Transport & storage (inc postal)	1.2%	6.9%	2.0%	5.2%
Accommodation & food services	8.2%	6.1%	4.7%	7.1%
Information & communication	7.3%	3.8%	9.3%	4.6%
Financial & insurance	1.0%	1.1%	1.2%	3.5%
Property	1.2%	1.5%	0.8%	1.8%
Professional, scientific & technical	14.7%	7.6%	23.3%	9.0%
Business administration & support services	4.1%	12.2%	8.1%	8.9%
Public administration & defence	2.0%	1.5%	1.5%	4.2%

<sup>3</sup> The Business Register and Employment Survey (BRES) publishes employee and employment estimates at detailed geographical and industrial levels and is regarded as the official source of employee and employment estimates by detailed geography and industry.

Industry type	Cambridge	East Cambs	South Cambs	England
Education	29.4%	9.1%	7.0%	9.0%
Health	15.5%	7.6%	9.3%	13.2%
Arts, entertainment, recreation & other services	4.1%	5.3%	2.9%	4.2%

Source: Business Register and Employment Survey, 2020

3.1.17 No data are available for employment by industry in the study area.

3.1.18 The largest industries of employment in Cambridge are ‘Education’, ‘professional, scientific and technical’, ‘information and communication’, and ‘accommodation and food services’ (29.4%, 14.7%, 7.3% and 8.2% respectively). The proportion of employees within the education sector in Cambridge is 29.4%, which is considerably higher than the proportion in all other comparator areas.

### Private property and housing

3.1.19 The residential properties within the study area are shown on Figure 11.7: Residential properties (Book of Figures – Community, App Doc Ref 5.3.11). This includes properties in the settlements of Waterbeach, Clayhithe, Milton, Horningsea, Chesterton and Fen Ditton. The closest properties to the Proposed Development, and the settlements in which they are located, are detailed further below:

- Chesterton – properties located from Milton Road, Green End Road and Fen Road;
- Fen Ditton – properties located from Horningsea Road (including Poplar Hall Farm), High Ditch Road, Green End and Red House Close;
- Stow cum Quy – properties located from Low Fen Drove Way (including the Gate House);
- Milton – properties located from Cambridge Road;
- Horningsea – properties located from Horningsea High Street;
- Clayhithe – properties located from Clayhithe Road; and
- Waterbeach – properties located from Station Road, Burges Road, Way Lane, Bannold Road, Long Drove, Bannold Drove and Cody Road.

### Businesses

3.1.20 The main business clusters within or adjacent to Scheme Order Limits are shown in Figure 11.8: Businesses (Book of Figures – Community, App Doc Ref 5.3.11) and are as follows:

- Chesterton: There are several large business and industrial parks in the Chesterton area. Cambridge Science Park to the west, located off Cambridge Science Park Road; St Johns Innovation Centre located in the northern part of Chesterton, close to the Milton Interchange; and an industrial site located off of Fen Road.

- Fen Ditton: There is a small cluster of local businesses located on the northern edge of the village. These include an art gallery, restaurant and farm shop.
- Milton: There are several large business and industrial parks in the Milton area. These include the Cambridge Golf Driving Range to the east of Chesterton, adjacent to the existing Cambridge WWTP; and Cambridge Road Industrial Estate, located to the east of the settlement, adjacent to Milton Country Park. There are also a number of businesses located on Fen Road, to the east of Milton.
- Horningsea: There are several areas for businesses within Horningsea, including on the eastern edge of the village; and in the areas adjacent to Horningsea Road and the High Street. These include restaurants, a clothes shop and an art restoration business.
- Clayhithe: There is a small cluster of local businesses located within the village. These include Cambridge County Cottages and CBS Automotive, both located on Clayhithe Road to the south of the village.
- Waterbeach: There is a small cluster of local businesses located on the western edge of village, at Denny End Industrial Estate.

## **Community facilities**

3.1.21 The community resources located within the study area and the settlements in which they are located are detailed below. These are also shown in Figure 11.9: Community facilities (Book of Figures – Community, App Doc Ref 5.3.11).

### **Chesterton**

3.1.22 In the Chesterton area a number of facilities are located in the south of the settlement along the south end of Green End Road, including Chesterton Methodist Church, Clarence Home Day Nursery, Chesterton Primary School and Chestnut Nursery School; and the Cambridge District South Headquarters. St Georges Church and Hall is located off Milton Road, a major main road in the settlement.

3.1.23 Further north, Nuffield Road Medical Centre, Shirley Community Primary School and Pauline Burnet House Care Home are all located on Nuffield Road off Green End Road within the centre of the settlement. There is also a Play Area located on Discovery Way. The Bradfield Centre co-working space, the Trinity Centre meeting and event space, and the Revolution Health and Fitness Club are all located in Cambridge Science Park, in the north of Chesterton.

### **Fen Ditton**

3.1.24 There is a small number of community facilities located within Fen Ditton. These include Fen Ditton Church and St Mary the Virgin Fen Church both located on either side of Church Road in the south east of the settlement. Fen Ditton Community Primary School is located on the main road in the centre of the settlement on Horningsea Road.

### **Milton**

- 3.1.25 There are a number of community facilities located in Milton. Milton Country Park is located in the south of the village, adjacent to the A14 and Cambridge Road. Sycamores Recreation Ground is located on The Sycamores in the west of the village; and Milton Village Community Centre and Recreation Grounds (used regularly for activities including baby and toddler groups, senior groups and fitness classes) located in the centre of the village on Coles Road.

### **Horningsea**

- 3.1.26 There is a small number of community facilities located around the village Horningsea. Biggin Abbey, a historic manor house, is located to the south of the village. Within the village itself Horningsea Village Hall, Millennium Green, and Goose Green Play Area are all located off the High Street in the centre of the village. Further north in the village, the Saxon- era Grade II listed Church of St Peter located on St. Johns Lane.

### **Clayhithe**

- 3.1.27 Community facilities located in Clayhithe include the Cambridge Sailing Club and Cambridge Motorboat Club, both located in the north of Clayhithe, on Clayhithe Road and adjacent to the River Cam.

### **Waterbeach**

- 3.1.28 There are a number of community facilities located in Waterbeach close to the Waterbeach pipeline. These include Waterbeach Village Hall, located in the southern edge of the village on Car Dyke Road. The Church of St John the Evangelist and Waterbeach Baptist Church are both located in the south of the village on Station Road.
- 3.1.29 Hatley Court Residential Home is located in Way Lane in the south east of the village. Waterbeach Toddler Playgroup, Waterbeach Community Primary School and Waterbeach Library are located in a cluster in the centre of the village on Burgess Road. In the north of the village Lancaster House and Little Stars Day Nursery is located on Capper Road, and a playground is located on Abbey Place.

## **Open Space and Recreation**

### **River Cam**

- 3.1.30 The River Cam is a popular destination which provides connectivity between communities and a range of recreational opportunities. The river is also a designated County Wildlife Site (CWS). Recreational uses include rowing, punting, swimming, kayaking, fishing, and motor boating. Engagement with recreational user groups confirmed these variety of uses and that they occur from March to early November. Users live locally, but some also travel (up to approximately an hour) to access these activities.
- 3.1.31 Rowing is the most popular activity in terms of numbers of river users. There has been rowing on the River Cam for nearly 200 years. There are 39 active rowing clubs



in Cambridge, with most boat clubs clustered along the river upstream within the centre of Cambridge. Boat clubs use the River Cam every day for practice in both the winter and summer months.

- 3.1.32 Rowing events along the River Cam are mainly held on Saturdays and Sundays throughout the calendar year. The major events during the weekdays are the University Lent Bumps (Wednesday to Saturday in March), University May Bumps (Wednesday to Saturday in June), and Cambridgeshire Rowing Association Bumps (Monday to Friday in July). These events are coordinated through the Cambridgeshire Rowing Association.
- 3.1.33 In addition to water-based activities, the River Cam is used by groups for angling as well as for walking along the PRoW located on both the eastern and western banks.
- 3.1.34 Cambridge Fish Preservation and Angling Society (CFPAS) (founded in 1885) controls angling activities along the section of the River Cam from the reach from Chesterton to Clayhithe. CFPAS issues licenses / day tickets and runs a series of matches including events located along the section of river downstream of the proposed new outfall.
- 3.1.35 User counts completed as part of the baseline information (Appendix 19.4, App Doc Ref 5.4.19.4) indicate higher usage in mornings dominated by rowers and confirm a range of users (rowers, kayaks, motorboats) as well as use of the banks by runners, walkers, cyclists and angling.

#### **Open space, recreation and Public Rights of Way**

- 3.1.36 The study area includes a number of green space and recreational areas, linked by an extensive PRoW network. The following section describes these areas of open space, recreational resources and PRoWs surrounding each settlement.

#### **Chesterton**

- 3.1.37 There is a large number of green and recreational open space in Chesterton. These include recreation grounds at Dundee Close and Scotland Road in the southern part of the area. A further recreation ground, Green End Road recreation ground, is located further north along the same road and is linked to Cycle Route 51.
- 3.1.38 Five Trees Garden is located to the east of the town and can be accessed from Cam Causeway and Fen Road, with this second road lying parallel to the River Cam.
- 3.1.39 Chesterton Nature Reserve is located to the rear of Nuffield Road Health Centre and can be accessed from Nuffield Road. Nuffield Road Allotments lies slightly north of the nature reserve and can also be accessed from a footpath from Nuffield Road. Nuffield Road lies adjacent to Cycle Route 51. National Cycle Route 51 passes through these communities, starting on Cowley Road, heading east on the Cambridgeshire Guided Busway, before crossing over the River Cam and heading north and then east to Fen Ditton. A newly built cycle way, the Chisolm Trail, crosses over the River Cam via the newly built Abbey-Chesterton Bridge and forms part of the wider cycle network.

### **Fen Ditton**

- 3.1.40 There are two main areas of open space and recreation within Fen Ditton village. To the south of the village is Ditton Meadows, which lies adjacent to the River Cam, and is connected to the community via a number of walking routes. Fen Ditton Recreation Ground is located on the northeastern edge of town, at the junction of Green End, Stanbury close and Church Street. These open spaces are connected by PRoW 85/3 (footpath), which runs north through the village.
- 3.1.41 There is further formal PRoW provision through the local area which provide key connections for people living and visiting Fen Ditton:
- PRoW 85/6 (a footpath) provides a connection along the eastern bank of the River Cam from Horningsea to Fen Ditton. This footpath changes into PRoW 130/3 (a byway) and PRoW 85/5 (a byway), providing access to the B1047; and
  - PRoW 85/2 and PRoW 85/1 (footpaths) provide access from the south part of Fen Ditton to High Ditch Road.
- 3.1.42 There is no specific walking and cycling provision along the majority of High Ditch Road. However, there is footway provision approximately 1km from the west of the High Ditch Road/Low Fen Drove Way junction. National Cycling Route 51 is located along the A1303 Newmarket Road. This provides an accessible route to and from communities east and west of Fen Ditton.

### **Milton**

- 3.1.43 Milton Country Park is located north of the A14 in the south/south-east of Milton on Cambridge Road and provides open and recreational space for the local community.
- 3.1.44 The community of Milton has poor connections to the PRoW network. Their nearest formal footpaths which form part of the PRoW network, are located to the south of the A14 and along the banks of the River Cam. PRoW 162/7 (a bridleway) runs from east to west along Cambridgeshire Guided Busway, just south of Cambridge Science Park. PRoW 162/1 runs on the west bank of the River Cam and is accessed via a level crossing on Fen Road.
- 3.1.45 There are formal footpaths in the south of the community that form part of the PRoW network. One footpath (39/13) runs along the River Cam from Chesterton to the north, and links up with PRoW 162/1, which continues along the west bank of the river.
- 3.1.46 National Cycle Route 51 also passes through the east of Milton, following the west bank of the River Cam. This links with National Cycle Route 11, which provides a cycle route around the perimeter of Milton Country Park.

### **Horningsea**

- 3.1.47 Horningsea linked to other areas of recreation and settlements by a network of PRoWs. To the south of the settlement, the Honey Hill area is accessible from Low Fen Drove Way (part of which is byway 85/14). Some people using this area use an area of existing hardstand along the northern section of Low Fen Drove Way. This

area forms part of the Eastern Fen Edge Landscape Character Area and is used by local residents as part of a walking and cycling loop.

3.1.48 Access is provided from the south of the village to the River Cam by a small network of PRoW:

- PRoW 130/1 provides access from Horningsea Road and connects to PRoW 85/7 and PRoW 85/6, the latter of which provides access to the River Cam; and
- PRoW 162/1 runs along the west side of the River Cam. This route provides a connection from Horningsea to Fen Road via PRoW 85/6 which crosses over the river at Baits Bite Lock.

3.1.49 Within the centre of the settlement, there are a number of recreational areas. There are two fields to the west of High Street which includes Goose Green play area and a public open space to the east of High Street is Millennium Green.

3.1.50 There is a network of PRoW to the north east of Horningsea providing connections from the village to the neighbouring areas of Stow-cum-Quy Fen, Stow-Cum-Quy and Lode. These PRoW are accessible from Clayhithe Road. There is a layby on Clayhithe Road which is used, informally, for car parking by walkers accessing PRoW 130/8 (a bridleway) which provides a route to Stow-cum-Quy Fen Site of Special Scientific Interest (SSSI) via connecting rights of way (these are indicated within A.13 of Appendix 19.3 of the Transport Assessment (App Doc Ref 54.19.3)).

3.1.51 There is an existing pedestrian and cycling provision located along the western side of Horningsea Road, which starts approximately 400m south of Horningsea Road overpass above the A14. This route provides access for pedestrians and cyclists from Horningsea to Fen Ditton. The Fen Ditton Horningsea Cycleway, approximately 2km in length and located to the west of the B1047 Horningsea Road, is planned to become part of the proposed Horningsea Greenway (a shared-use path providing cyclists and walkers with an alternative to using the B1047).

### **Clayhithe**

3.1.52 Within Clayhithe, there is a formal bridleway provision (PRoW 247/23) located adjacent to Clayhithe Road. This provides a connection to Station Road and between the communities of Waterbeach and Clayhithe.

### **Waterbeach**

3.1.53 There are several open space and recreational areas in Waterbeach, and a small amount of PRoW provision for the community.

3.1.54 PRoW 247/23 provides access between the community of Waterbeach and the community of Clayhithe to the south, whilst on the western side of the River Cam, PRoW 247/10 (a formal bridleway) provides a connection to the north and south of Waterbeach.

3.1.55 Hall Farm Stables is located to the south of the village of Waterbeach, just off the A10. The facility provides riding lessons across a 14ha site. Waterbeach Recreational

Ground is located in the southern portion of Waterbeach and includes a tennis court facility, a skate park and a playground.

- 3.1.56 Cow Hollow Wood is a small country park located west of the River Cam, adjacent to Clayhithe Road. Green spaces to the south of Bannold Road and north of Waterbeach train station are part of Waterbeach Hyacinth Park.
- 3.1.57 On the eastern side of the River Cam, PRoW 130/13 (a formal footpath) provides a connection, via the PRioW network between Clayhithe and communities in the north including Upware, Wicken Fen and Padney.
- 3.1.58 Open space, recreational areas are also shown in Figure 11.10: Open space and recreational areas (Book of Figures – Community, App Doc Ref 5.3.11) and public rights of way are also shown in Figure 11.11: Public Rights of Way (Book of Figures – Community, App Doc Ref 5.3.11).

## 3.2 Future baseline

3.2.1 . For the aspect of community, the following future developments indicated in Table 3-1, Chapter 5 (App Doc Ref 5.2.5) that may lead to additional receptors are:

- S/2075/18/OL: Up to 4500 dwellings, business, retail, community, education and leisure uses, Waterbeach New Town East (at construction year 1 this would be partially completed);
- S/0559/17/OL: Up to 6500 dwellings, business, retail, community, leisure, education and sports use, Waterbeach New Town (at construction year 1 this would be partially completed); and
- S/2682/13/OL: Up to 1300 dwellings, school, food store, community and open spaces, Marleigh.
- residential receptors at Parsonage Farm (22/00343/PRIOR).
- 18/0481/OUT: Up to 1200 dwellings, retail, education and community facilities on land north of Cherry Hinton
- 22/02771/OUT: Cambridge North Residential Quarter new residential blocks for up to 425 residential units.
- S/4629/18/FL: business receptors at Cambridge Science Park
- 20/04010/FUL: business receptors south of Milton Park and Ride.

3.2.2 By operation year 1 however both the Waterbeach New Town and New Town East developments would not experience adverse effects and would benefit from the waste water treatment facility. Similarly, residents at Cambridge North, should this site be taken forward for residential, would also not be expected to experience adverse impacts.

3.2.3 For the community topic, changes in access to residential properties, community resources, businesses and open space and recreational areas are relevant to the

future baseline. Population trends have been analysed to provide insight into the likely future local community circumstance. ONS data predicts there to be population growth across all three districts between 2020 and 2040, with the largest growth occurring in East Cambridgeshire. The proportion of children (those under 16) in these three local authority areas is predicted to reduce, and the proportion of older people (65 and over) is predicted to increase by over 30% for all three local authority areas. Further details are provided in Chapter 12: Health. It is likely that the types of residential properties and community resources will respond to this changing demographic, although the exact location of these facilities is not able to be confirmed.

- 3.2.4 Potential changes to work patterns, such as how often people choose to commute to work, is relevant to understanding impacts on business activity and the value placed on local recreational resources in the future. This has also been influenced by the Covid-19 pandemic which has changed commuting patterns and the amount of time which people spend working from home. This is likely to influence the type, location and demand for recreational resources, although the exact change is not able to be predicted. As such, the exact impact of changes to work patterns cannot be determined.

### **Impacts of climate change on future baseline**

- 3.2.5 The likely ranges of change in climatic parameters including precipitation, temperature, wind speed, humidity and frequency of extreme weather are not considered to materially affect the future baseline described above for potential impacts on the community or increase the sensitivity of receptors to impact.
- 3.2.6 Chapter 9: Climate Resilience considers the potential for elevated odour risks due to changes in climatic conditions, as well as effects relating to air quality, landscape and visual impacts.

## 4 Assessment of Effects

4.1.1 This section presents the assessment of effects and sets out a preliminary assessment that takes into account primary and tertiary mitigation in determining effects and then considers secondary mitigation and the assessment of residual effects.

### 4.2 Construction phase

#### Project wide

4.2.1 This section describes and assesses the potential community effects associated with temporary changes to employment across all elements of the Proposed Development (proposed WWTP, Waterbeach pipeline and existing Cambridge WWTP).

#### Temporary changes to employment

##### Magnitude of impact

4.2.2 During construction of the proposed WWTP and Waterbeach pipeline, there would be a beneficial impact on the economy through providing employment opportunities, through both new and existing construction contracts. This is likely to be beneficial for local employment opportunities associated with direct employment from the construction activity, as well as for local businesses through indirect expenditure.

4.2.3 As described in Chapter 2: Project Description, at the peak construction activity there are anticipated to be 60 supervisory and administrative staff and approximately 422 staff working across the site. The proportion of construction workers and/or contracts that would be sourced locally is currently unknown. However, as the number of jobs would affect over 100 people for over a period of one year, the magnitude of impact is moderate.

##### Sensitivity of receptor

4.2.4 The existing sensitivity of the employment market within the study area is considered to be low as there are relatively low levels of deprivation and the unemployment rate is lower than national and regional rates.

##### Significance of effect

4.2.5 Overall, it is predicted that the moderate magnitude of impact on the low sensitivity receptor would result in a minor beneficial effect, which is **not significant**.

##### Secondary mitigation or enhancement

4.2.6 There are no secondary mitigation measures relevant to employment and the effect remains as a minor beneficial, which is **not significant**.

Residual effect

4.2.7 The residual effect remains as a minor beneficial effect, which is **not significant**.

**Proposed WWTP**

4.2.8 The section presents the assessment of effects and takes into account primary and tertiary mitigation in determining effects and then considers secondary mitigation and the assessment of residual effects.

**Temporary and permanent requirements for land**

4.2.9 The construction of the proposed WWTP (including access road, treated effluent pipeline and transfer tunnel) will require the temporary and permanent use of land:

- The construction of the proposed WWTP and the permanent access road will require the permanent removal of 22ha of land.
- The permanent use of land for the planting and earthworks entirely within the extent of land required for the landscape masterplan (Figure 3.1 within the LERMP (Appendix 8.14, App Doc Ref 5.4.8.14)).
- The land required for the construction of the treated effluent pipeline and outfall comprises a temporary removal of up to 50ha of land for the construction corridor which would be reinstated, and
- The construction of the transfer tunnel which requires the temporary use of up to 3.5ha for associated construction accesses, compound areas and construction tracks which would be reinstated.

4.2.10 These temporary and permanent land requirements are not required from community receptors, namely residential properties, community resources, non-agricultural businesses or areas of formal open space and recreational parks. Therefore, the impact of temporary and permanent land requirement is not considered further within this aspect of the assessment. The impact of temporary and permanent land requirements on agricultural land are assessed in Chapter 6: Agricultural Land and Soils. The impact of temporary and permanent land requirements on recreational resources and open space are assessed below.

**Temporary changes to amenity**

4.2.11 Changes in amenity, which result from a combination of significant residual (post-mitigation) effects reported in other assessment topics, specifically noise, vibration, odour, air quality and visual effects. For an amenity effect to be identified, at least two residual effects must combine at the same location. The assessment has not identified any residual significant effects combining at the same location. Therefore, no change to amenity is anticipated during the construction of the proposed WWTP. Therefore, the impact of change to amenity is not considered further within this aspect of the assessment.

### **Temporary changes to access affecting residents on Low Fen Drove Way**

4.2.12 This section assesses the potential community effects associated with temporary changes to access which arise due to physical barriers to entering or exiting a resource, or as a result of delays which means it takes longer to enter a resource.

#### Magnitude of impact

4.2.13 There are residents who live on Low Fen Drove Way in Stow cum Quy to the north east of the Proposed Development. These residents may experience temporary disruption to access during the construction of the proposed WWTP due to the increased number of construction vehicles on Low Fen Drove Way for up to 6 months. Although access will be maintained to the property, residents of Low Fen Drove Way may experience temporary delays due to the increased number of construction vehicles on Low Fen Drove Way. As the duration of impact is up to six months, the magnitude of the impact is considered to be minor.

#### Sensitivity of receptor

4.2.14 The sensitivity of this residential property is considered to be high as there are no alternative accesses to the property apart from on Low Fen Drove Way.

#### Significance of effect

4.2.15 Overall, it is predicted that the minor magnitude of impact on the high sensitivity receptor would result in a reversible, temporary, and slight adverse effect, which is **not significant**.

#### Secondary mitigation or enhancement

4.2.16 The CTMP and CoCP (Section 5.2 Mitigation measures adopted as part of the Proposed Development) would mitigate the potential effects associated with construction vehicle movements. Specifically:

- CTMP measures
  - section 4.2 (Access route strategy) requires all deliveries to be made outside of peak hours (8am-9am, 3-4pm, 5-6pm);
  - section 5.2 (Temporary access points and construction road signage) which requires the use of temporary signage along all proposed construction haul roads;
  - section 6.3 (Adherence to Designated Routes);and
  - section 6.9 (Facilitate safe movement of users of the highway (including NMUs) requirement to provide connectivity/access to community facilities and residential properties during works.
- CoCP measures for temporary traffic control during the construction period and restrictions on construction vehicle movements through the Fen Ditton and Horningsea.



- 4.2.17 Through a requirement of the Community Liaison Plan (CLP) (draft CLP Application Reference Document 7.8.) instances of time critical works would be communicated the local community and stakeholders in advance of the works taking place including provision of information on durations, particularly where these will involve works outside of the core working hours.
- 4.2.18 Notwithstanding the application of these measures, the impact would remain slight adverse which is **not significant**.

*Residual effect*

- 4.2.19 The residual effect remains as slight adverse which is **not significant**.

**Temporary changes to users of recreational resources and open spaces**

- 4.2.20 This section details potential impacts on recreational opportunities due to changes in access to areas of open space and recreational areas. Additionally, recreational opportunities can be impacted by the ability of non-motorised users to access routes and use PRoW and non-designated public routes, changes to the accessibility and usability of routes, changes to journey lengths, and changes to journey pleasantness.
- 4.2.21 Impacts are separated to consider users of the River Cam, users of PRoW affected in Fen Ditton, users of PRoW affected in Fen Ditton, users of Low Fen Drove Way and PRoW 85/14 and PRoW 130/17, and users of Horningsea Road.

*River Cam*

*Magnitude of impact*

- 4.2.22 Recreational users of the River Cam will experience temporary changes due to the construction of the outfall structure to the River Cam. The construction activity will temporarily reduce the width of the navigation for river users (such as rowers, punters, boaters and canoers). As the width of the portion of the river which is navigable will be reduced on a short-term temporary basis, river users may be particularly affected at busy times. Consultees from recreational facilities noted that March to November was the busiest time for recreational use of the River Cam, with events on Saturdays and Sundays throughout this period. It is also noted that the rowing numbers drop in the summer months during the summer university break between end of June and early September. Consultation identified concerns regarding changes in river water quality or releases of untreated wastewater during construction (and operation) would significantly disrupt activities on the River Cam (see Section 1.5, Consultation for more information).
- 4.2.23 The construction of the outfall will require temporary river works including the use of a cofferdam to provide a safe dry working area. This will result in a short term restriction to the width of the river affecting navigation for a short section of the River Cam.
- 4.2.24 The minimum navigation widths required as well as the need for navigation marks and warnings have been discussed with the navigation authority (Conservancy) in addition to the timing and duration of the works.

4.2.25 The design of the temporary works and the timing have accommodated feedback from the Conservancy (site meeting July 1<sup>st</sup>, 2022). The magnitude of the impact is considered to be moderate adverse given the number of users, duration of the construction (likely to be up to 4 months) and the disruption to river users who may have to alter activities, even though the river remains navigable. This particularly applies to rowing events which may have to consider alternative courses, or different times for the events, if the navigable width is not sufficient to accommodate the requirements of the event.

Sensitivity of receptor

4.2.26 The recreational users of the River Cam are considered to have high sensitivity because there is a limited range of alternative resources in close proximity which offer comparable recreational opportunities. The area is also frequently accessed by a range of river users, and there are specific events throughout the year which use the area in which construction of the outfall is proposed.

Significance of effect

4.2.27 Overall, it is predicted that the moderate magnitude of impact on the high sensitivity receptor would result in a temporary moderate adverse effect, which is **significant**.

Secondary mitigation or enhancement

4.2.28 The following measures would further mitigate the impact to the River Cam. These are set out within the COCP Part B. The measures of particular relevance to River Cam users are:

- Section 3.1 of the CoCP Part B (Appendix 2.2, App Doc Ref 5.4.2.2) includes limiting the construction activity in the river to between mid-June and early September and defining a minimum river width that must be retained throughout the duration of the construction.
- Specific measures set out to provide advance warning to potentially affected receptors on the duration and type of works within the river.

Residual effect

4.2.29 Notwithstanding the application of these measures, the residual effect would remain moderate adverse, which is **significant**, due to the volume of activity on the river and the lack of alternative comparable recreational opportunities.

*Fen Ditton (PRoW 85/6 and PRoW 85/8)*

Magnitude of impact

4.2.30 Footpath 85/6 (parallel to the east bank of the River Cam south of the A14 road bridge) will be temporarily closed for a period of up to 11 months during construction of the outfall structure and the treated effluent pipeline. A temporary diversion will be put in place, via PRoW 85/8 (which provides a connection between PRoW 85/6 and PRoW 130/1), throughout the construction period.

4.2.31 During the diversion there would be a period where use of the footpath 85/8 would cease due to the construction corridor related to the open cut construction of the treated effluent pipeline. This would require a longer diversion to the footway/cycleway along the western side of the carriageway to join the PROW 130/1 meaning users of the 85/6 would need to travel an additional 1010m to return to back to the 85/6.

4.2.32 The magnitude of the impact is considered to be major given the limited duration over which they are likely to be impacted. The diversion is unlikely to dissuade people from using these routes to access recreational opportunities.

Sensitivity of receptor

4.2.33 The recreational users of PROW (85/6 and 85/8) are of medium sensitivity because these routes are used frequently for recreational purposes and provide a link to a wider network of PROW to the north and south. There are limited alternative routes providing a direct connection between Horningsea and Fen Ditton.

Significance of effect

4.2.34 Overall, it is predicted that the major magnitude of impact on the medium sensitivity receptor would result in a reversible, temporary moderate significant effect, which is **significant**.

Secondary mitigation or enhancement

4.2.35 The following measures would further mitigate the impact to PROW 85/6 and PROW 85/8. These are set out within the COCP Part A (Appendix 2.1, App Doc Ref 5.4.2.1). The measures of particular relevance to PROWs 85/6 and 85/8 users are:

- A requirement for the use of safety gates to be put in place and users allowed to safely cross the construction working area which would allow users diverted on to the 85/8 to cross over the works to construct the treated effluent pipeline and join the temporary diversion back to the 85/6; and
- a requirement for all PROW to be restored to the same condition as before the works took place or to a standard which is acceptable to the Local Highway Authority which returns the paths to the same or better condition, so journey quality is unaffected once the works have been completed.

4.2.36 The provision of safety gates allowing users to cross the construction working area would reduce the length of the diversion to 770m for users of PROW 85/6.

Residual effect

4.2.37 Despite the application of these measures, the impact would remain major. The residual effect therefore remains as moderate adverse, which is **significant**.

### *Low Fen Drove Way (PRoW 85/14 and PRoW 130/17)*

#### Magnitude of impact

4.2.38 During construction of the proposed WWTP recreational users of Low Fen Drove Way, including PRoW 85/14 and PRoW 130/17, will experience temporary disruption during:

- construction of the temporary access road from Low Fen Drove Way into the land required for the construction of the permanent access to the proposed WWTP;
- construction of the proposed pathway extending from the south of the landscape masterplan to connect to Low Fen Drove Way; and
- earthworks and landscaping within the land required for the construction of the proposed WWTP and landscape masterplan.

4.2.39 The magnitude of the impact is considered to be minor as access to these routes will be maintained for the duration of the construction period and the presence of construction activity nearby is unlikely to dissuade people from using these routes for recreation. The construction activity is primarily at the western end of Low Fen Drove Way where it connects to Horningsea Road, which is only a small portion of the route and study area connecting recreational receptors to the east.

#### Sensitivity of receptor

4.2.40 The recreational users of Low Fen Drove Way are of medium sensitivity because there are limited alternative routes for walking, cycling and horse-riding in the area which provide connections between Horningsea to the north. There is a network of PRoW to the north, but these are on the northern side of Horningsea.

#### Significance of effect

4.2.41 Overall, it is predicted that the minor magnitude of impact on the medium sensitivity receptor (recreational users of Low Fen Drove Way) would result in a reversible, temporary, slight adverse effect, which is **not significant**.

#### Secondary mitigation or enhancement

4.2.42 The following measures would further mitigate the impact to Low Fen Drove Way. These are set out within Section 7.6 (traffic and transport) the COCP Part A (Appendix 2.1, App Doc Ref 5.4.2.1). The measures of particular relevance to Low Fen Drove Way and PRoWs 85/14 and 130/17 users are:

- a requirement for the use of safety gates to be put in place and users allowed to safely cross the construction working area; and
- a requirement for all PRoW to be restored to the same condition as before the works took place or to a standard which is acceptable to the Local Highway Authority.

Residual effect

4.2.43 Despite the application of these measures the impact would remain minor. The residual effect therefore remains as slight adverse, which is **not significant**.

*Horningsea Road*

*Magnitude of impact*

4.2.44 Walkers, cyclists and horse-riders using Horningsea Road to travel to and from Fen Ditton and Horningsea during construction of the proposed WWTP will experience temporary disruption during:

- construction of the final effluent pipeline across Horningsea Road;
- construction of the improved shared cyclist / pedestrian footway and construction of the new ghost island (described in Table 2-10 of Chapter 19: Traffic and Transport) – these are provided to afford right-turning vehicles some protection and assist free flow of major road through traffic;
- construction of the new arm to the existing signalised junction between Horningsea Road and the A14; and
- use of Horningsea Road by construction vehicles to access land required for the construction of the proposed WWTP and land required for the construction of the transfer tunnel including shafts 4 and 4 and the section of Waterbeach south of the A14.

4.2.45 Despite the duration of construction intermittently affecting Horningsea Road for up to 45 months, access will be retained and any disruption is not likely to stop people from being able to travel between communities or access recreational opportunities. The construction sequencing is such that the permanent access is constructed early in the programme so that that direct access to the land required for the construction of the proposed WWTP is achieved by use of the new signalised arm allowing crossing over Horningsea Road. As such, the magnitude of the impact is considered to be minor. .

Sensitivity of receptor

4.2.46 The sensitivity of pedestrians, cyclists and horse-riders using the section of Horningsea Road extending south by 755m from the junction with A14 are of high sensitivity because there are no alternative routes of the same length that provide direct access between Horningsea and Fen Ditton. Children travelling to Fen Ditton Primary School from Horningsea also use this route.

Significance of effect

4.2.47 Overall, it is predicted that, due to access being maintained, with users only experiencing slight delays, the minor magnitude of impact on the high sensitivity receptor would result in a reversible, temporary slight adverse effect, which is **not significant**.

Secondary mitigation or enhancement

4.2.48 The following measures would further mitigate the impact to Horningsea Road. These are set out within the CTMP (Appendix 19.7, App Doc Ref 5.4.19.7). The measures of particular relevance to Horningsea Road are:

- Section 6.3 Adherence to Designated Routes
- Section 6.9 Facilitate safe movement of users of the highway which requires maintaining the existing footway / cycleway to the west of the Horningsea Road carriageway at all times with suitable barriers separating the footway from the works
- Section 6.9 requirement to provide connectivity/access to community facilities and residential properties during works).
- Section 6.9 requirement for a temporary speed restriction to Horningsea Road to be put in place in accordance with the Temporary Traffic Regulation Order set out in Article 16 of the DCO for the duration of the works.
- Section 6.9 requirement that the existing footway / cycleway to the west of the Horningsea Road carriageway will be maintained at all times with suitable barriers separating the footway from the works. Any site crossing points on the footway will need to be controlled with suitable TM and traffic marshals where appropriate.

Residual effect

4.2.49 Despite the application of these measures, the impact would remain minor. The residual effect remains as slight adverse, which is **not significant**.

**Waterbeach transfer pipeline**

4.2.50 This section sets out the assessment of effects in relation to the construction of the Waterbeach pipeline which consists of a transfer section running from the north near Waterbeach to Low Fen Drove Way, a section crossing the area of land required for the construction of the proposed WWTP, a section south of the A14 which connects to the area of land where the existing Cambridge WWTP is located.

Temporary requirement for land

4.2.51 The Proposed Development requires temporary and permanent land. CBS Automotive, located in Clayhithe, is the only business which is affected. Temporary and permanent land requirements do not require land from private residential property, or communities facilities, so are not considered further within this assessment.

Magnitude of impact

4.2.52 CBS Automotive is a vehicle installation business located on Clayhithe Road to the south of the village of Clayhithe. The construction of the proposed Waterbeach pipeline would potentially temporarily require land from CBA Automotive. The

magnitude of impact is considered to be minor as access to the business will be unaffected and the temporary use of land is not expected to inhibit CBS Automotive from being able to continue to operate.

Sensitivity of receptor

- 4.2.53 The sensitivity of CBS Automotive is considered to be medium, as the business is considered to be a moderately, or semi-frequently accessed resource.

Significance of effect

- 4.2.54 Overall, it is predicted that the minor magnitude of impact on the medium sensitivity receptor (CBS Automotive) would result in a slight adverse effect, which is **not significant**.

Secondary mitigation or enhancement

- 4.2.55 There are no secondary mitigation measures relevant to CBS Automotive and the effect remains as slight adverse and is **not significant**.

Residual effect

- 4.2.56 The residual effect remains as slight adverse, which is **not significant**.

**Temporary changes to amenity**

Magnitude of impact

- 4.2.57 Changes in amenity, which result from a combination of significant residual (post-mitigation) effects reported in other assessment topics, specifically noise, vibration, odour, air quality and visual effects. For an amenity effect to be identified, at least two residual effects must combine at the same location.
- 4.2.58 The assessment has not identified any residual significant effects combining at the same location. Therefore, no change to amenity is anticipated during construction of the Waterbeach transfer pipeline.

**Temporary changes to recreational resources and open spaces**

Magnitude of impact

- 4.2.59 Recreational users of PRoW (130/16, 130/10, 130/6 and 130/8) to the east of Waterbeach may experience temporary disruption to the use of these routes which provide access to a wider network of PRoW to the north and south. This is due to construction of the Waterbeach pipeline to the east of Waterbeach and under the railway line, the A14, Horningsea Road and the River Cam.
- 4.2.60 Temporary diversions will be implemented, for up to six months, close to the route required, with the length up to 170m.
- 4.2.61 The magnitude of the impact is considered to be minor as recreational users will still be able to use the PRoW and due to the short period of impact.

Sensitivity of receptor

- 4.2.62 The sensitivity of recreational users of PRoW (130/16, 130/10, 130/6 and 130/8) is considered to be low because there are a wide range of footpaths and PRoWs that can be used as alternatives, within an accessible distance, to access recreational spaces to the east of Waterbeach.

Significance of effect

- 4.2.63 Overall, it is predicted that the minor magnitude of impact on the low sensitivity receptors (users of 130/16, 130/10, 130/6 and 130/8) to the east of Waterbeach would result in a neutral effect, which is **not significant**.

Secondary mitigation or enhancement

- 4.2.64 The measures of particular relevance to users of PRoW 130/16, 130/10, 130/6 and 130/8 is a requirement for the use of safety gates to be put in place and users allowed to safely cross the construction working area. The following measure would further mitigate the impact to recreational resources and open spaces. These are set out within Section 7.6 (traffic and transport) the COCP Part A.

Residual effect

- 4.2.65 Notwithstanding the application of these measures, the impact would remain minor and the residual effect remains as neutral, which is not significant.

### **Existing Cambridge WWTP**

- 4.2.66 No community effects are anticipated in relation to construction activities within the existing Cambridge WWTP.

### **Monitoring**

- 4.2.67 To maximise potential benefits from changes to temporary employment, the Applicant will be responsible for:
- monitoring the number of employees from the local (Cambridgeshire) area;
  - recording the monetary value of contracts which have been entered into with local (Cambridgeshire) companies; and
  - monitoring what apprenticeship and training opportunities have been provided where people from Cambridgeshire have benefitted.
  - This should occur for the duration of the construction period.
- 4.2.68 Regular engagement with Cam Conservators and other recreational organisations who use the River Cam should be undertaken to ensure that:
- navigable widths are appropriate for the range of river users; and
  - construction activity is planned around key events which use the area of the River Cam where the outfall is proposed.



## 4.3 Operation phase

### Proposed WWTP

- 4.3.1 This section sets out the assessment of effects in relation to the operation and maintenance of the proposed WWTP including the landscaping proposals, final effluent pipeline, outfall, transfer tunnel and new access connection connecting with the B1047 Horningsea Road.

#### **Permanent changes to amenity**

- 4.3.2 Changes in amenity, which result from a combination of significant residual (post-mitigation) effects reported in other assessment topics, specifically noise, vibration, odour, air quality and visual effects. For an amenity effect to be identified, at least two residual effects must combine at the same location.
- 4.3.3 The assessment has not identified any residual significant effects combining at the same location. Therefore, no change to amenity is anticipated during the operation of the proposed WWTP.

#### **Temporary changes associated with completion of phased expansion**

##### Requirement for land

- 4.3.4 The phase expansion of the proposed WWTP would not require the acquisition of further land since the expansion would be completed within the land surrounded by the earth bank and access by use of the permanent access road from Horningsea Road. The phased expansion therefore has no impacts associated with permanent or temporary land acquisition.

##### Amenity

- 4.3.5 The construction activities associated with delivery of the phased expansion are expected no earlier than 2035. The expansion would not result in changes to amenity which result from a combination of significant residual (post-mitigation) effects reported in other assessment topics. The impacts associated with the expansion works are no more severe than the impacts experienced during the initial construction phase and therefore would also not represent a significant effect on amenity.

##### Community resources / provision of recreational resources

- 4.3.6 The expansion would be completed within the land surrounded by the earth bank and accessed by use of the permanent access road from Horningsea Road. There would, therefore, be no change to the provision of access to the discovery centre or change to use of the landscaped area surrounding the proposed WWTP.

**Permanent change in provision of community resources – discovery centre**

Magnitude of impact

- 4.3.7 Users of the discovery centre will have access to a unique education experience covering topics (such as sustainability and the circular economy) that are not always covered by the more formal educational facilities. However, visits are not likely to be frequent so there is likely to be a short-term impact. Although the main users of the facility are likely to be children within the local authority area, there is the potential for schools and families to travel from neighboring local authorities. Most visits are likely to be scheduled and/or intermittent due to the nature of the facility, therefore the magnitude of the impact is considered to be minor beneficial.

Sensitivity of receptor

- 4.3.8 The sensitivity of the potential users of area is considered to be medium as there are limited alternative facilities in the local authority, and the centre would be semi-frequently accessed.

Significance of effect

- 4.3.9 Overall, the provision of the discovery centre is likely to result in a slight beneficial effect as a result of a minor magnitude of impact on a medium sensitivity receptor and is not significant.

Secondary mitigation or enhancement

- 4.3.10 There are no secondary mitigation measures relevant to the provision of community resources and the effect remains as slight beneficial, which is not significant.

Residual effect

- 4.3.11 On the basis that no secondary mitigation or enhancement measures are proposed, the residual effect remains slight beneficial, which is not significant.

**Permanent change in the provision of recreational resources and open spaces**

Magnitude of impact

- 4.3.12 A new bridleway connection to the north-east of the Proposed Development is intended to provide an enhanced connection for walkers, cyclists and horse riders to the existing formal PRow network, providing new circular routes and maintaining accessibility between communities. There will also be an extension of the footway on the eastern side of Horningsea Road to Low Fen Drove Way and widening of the footpath on the western side of the carriageway and a new pedestrian crossing. A publicly accessible permissive path will run through the landscaped area surrounding the proposed WWTP, which will be of a suitable width to be shared by pedestrians and recreational cyclists.
- 4.3.13 Within the new space for the landscaping proposals, interpretation boards, finger posts and scattered informal bench seating will be provided as part of the new setting. The magnitude of the impact of the new active travel connections for walkers, cyclists and horse riders, as well as the new recreational area, is considered

to be a moderate beneficial magnitude given the existing recreational use of the area and the availability of alternative PRoW and informal walking routes.

Sensitivity of receptor

- 4.3.14 The sensitivity of the existing recreational users is considered to be low as there are a range of other walking, cycling and horse-riding routes within the study area.

Significance of effect

- 4.3.15 Overall, it is predicted that the moderate magnitude of impact on the low sensitivity receptor would result in a slight beneficial effect, which is **not significant**.

Secondary mitigation or enhancement

- 4.3.16 There are no secondary mitigation measures relevant to the provision of community resources and the effect remains as slight beneficial, which is **not significant**.

Residual effect

- 4.3.17 On the basis that no secondary mitigation or enhancement measures are proposed, the residual effect remains minor beneficial, which is **not significant**.

### **Waterbeach transfer pipeline**

- 4.3.18 This section sets out the assessment of effects in relation to the operation and maintenance of the Waterbeach pipeline which consists of a transfer section running from the north near Waterbeach to Low Fen Drove Way, a section crossing the area of land required for the construction of the proposed WWTP, a section south of the A14 which connects to the area of land where the existing Cambridge WWTP is located.

- 4.3.19 No community effects associated with the Waterbeach pipeline are anticipated as there are no above ground elements to this part of the Proposed Development.

### **Monitoring**

- 4.3.20 Ongoing monitoring of the frequency and types of user groups visiting the discovery centre should be retained to determine the demand and types of groups benefitting from the discovery centre.
- 4.3.21 There shall be annual monitoring of the volumes and types of user groups visiting the area of land within the landscape masterplan for the first 5 years of operation. These data should be used to inform long term discussions with Quy Fen Trust/National Trust/Wildlife Trust and SCDC Ecology Officers in relation to adaptive management that may be required in relation to the impacts of user pressure to existing local resources used for recreation.

## **4.4 Decommissioning**

- 4.4.1 No community effects associated with the decommissioning of the existing Cambridge WWTP are anticipated. The activities within the existing Cambridge

WWTP would be temporary and do not require disturbance to community receptors, namely residential properties, community resources, non-agricultural businesses or areas of formal open space and recreational parks. Therefore, decommissioning is not considered further within this aspect of the assessment.

## 4.5 Cumulative effects

- 4.5.1 Cumulative effects are those arising from impacts of the proposed development in combination with impacts of other proposed or consented development projects that are not yet built or operational. An assessment of cumulative effects for community has been completed and is reported in Chapter 22: Cumulative Effects Assessment.
- 4.5.2 For Community there are no residual cumulative effects.

## 4.6 Inter-related effects

- 4.6.1 Inter-relationships are the impacts and associated effects of different aspects of the construction, operation of the Proposed Development and the decommissioning of the existing Cambridge WWTP on the same receptor. The assessment of inter-related effects for has been completed and is reported in Chapter 22: Cumulative Effects Assessment.
- 4.6.2 For the community, the assessment is fundamentally about inter-related effects on the community. In particular, the effect of noise, air quality, visual amenity and traffic effects.

## 5 Conclusion and Summary

- 5.1.1 This assessment of the effects, and their significance, of the Proposed Development as it applies to community has been thoroughly carried out based on the information currently available.
- 5.1.2 The assessment considers the potential impact on amenity, population, employment and economic activity, private property and housing, businesses, community facilities and open space and recreational impacts of the Proposed Development during its construction (including commissioning), operation and maintenance, and decommissioning phases.
- 5.1.3 The approach to assessment has adapted guidance provided by DMRB LA 112 and Public Health England guidance as well as national and local policy.

### Construction

- 5.1.4 The construction of the Proposed Development across all elements of the Proposed Development (proposed WWTP, Waterbeach pipeline and existing Cambridge WWTP) during construction would have a beneficial impact on the local economy through the provision of employment opportunities via both new and existing construction contracts. The effect on employment is assessed to be minor beneficial, which is not significant.
- 5.1.5 Through the application of primary and tertiary mitigation measures, the adverse effects of the Proposed Development on community receptors during construction would vary from neutral to moderate effects prior to mitigation, which would be significant in the case of moderate effects.
- 5.1.6 With the implementation of secondary mitigation measures, the construction effects on all identified receptors would be negligible / minor adverse (not significant) – with the exception of effects on the River Cam. Construction activity will temporarily reduce the width of the navigation for River Cam users resulting in a temporary, moderate adverse effect which is significant.
- 5.1.7 During construction, there will be a requirement for mitigation measures to be implemented through the application of management plans as specified by the CoCP Part A and B (Appendix 2.1 & 2.2, App Doc Ref 5.4.2.1 and 5.4.2.2).
- 5.1.8 Section 3 (Community and Stakeholder Engagement) of the CoCP Part A (Appendix 2.1, App Doc Ref 5.4.2.1) includes a requirement to develop a detailed CLP and appointing a CLO and specifies an ongoing dedicated project complaints procedure.
- 5.1.9 Measures to control impacts relation to temporary land use change (agricultural land and soils), air quality, health, landscape and visual changes, noise, odour, traffic and transport and water quality are detailed within Chapter 6: Agricultural Land and Soils, Chapter 7: Air Quality, Chapter 12: Health, Chapter 17: Noise and Vibration, Chapter 18: Odour and Chapter 20: Water Resources respectively.
- 5.1.10 There will also be controls on vehicle movements so that no construction vehicles will be permitted to travel through the villages of Horningsea or Fen Ditton.

## **Operation**

- 5.1.11 The effects of the Proposed Development on community receptors during operation and maintenance of the proposed WWTP are slight beneficial, as a result of the effect of formalising recreational opportunities provided as part of the Proposed Development (as set out in Section 3 of the LERMP (App Doc Ref 8.4.2.13), and through the provision of the Discovery Centre.
- 5.1.12 Future expansion of the treatment capacity would be regulated by the phased environmental permit (Discharges to surface water). Works to complete the expansion do not result in any significant community effects.
- 5.1.13 During operation, the proposed WWTP would be regulated through an environmental permit which would obligate the Applicant to operate the proposed WWTP in accordance with emissions limits.

## **Decommissioning**

- 5.1.14 There are no potential community effects as a result of decommissioning the existing Cambridge WWTP for the purpose of surrendering the existing environmental permit.
- 5.1.15 A summary of potential environmental effects, mitigation and monitoring is provided in Table 5-1. Table 5-2 sets out how mitigation would be secured.

**Table 5-1: Summary of community effects**

Description of effect	Primary and tertiary measures adopted as part of the project	Magnitude of impact	Sensitivity of receptor	Initial classification of effect	Additional/secondary mitigation measures	Residual effect significance	Proposed monitoring
<b>Construction</b>							
Temporary changes to access affecting residents on Low Fen Drove Way due to use during construction for access	Sequencing construction of the permanent access at the start to minimise disruption to Low Fen Drove Way	Minor	High	Slight adverse (not significant)	<p>CoCP measures for temporary traffic control and implementation of the CTMP (Appendix 19.7, App Doc Ref 5.4.19.7) in particular:</p> <ul style="list-style-type: none"> <li>● section 4.2 (Access route strategy) requires all deliveries to be made outside of peak hours (8am-9am, 3-4pm, 5-6pm);</li> <li>● section 5.2 (Temporary access points and construction road signage) which requires the use of temporary signage along all proposed construction haul roads; and</li> <li>● Section 6.3 Adherence to Designated Routes</li> <li>● Section 6.9 requirement to provide connectivity/access to community facilities and residential properties during works</li> </ul> <p>Implementation access controls as set out in Section 6.3 of the CTMP and Traffic and Transport measures of the CoCP in particular:</p> <ul style="list-style-type: none"> <li>● Section 6.3 Adherence to Designated Routes</li> <li>● Section 6.9 Facilitate safe movement of users of the highway which requires maintaining the existing footway / cycleway to the west of the Horningsea Road carriageway at all times with suitable barriers separating the footway from the works</li> <li>● Section 6.9 requirement to provide connectivity/access to community facilities and residential properties during works).</li> <li>● Requirement within section 3 of the CoCP Part A and B (Appendix 2.1, App Doc Ref: 5.4.2.1) Part A (Community &amp; Stakeholder Engagement) to appoint a Community Liaison Officer responsible for ensuring that relationships and lines of communication are maintained throughout the construction period including communication of construction activity, construction vehicle movements, diversions etc</li> </ul>	Slight adverse (not significant)	None proposed
Temporary changes to recreational resources and open spaces - River Cam	Temporary works design maintain navigation of River Cam throughout construction period of the outfall Timing of works will not take place before mid-July and will be completed by October in any one year	Moderate	High	Moderate adverse (significant)	<p>Measures to manage the minimum width that must be retained and provide advance warning to users of the river are outlined in section 3.1 of CoCP Part B (Appendix 2.2, App Doc Ref 5.4.2.2). Additional measures include limiting the construction activity to between mid-June and early September.</p> <p>Measures to manage the minimum width that must be retained and provide advance warning to users of the river</p>	Moderate adverse (significant)	Regular engagement with Cam Conservators to ensure that navigable widths are appropriate for the range of river users.

Description of effect	Primary and tertiary measures adopted as part of the project	Magnitude of impact	Sensitivity of receptor	Initial classification of effect	Additional/secondary mitigation measures	Residual effect significance	Proposed monitoring
					<p>are outlined in section 3.1 of CoCP Part B (Appendix 2.2, App Doc Ref 5.4.2.2) in particular:</p> <ul style="list-style-type: none"> <li>Requirement within section 3 of the CoCP Part A and B (Appendix 2.1, App Doc Ref: 5.4.2.1) Part A (Community &amp; Stakeholder Engagement) to appoint a Community Liaison Officer responsible for ensuring that relationships and lines of communication are maintained throughout the construction period</li> <li>Requirement within section 3 of the CoCP Part A and B (Appendix 2.1, App Doc Ref: 5.4.2.1) Part A (Community &amp; Stakeholder Engagement) to appoint a Community Liaison Officer responsible for ensuring that relationships and lines of communication are maintained throughout the construction period including communication of changes to access because of PRow realignment or diversion</li> </ul>		
Temporary changes to recreational resources and open spaces - Fen Ditton (PRow 85/6 and PRow 85/8) due to the temporary in-river construction works to construct the outfall	Temporary diversions to be implemented for up to 11 months.	Moderate	Medium	Moderate adverse (significant)	<p>Measures set out in CoCP Part A (Appendix 2.1, App Doc Ref 5.4.2.1), in particular:</p> <ul style="list-style-type: none"> <li>A requirement for the use of safety gates to be put in place and users allowed to safely cross the construction working area; and</li> <li>A requirement for all PRow to be restored to the same condition as before the works took place or to a standard which is acceptable to the Local Highway Authority</li> </ul>	Moderate adverse (significant)	None proposed
Temporary changes to recreational resources and open spaces - Low Fen Drove Way (PRow 85/14 and PRow 130/17) due to the temporary use of Low Fen Drove Way for construction access	<p>Sequencing construction of the permanent access at the start to minimise disruption to Low Fen Drove Way</p> <p>Retaining access for pedestrian/cyclists to Low Fen Drove Way.</p>	Minor	Medium	Slight adverse (not significant)	<p>Measures set out in CoCP Part A (Appendix 2.1, App Doc Ref 5.4.2.1), in particular:</p> <ul style="list-style-type: none"> <li>A requirement for the use of safety gates to be put in place and users allowed to safely cross the construction working area; and</li> <li>A requirement for all PRow to be restored to the same condition as before the works took place or to a standard which is acceptable to the Local Highway Authority</li> </ul>	Slight adverse (not significant)	None proposed
Temporary changes to recreational resources and open spaces - Horningsea Road	Design retains access to Low Fen Drove Way.	Minor	High	Slight adverse (not significant)	<p>Diversions and appropriate signage to communicate temporary diversions as detailed in section 7.6 (Traffic and transport) of the CoCP Part A (Appendix 2.1, App Doc Ref 5.4.2.1)</p> <p>Management of construction impacts to Horningsea Road through the implementation of the CTMP (Appendix 19.7, App Doc Ref 5.4.19.7) in particular:</p> <ul style="list-style-type: none"> <li>Section 6.3 Adherence to Designated Routes</li> </ul>	Slight adverse (not significant)	None proposed



Description of effect	Primary and tertiary measures adopted as part of the project	Magnitude of impact	Sensitivity of receptor	Initial classification of effect	Additional/secondary mitigation measures	Residual effect significance	Proposed monitoring
					<ul style="list-style-type: none"> <li>Section 6.9 Facilitate safe movement of users of the highway which requires maintaining the existing footway / cycleway to the west of the Horningsea Road carriageway at all times with suitable barriers separating the footway from the works.</li> <li>Section 6.9 requirement to provide connectivity/access to community facilities and residential properties during works).</li> </ul>		
<p>Temporary requirement for land to construct the pipeline - CBS Automotive</p>	<p>The extent of land required temporarily has been minimised as much as practicable.</p> <p>Management of impacts to land temporarily required managed through measures as described within the CoCP Part A and B (Appendix 2.1 &amp; 2.2, App Doc Ref 5.4.2.1 &amp; 5.4.2.2) and CTMP:</p> <ul style="list-style-type: none"> <li>requirement within the CoCP Part A for the reinstatement of ditches temporarily disturbed during construction</li> <li>requirements to maintain access</li> </ul>	Minor	Medium	Slight adverse (not significant)	<p>Implementation of the CTMP in particular Section 6.9 (Facilitate safe movement of users of the highway (including NMUs) ) which:</p> <ul style="list-style-type: none"> <li>requires connectivity/access to community facilities and residential properties to be maintained during works.</li> <li>requires connectivity/access to community facilities and residential properties to be maintained during works.</li> <li>section 6.9 (Facilitate safe movement of users of the highway (including NMUs) which requires adequate reinstatement of any areas of footpath affected by the works and to maintain the existing alignment/gradient as much as is practicable.</li> </ul>	Slight adverse (not significant)	None proposed
<p>Temporary changes to recreational resources and open space – Waterbeach PRoW (130/16, 130/10, 130/6 and 130/8) due to the temporary crossings by the pipeline construction</p>	<p>Temporary diversion of the PRoW 85/6 at the outfall works area using 85/8 and a temporary path to re-join the PRoW 85/6 upstream of the outfall works area</p>	Minor	Low	Neutral adverse (not significant)	<p>Measures set out in CoCP Part A (Appendix 2.1, App Doc Ref 5.4.2.1), in particular:</p> <ul style="list-style-type: none"> <li>A requirement for the use of safety gates to be put in place and users allowed to safely cross the construction working area</li> </ul> <p>Provision of diversions and appropriate signage to communicate temporary diversions as detailed in section 7.6 (Traffic and transport) of the CoCP Part A (Appendix 2.1, App Doc Ref 5.4.2.1) in particular:</p> <ul style="list-style-type: none"> <li>Implementation of section 7.7 of the CoCP Part A (Appendix 2.1, App Doc Ref: 5.4.2.1) Part A (Traffic and Transport) which includes measures for temporary traffic control and measures manage the impact upon users of the PRoW during the construction period.</li> <li>Requirement within section 3 of the CoCP Part A and B (Appendix 2.1, App Doc Ref: 5.4.2.1) Part A (Community &amp; Stakeholder Engagement) to appoint a Community Liaison Officer responsible for ensuring that relationships and lines of communication are maintained throughout the construction period including communication of</li> </ul>	Neutral adverse (not significant)	None proposed

Description of effect	Primary and tertiary measures adopted as part of the project	Magnitude of impact	Sensitivity of receptor	Initial classification of effect	Additional/secondary mitigation measures	Residual effect significance	Proposed monitoring
					changes to access because of PRow realignment or diversion		
<b>Operation</b>							
Provision of new community resources – through new Discovery Centre provides benefit through new community resource	The opportunity for enhanced provision of community resource through the inclusion of Discovery Centre and continued operation throughout the operational lifetime of the proposed WWTP (by appointment)	Minor	Medium	Slight beneficial (not significant)	Monitoring to understand usage and demand to inform changes to how the discovery centre is used over the lifetime of the development	Slight beneficial (not significant)	The frequency and types of user groups should be retained to determine the demand and types of groups benefitting from the Discovery Centre. Changes to the management of and or access to the Discovery Centre would be delivered through changes to operational controls on its usage (timings, appointment process, capacity).
The presence of permanent infrastructure creates a permanent change to access recreational resources and informal open spaces	<p>Design measures to prevent or minimise impacts to recreational users:</p> <ul style="list-style-type: none"> <li>● Design of outfall so as not to affect width and gradient of footpath (PRow 85/6)</li> <li>● Design of outfall (orientation and sizing) to minimise land required overall and to limit the extent of the structure within the river and along the banks</li> <li>● Design of the outfall so that it integrates into the existing bank and allows for the reinstatement to existing levels</li> </ul>	Moderate	Low	Minor beneficial (not significant)	Management of impacts during operation will be through implementation of an outfall management plan and monitoring plan to include ongoing monitoring measures to identify erosion/scour of the river bank. This may trigger the need for remediation including the application of further physical interventions	Minor beneficial (not significant)	Continued annual monitoring post construction to inform the need for any remedial actions in relation to bank scour

Description of effect	Primary and tertiary measures adopted as part of the project	Magnitude of impact	Sensitivity of receptor	Initial classification of effect	Additional/secondary mitigation measures	Residual effect significance	Proposed monitoring
	<p>Design measures to prevent impacts to recreational users and provide enhanced opportunity for recreation:</p> <ul style="list-style-type: none"> <li>● Opportunity for access to the area in proximity to the land required for the proposed WWTP will include formalising access through the provision of permissive paths and leisure cycling access within the LERMP</li> <li>● Change of status for up to 1.03km of existing farm track to provide a new Public Right of Way (bridleway)</li> <li>● Improvements to the footway on the east and west of Horningsea Road</li> <li>● New pedestrian crossing to access the landscape masterplan area</li> </ul>				<p>Further measures delivered during operation will be implemented through the long-term application of the LERMP (Appendix 8.14, App Doc Ref 5.4.8.14) which requires that the operator to prepare a detailed management and maintenance plan (secured through requirements in the DCO), based on the LERMP which will be agreed with key stakeholders. In relation to users this includes the requirement to complete user survey at least twice a year to understand how people are interacting with the recreational space and accessing the wider network of PRow and permissive paths.</p>		<p>In line with LERMP Table 5.1 requirements These data should be used to inform long term discussions with Quy Fen Trust/National Trust/Wildlife Trust and SCDC Ecology Officers in relation to adaptive management that may be required in relation to the impacts of recreational user pressure to existing local resources used for recreation. Changes to management activities would be delivered through an amended LERMP.</p>

## 5.2 Securing mitigation

5.2.1 The delivery of mitigation will be controlled through the Development Consent Order (DCO) which:

- identifies parameters within which certain works activities will be located and constructed (e.g. maximum and minimum building dimensions (including below ground), or locational zones);
- sets requirements for construction, operation and maintenance of the Proposed Development to be undertaken in accordance with 'control plans / documents' (including those that are related to compliance with environmental permits); and
- sets requirements for the control of specific issues or works (e.g. time limits around the completion of the outfall construction)

5.2.2 Table 5-2 summarises all mitigation in relation to community effects, how these measures are secured, the party responsible for the implementation of the measure, when the measure would be delivered and any mechanisms to deliver the measure.

**Table 5-2: Community mitigation summary**

Description of impact	Residual effect	Mitigation measures	Mitigation type	Secured by	Responsible party	Timing on the provision of the measure	Trigger for the discharge of any related requirement
<b>Construction</b>							
Temporary changes to access affecting residents on Low Fen Drove Way due to use during construction for access	Slight adverse (not significant)	<p>Sequencing construction of the permanent access at the start to minimise disruption to Low Fen Drove Way</p> <p>Implementation access controls as set out in Section 6.3 of the CTMP and Traffic and Transport measures of the CoCP in particular:</p> <ul style="list-style-type: none"> <li>Section 6.3 Adherence to Designated Routes</li> <li>Section 6.9 Facilitate safe movement of users of the highway which requires maintaining the existing footway / cycleway to the west of the Horningsea Road carriageway at all times with suitable barriers separating the footway from the works</li> <li>Section 6.9 requirement to provide connectivity/access to community facilities and residential properties during works).</li> <li>Requirement within section 3 of the CoCP Part A and B (Appendix 2.1, App Doc Ref: 5.4.2.1) Part A (Community &amp; Stakeholder Engagement) to appoint a Community Liaison Officer responsible for ensuring that relationships and lines of communication are maintained throughout the construction period including communication of construction activity, construction vehicle movements, diversions etc</li> </ul>	Secondary	<p>A requirement within Section 7.6 of the CoCP Part A</p> <p>Approval and implementation of a Construction Environmental Management Plan secured through a requirement of the draft DCO (App Doc Ref 2.1).</p> <p>Community Liaison Plan (App Doc Ref 7.8) which is secured through a requirement in the draft DCO (App Doc Ref 2.1)</p>	Appointed Contractor(s)	Prior to start of construction (enabling works)	<p>Approved CEMP required prior to the commencement of construction activities on Low Fen Drove Way</p> <p>Approved CTMP including traffic management measures required prior to the commencement of construction activities on Low Fen Drove Way</p> <p>Approved CLP</p>
Temporary changes to recreational resources and open spaces - River Cam	Moderate adverse (significant)	Maintained navigation of River Cam throughout construction period through use of temporary river works that maintain minimum navigable width	Primary	Approval and implementation of a OMMP secured through a requirement of the draft DCO (App Doc Ref 2.1).	Appointed Contractor(s)	Prior to construction of the outfall	<p>Approval of the construction risk assessment and method statement associated with the detailed design and construction approach for the outfall as secured through applicable Environmental Permit (Flood Risk Activities).</p> <p>Approved outfall management plan required prior to the commencement of construction activities</p>
		Measures to manage the minimum width that must be retained and provide advance warning to users of the river are outlined in section 3.1 (Treated effluent and storm pipelines and outfall to the river Cam) of CoCP Part B (Appendix 2.2, App Doc Ref 5.4.2.2) in particular requirement within section 3 of the CoCP Part A (Appendix 2.1, App Doc Ref: 5.4.2.1) (Community & Stakeholder Engagement) to appoint a Community Liaison Officer responsible for ensuring that relationships and lines of communication are maintained throughout the construction period including communication of	Secondary	Approval and implementation of a OMMP secured through a requirement of the draft DCO (App Doc Ref 2.1).		Prior to and during construction of the outfall	

Description of impact	Residual effect	Mitigation measures	Mitigation type	Secured by	Responsible party	Timing on the provision of the measure	Trigger for the discharge of any related requirement
		changes to access because of PRow realignment or diversion					affecting the river cam and its users Notice of navigational changes provided to river users prior to the commencement of the works Approved CLP
Temporary changes to recreational resources and open spaces - Fen Ditton (PRow 85/6 and PRow 85/8) due to the temporary in-river construction works to construct the outfall	Slight adverse (not significant)	<p>Temporary diversion of the PRow 85/6 at the outfall works area using 85/8 and a temporary path to re-join the PRow 85/6 upstream of the outfall works area</p> <p>Provision of diversions and appropriate signage to communicate temporary diversions as detailed in section 7.6 (Traffic and transport) of the CoCP Part A (Appendix 2.1, App Doc Ref 5.4.2.1) in particular:</p> <ul style="list-style-type: none"> <li>Implementation of section 7.7 of the CoCP Part A (Appendix 2.1, App Doc Ref 5.4.2.1) (Traffic and Transport) which includes measures for temporary traffic control and measures manage the impact upon users of the PRow during the construction period.</li> <li>Implementation of section 7.6 which includes a requirement for the use of safety gates to be put in place and users allowed to safely cross the construction working area.</li> <li>Requirement within section 3 of the CoCP Part A (Appendix 2.1, App Doc Ref 5.4.2.1) (Community &amp; Stakeholder Engagement) to appoint a Community Liaison Officer responsible for ensuring that relationships and lines of communication are maintained throughout the construction period including communication of changes to access because of PRow realignment or diversion</li> </ul>	<p>Embedded (Primary)</p> <p>Secondary</p>	<p>Section 7.2, CoCP Part A (Appendix 2.1, App Doc Ref 5.4.2.1) secured through a requirement of the draft DCO (App Doc Ref 2.1)</p> <p>Approval and implementation of a CEMP secured through a requirement of the draft DCO (App Doc Ref 2.1).</p> <p>Approval and implementation of a Construction Environmental Management Plan secured through a requirement of the draft DCO (App Doc Ref 2.1).</p> <p>Community Liaison Plan (App Doc Ref 7.8) which is secured through a requirement in the draft DCO (App Doc Ref 2.1)</p>	Appointed Contractor(s)	Prior to construction affecting PRow	<p>Phasing plan</p> <p>Approved diversion route</p> <p>Approved CMTMP</p> <p>Approved outfall management plan required prior to the commencement of construction activities affecting the river cam and its users</p> <p>Approved CLP</p>
Temporary changes to recreational resources and open spaces – due to the temporary use of Low	Slight adverse (not significant)	<p>Sequencing construction of the permanent access at the start to minimise disruption to Low Fen Drove Way</p> <p>Management of construction impacts to Horningsea Road through the implementation of the CTMP (App Doc Ref 5.4.19.7) in particular:</p> <ul style="list-style-type: none"> <li>Section 6.3 Adherence to Designated Routes</li> <li>Section 6.9 Facilitate safe movement of users of the highway which requires maintaining the</li> </ul>	Embedded (Primary)	<p>Sections 6.3 of the Construction Traffic Management Plan (Appendix 19.7, App Doc Ref 5.4.19.7), secured through a requirement of the draft DCO (App Doc Ref 2.1)</p> <p>Approval and implementation of a Construction Environmental Management Plan secured through a requirement of the draft DCO (App Doc Ref 2.1).</p>	Appointed Contractor(s)	Construction (enabling works)	<p>Phasing plan</p> <p>Approved CEMP required prior to the commencement of construction activities on Low Fen Drove Way</p> <p>Approved CTMP including traffic management measures</p>

Description of impact	Residual effect	Mitigation measures	Mitigation type	Secured by	Responsible party	Timing on the provision of the measure	Trigger for the discharge of any related requirement
Fen Drove Way for construction access		<p>existing footway / cycleway to the west of the Horningsea Road carriageway at all times with suitable barriers separating the footway from the works</p> <ul style="list-style-type: none"> <li>Section 6.9 requirement to provide connectivity/access to community facilities and residential properties during works) including retaining access for pedestrian / cyclists to Low Fen Drove Way.</li> <li>Requirement within section 3 of the CoCP Part A (Appendix 2.1, App Doc Ref 5.4.2.1) (Community &amp; Stakeholder Engagement) to appoint a Community Liaison Officer responsible for ensuring that relationships and lines of communication are maintained throughout the construction period including communication of changes to access because of PRow realignment or diversion</li> </ul>		Community Liaison Plan (App Doc Ref 7.8) which is secured through a requirement in the draft DCO (App Doc Ref 2.1)			required prior to the commencement of construction activities on Low Fen Drove Way Approved CLP
Temporary changes to recreational resources and open spaces Horningsea Road	Slight adverse (not significant)	<p>Management of construction impacts to Horningsea Road through the implementation of the CTMP (Appendix 19.7, App Doc Ref 5.4.19.7) in particular:</p> <ul style="list-style-type: none"> <li>Section 6.3 Adherence to Designated Routes</li> <li>Section 6.9 Facilitate safe movement of users of the highway which requires maintaining the existing footway / cycleway to the west of the Horningsea Road carriageway at all times with suitable barriers separating the footway from the works</li> <li>Section 6.9 requirement to provide connectivity/access to community facilities and residential properties during works).</li> </ul>	Secondary	<p>A requirement within Section 7.6 of the CoCP Part A and Sections 6.3 and 6.9 of the CTMP.</p> <p>Section 7.2, CoCP Part A (Appendix 2.1, App Doc Ref 5.4.2.1) secured through a requirement of the draft DCO (App Doc Ref 2.1)</p> <p>Approval and implementation of a CEMP secured through a requirement of the draft DCO (App Doc Ref 2.1).</p> <p>Construction Traffic Management Plan (Appendix 19.7, App Doc Ref 5.4.19.7), secured through a requirement of the draft DCO (App Doc Ref 2.1)</p> <p>Community Liaison Plan (App Doc Ref 7.8) which is secured through a requirement in the draft DCO (App Doc Ref 2.1)</p>	Appointed Contractor(s)	Construction (enabling works) through to completion of construction	<p>CTMP approved prior to the commencement of construction</p> <p>Approved CEMP</p> <p>Approved CLP</p> <p>Traffic management measures approved by local highways prior to implementation of traffic management measures</p>
Temporary requirement for land to construct the pipeline - CBS Automotive	Slight adverse (not significant)	<p>The extent of land required temporarily has been minimised as much as practicable.</p> <p>Management of impacts to land temporarily required managed through measures as described within the CoCP Part A (Appendix 2.1 , App Doc Ref 5.4.2.1 ) and CTMP:</p> <ul style="list-style-type: none"> <li>requirement within the CoCP Part A for the reinstatement of ditches temporarily disturbed during construction</li> <li>requirements to maintain access</li> </ul>	<p>Embedded (Primary)</p> <p>Secondary</p>	<p>Design Plans - Waterbeach pipeline long sections (App Doc Ref 4.14)</p> <p>Section 7.2, CoCP Part A (Appendix 2.1, App Doc Ref 5.4.2.1) secured through a requirement of the draft DCO (App Doc Ref 2.1)</p> <p>Approval and implementation of a CEMP secured through a requirement of the draft DCO (App Doc Ref 2.1).</p> <p>Construction Traffic Management Plan (Appendix 19.7, App Doc Ref 5.4.19.7),</p>	Applicant	Prior to start of construction	Approved CEMP required prior to the commencement of construction activities with access measures through consultation with CBS Automotive

Description of impact	Residual effect	Mitigation measures	Mitigation type	Secured by	Responsible party	Timing on the provision of the measure	Trigger for the discharge of any related requirement
		<p>Implementation of the CTMP in particular Section 6.9 (Facilitate safe movement of users of the highway (including NMUs) ) which:</p> <ul style="list-style-type: none"> <li>requires connectivity/access to community facilities and residential properties to be maintained during works.</li> <li>section 6.9 (Facilitate safe movement of users of the highway (including NMUs) ) which requires adequate reinstatement of any areas of footpath affected by the works and to maintain the existing alignment/gradient as much as is practicable</li> </ul>		secured through a requirement of the draft DCO (App Doc Ref 2.1)			
Temporary changes to recreational resources and open space – Waterbeach PRow (130/16, 130/10, 130/6 and 130/8) due to the temporary crossings by the pipeline construction	Neutral adverse (not significant)	<p>Provision of gated crossings and appropriate signage to communicate temporary diversions as detailed in section 7.6 (Traffic and transport) of the CoCP Part A (Appendix 2.1, App Doc Ref 5.4.2.1)</p> <p>Implementation of section 7.7 of the CoCP Part A (Appendix 2.1, App Doc Ref 5.4.2.1) Part A (Traffic and Transport) which includes measures for temporary traffic control and measures manage the impact upon users of the PRow during the construction period.</p>	Secondary	<p>Section 7.2, CoCP Part A (Appendix 2.1, App Doc Ref 5.4.2.1) secured through a requirement of the draft DCO (App Doc Ref 2.1)</p> <p>Approval and implementation of a CEMP secured through a requirement of the draft DCO (App Doc Ref 2.1).</p> <p>Construction Traffic Management Plan (Appendix 19.7, App Doc Ref 5.4.19.7), secured through a requirement of the draft DCO (App Doc Ref 2.1)</p>	Appointed Contractor(s)	Prior to start of construction of Waterbeach pipeline	<p>Phasing plan</p> <p>Approved CEMP required prior to the commencement of construction activities for Waterbeach pipeline north of Low Fen Drove Way</p> <p>Approved CTMP required prior to the commencement of construction activities for Waterbeach pipeline north of Low Fen Drove Way</p>
<b>Operation</b>							
Provision of new community resources through new Discovery Centre provides benefit	Slight beneficial (not significant)	The opportunity for enhanced provision of community resource through the Inclusion of Discovery Centre and continued operation throughout the operational lifetime of the proposed WWTP (by appointment)	Primary	Requirement implement and monitor usage of the Discovery Centre which is secured through a requirement in the draft DCO (App Doc Ref 2.1)	Applicant	From operation for duration of operations (all phases)	Approved operational Discovery Centres scheme, within the gateway building, prior to commencement of operation to include monitoring of use of the Discovery Centre
The presence of permanent infrastructure creates a permanent	Minor beneficial (not significant)	<p>Design measures to prevent or minimise impacts to recreational users:</p> <ul style="list-style-type: none"> <li>Design of outfall so as not to affect width and gradient of footpath (PRow 85/6)</li> </ul>	<p>Primary</p> <p>Secondary</p>	<p>Approved outfall design secured through conditions with the Environmental Permit (Flood Risk Activities)</p> <p>Approval and implementation of an Outfall Management Plan secured through</p>	Applicant	Prior to construction of the outfall	Design of outfall and scour protection measures as per final design specified as part of the



Description of impact	Residual effect	Mitigation measures	Mitigation type	Secured by	Responsible party	Timing on the provision of the measure	Trigger for the discharge of any related requirement
change to access in the provision of recreational resources and informal open spaces		<ul style="list-style-type: none"> <li>Design of outfall (orientation and sizing) to minimise land required overall and to limit the extent of the structure within the river and along the banks</li> <li>Design of the outfall so that it integrates into the existing bank and allows for the reinstatement to existing levels</li> </ul>		a requirement of the draft DCO (App Doc Ref 2.1)		From operation for duration of operations (all phases)	environmental permit (flood risk activities) Approved OMMP as part of the Environmental Permit
		<p>Direct benefits to recreation to be realised through measures within the LERMP (Appendix 8.14, App Doc Ref 5.4.8.14):</p> <ul style="list-style-type: none"> <li>Opportunity for access to the area in proximity to the land required for the proposed WWTP will include formalising access through the provision of permissive paths and leisure cycling access within the LERMP</li> <li>Change of status for up to 1.03km of existing farm track to provide a new Public Right of Way (bridleway)</li> </ul>	Primary	Approval and implementation of a detailed management and monitoring plan secured to comply with LERMP secured through a requirement of the draft DCO (App Doc Ref 2.1)		Prior to construction of new footpaths/ cycleways	Implementation of approved LERMP
		<p>Long-term application of the LERMP (Appendix 8.14, App Doc Ref 5.4.8.14) which requires that the operator to prepare a detailed management and maintenance plan (secured through requirements in the DCO), based on the LERMP which will be agreed with key stakeholders. In relation to users this includes the requirement to complete user survey at least twice a year to understand how people are interacting with the recreational space and accessing the wider network of PRow and permissive paths.</p> <p>Opportunity for access to the area in proximity to the land required for the proposed WWTP will include formalising access through the provision of permissive paths and leisure cycling access within the landscape masterplan area.</p>	Secondary	Approval and implementation of a detailed management and monitoring plan secured to comply with LERMP secured through a requirement of the draft DCO (App Doc Ref 2.1)		Prior to commencement of operation	Approved detailed management and monitoring plan
		<p>Enhancements for recreational users through:</p> <ul style="list-style-type: none"> <li>Improvements to the footway on the east and west of Horningsea Road</li> <li>New pedestrian crossing to access the landscape masterplan area</li> </ul>	Primary	Approved design secured through a requirement of the draft DCO (App Doc Ref 2.1)	Contractor	Prior to commencement of operation	Approved detailed design and construction method statements

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<https://infrastructure.planninginspectorate.gov.uk/projects/eastern/cambridge-waste-water-treatment-plant-relocation/>