

C. Community assessment

C.1.1 The community assessment considered the impact on local residents, businesses and communities from the construction and operation of the different options. This is related to the possible impacts from the construction and operation of a WWTP in the area of each potential site, the waste water transfer tunnel, the treated effluent discharge pipeline, the Waterbeach transfer pipeline, the diversions of the existing water transfer network, the access roads and potential location of shafts.

C.1.2 The key receptors that were considered are as follows:

- Private property and housing;
- Community land and assets;
- Businesses, premises and land (including agricultural land); and
- Areas of open space and recreation, including walking and cycling routes.

C.1.3 There are three community criteria which have been used for the community assessment:

- Land use, property and business viability;
- Amenity;
- Traffic

C.1.4 These criteria are explained in further detail below. Each of these criteria have been given a RAG rating for each of the sites during both construction and operation.

C.2 Land use, property and business viability

Assessment methodology

C.2.1 The following factors have been considered to assess the potential impact on property and business viability:

- The **land and property requirements** of both construction and operation in terms of land take (both permanent and temporary).
- The impacts on **access** to community receptors (private property, businesses, community assets and areas of open space and recreation).
- The impact on **resource viability** from land take, changes in access, or other factors, based on information currently available. This includes factors such as reduction in footfall as a result of, for example, changes to the layout of the built environment or access arrangements, which may impact on the operation of a community receptor or employment numbers.

C.2.2 The RAG definitions developed to assess the impact on property and business viability from the construction and operation of the WWTP are shown in Table C.56.

Table C.56: Land use, property and business viability assessments – RAG definitions

Green	Amber	Red
<ul style="list-style-type: none"> ● Pipeline routes largely avoid residential areas/communities; tunnel shafts outside residential areas; no or minor disruption from construction of new access road; minor or no impact from site construction. ● The temporary or permanent acquisition of land, property or business does not directly affect the viability of the property or business as there is only very minor loss or alteration to one or more key characteristics or features. ● Access to property, business or community resources is maintained throughout construction and operation and any changes in access do not impact use, operation, or enjoyment of the resource. ● The potential business impacts are unlikely to impact employment. 	<ul style="list-style-type: none"> ● Pipeline routes partially through residential areas/communities; or one or more tunnel shafts within/adjacent to residential areas/communities; or, moderate disruption from construction of new access road; or, moderate impact from site construction. ● The temporary or permanent acquisition of land, property or business, may partially compromise the viability of the property or business as there is partial loss of/damage to key features or elements. ● Access to property, business or community resources may be constrained or altered during construction, and changes may partially impede use, operation, or enjoyment of the resource. ● The potential business impacts may impact employment, but this is not to a substantial proportion of the existing employees. 	<ul style="list-style-type: none"> ● Pipeline routes largely through residential areas/communities or; all tunnel shafts within/adjacent to residential areas/communities or; major disruption from construction of new access road or; significant impact from site construction. ● The temporary or permanent acquisition of property, land or premises, or change in access, compromises the viability of the land, property or business as there is full loss of key features or elements. ● Access to property, business or community resources may be prevented during construction, and changes may substantially impact use, operation, or enjoyment of the resource. ● The potential business impacts are likely to impact employment which will affect a substantial proportion of the existing employees.

Assessment of unmitigated options

Site area 1 – Construction

C.2.3 Agricultural land is required to construct the water treatment plant as well as the ancillary infrastructure. As land will be required from the construction stage, permanent land requirements are included within the assessment of construction, rather than the operational impacts. This loss of land is likely to have both permanent and temporary impacts on business operations for the existing landowners.

C.2.4 It is understood that land which is currently used as a fruit farm will be acquired to develop the WWTP at site area 1 and construct the treated effluent tunnel/pipeline corridor, waste water transfer tunnel corridor and site access area. The permanent acquisition of the required land has the potential to impact the viability of the fruit farm business, including potentially extinguishing it, as the land required is crucial for the operation of the business. The fruit farm is

also understood to employ seasonal workers, and these jobs would no longer be available as a result of the fruit farm business no longer being viable.

- C.2.5 Milton Maize Maze is located to the south east of site area 1 and is accessed either directly from the A10 or from Landbeach Road. During construction there is a potential for a reduction in patron's use and enjoyment of the recreational activities provided by the business from a reduction in amenity from a combination of potential landscape and visual, air quality and noise effects. Access to the business will not be impacted. The potential impacts on recreational activities provided by Milton Maize Maze may affect popularity and potentially reduce patronage.
- C.2.6 The construction of the Waterbeach transfer pipeline requires the temporary use of agricultural land between site area 1 and Waterbeach. The proposed route of the transfer pipeline goes through agricultural land for the majority of the length of the pipeline. There will be a temporary impact on ability to use the impacted areas of land as open cut trenching will be used for the construction for the majority of the pipeline. To the north of Waterbeach, the proposed route passes through disused army barracks which are understood to be earmarked for development. The construction of diversions of the existing waste water transfer network will also require the temporary use of agricultural land between site area 1 and the A14.
- C.2.7 The construction of the waste water transfer network and the treated effluent tunnel/pipeline corridor currently includes a portion of the Milton Park & Ride. This may have a temporary impact on the use this area of the park and ride. As the construction work includes a portion of the site, and the majority of the construction works are proposed to be tunnelled, it is not envisaged that the disruption will prevent use of the entire facility.
- C.2.8 For Option A, the construction of the treated effluent and stormwater discharge tunnel/pipeline includes a portion of the Milton Country Park. This may have a temporary impact on the use of this portion of the park, which is between Cambridge Road and the A14. For Option B, the construction of the treated effluent and stormwater discharge tunnel/pipeline includes a portion land currently used by Milton Park Footgolf, the Milton Maize Maze, Milton Cemetery and allotments located between Ely Road and the A10. Depending on the final location of the tunnel/pipeline there is the potential for a temporary impact on these receptors during construction.
- C.2.9 Mere Way, which is a PRow, provides access from south of the A14 to Oldfield Farm. The area required for site area 1 to construct the water treatment plant and the diversions of the existing waste water transfer network includes a portion of this PRow. This is likely to temporarily impact the ability of people use this route to travel north from the community of Kings Hedges.
- C.2.10 The proposed construction activities may disrupt access to businesses in close proximity to site area 1. The construction of the treated effluent transfer tunnel/pipeline, diversions of the existing waste water transfer network, site access road as well as other construction activities are likely to temporarily disrupt use of Butt Lane, impacting the way in which people access businesses located on the road, including (but not limited to) Milton Recycling Centre, a Fruit Shop, CMR Surgical Headquarters and a logistics company.
- C.2.11 The RAG ratings for site 1 in an unmitigated scenario are detailed in Table C.57.

Table C.57: Land take, property and business viability – unmitigated RAG evaluation during construction for Site 1 Option A and Option B

Site area	Evaluation	Unmitigated RAG rating
Site area 1 – Option A	<p>There is the potential for both temporary and permanent impacts on the use and viability of agricultural land. The construction of the WWTP is likely to compromise the viability of fruit farm as the area required for permanent land take is essential to the operation of the business. There is also likely to be a loss of employees affecting a substantial proportion of existing employees as the business is unlikely to be able to operate.</p> <p>There is the potential for impact on recreational activities provided by Milton Maize Maze, which may affect popularity and potentially reduce patronage. Businesses on Butt Lane are likely to experience a temporary disruption to access. This is unlikely to affect the viability of these businesses as due to their existing location; people need to make a specific trip, mainly by car, to access these businesses. People are likely to continue to make these trips, despite the potential for a temporary reduction in access. There is likely to be a temporary disruption in use of Milton Park and Ride, Mere Way and Milton Country Park. Only a small portion of these receptors are likely to be impacted.</p>	Red
Site area 1 – Option B	<p>Impacts are the same as above, except there is the potential for disruption to Milton Park Footgolf, the Milton Maize Maze, Milton Cemetery and the allotments located between Ely Road and the A10, rather than Milton Country Park. As the RAG rating is already red, this has not been changed for Option B.</p>	Red

Site area 1 – Operation

- C.2.12 Temporary and permanent land requirements were considered as part of the construction impacts. Since the use of the permanent land take starts from the construction period and have been reported during this period, these impacts are not further considered as part of the operational assessment.
- C.2.13 As mentioned above, Milton Maize Maze is located to the south-east of site area 1 and is accessed either directly from the A10 or from Landbeach Road. During operation there is the potential for the WWTP to be visible from parts of the site, which will change the surrounding visual character, and could impact on the perception of attractiveness of the recreational activities provided by the business.
- C.2.14 Although there will be increased traffic along Butt Lane where there are existing businesses, access to these businesses will be maintained. A separate entrance will be created for the WWTP off Butt Lane. As such, there is not envisaged to be an impact on the viability of these businesses or an impact on employment.

Table C.58: Land take, property and business viability – unmitigated RAG evaluation during operation for Site 1 Option A and Option B

Site area	Evaluation	Unmitigated RAG rating
Site area 1 – Option A	<p>No additional land is required temporarily or permanently during operation and no limitations to access will be required during operation.</p> <p>Although there will be increased traffic along Butt Lane, where there are existing businesses, there is no change in access to these businesses. There is not envisaged to be an impact on the viability of these businesses or an impact on employment.</p> <p>It is acknowledged that during operation there is the potential for an impact on the perception of attractiveness of the recreational activities provided by Milton Maize Maze. However, this is considered to only be a very minor loss or alteration to one of the features of the maze which is unlikely to directly affect the viability of the business.</p>	Green
Site area 1 – Option B	<p>Impacts are the same as above as presence of a discharge point is not confirmed and not likely to have a substantial impact on business receptors.</p>	Green

Site area 2 – Construction

- C.2.15 Similar to site area 1, agricultural land is required to construct the WWTP as well as the ancillary infrastructure. As land will be required from the construction stage, permanent land requirements are included within the assessment of construction, rather than the operational impacts. This loss of land is likely to have both permanent and temporary impacts on business operations for the existing owners.
- C.2.16 It is understood that land required to construct the WWTP is part of large land holdings, so although there may be a partial impact on the viability of the property, there will not be a loss of key features or elements which will make the whole business unviable.
- C.2.17 Similar to site area 1, the construction of the Waterbeach transfer pipeline requires the temporary use of agricultural land between site area 2 and Waterbeach and follows the same route. The key difference between site area 1 and site area 2 is that more temporary land will be required for the transfer pipeline as site area 2 is located further to the south. However, the impact of this difference, when comparing site area 1 and 2 is considered to not be significant.
- C.2.18 Similar to site area 1, there is likely to be a temporary impact on Milton Park and Ride, Milton Country Park and Mere Way.
- C.2.19 The construction of the treated effluent transfer tunnel/pipeline, diversions of the existing wastewater transfer network and construction of the site access road as well as other construction activities are likely to temporarily disrupt use of Butt Lane. The proposed construction activities associated with the site area 2 may disrupt access to businesses in close proximity to the site on Butt Lane. These businesses are the same as those described above in relation to site area 1 as the two sites are close in proximity.

Table C.59: Land take, property and business viability – unmitigated RAG evaluation during construction for site area 2 Option A and Option B.

Site area	Evaluation	Unmitigated RAG rating
Site area 2 – Option A	<p>There is the potential for both temporary and permanent impacts on the use and viability of agricultural land. However, based on current information, the permanent land requirements are part of larger holdings, so the permanent land acquisition is only like to partially compromise the viability of the business. Current potential employment impacts are not known.</p> <p>Businesses on Butt Lane are likely to experience a reduction temporary disruption to access. This is unlikely to affect the viability of these businesses as due to their existing location; people need to make a specific trip, mainly by car, to access these businesses. People are likely to continue to make these trips, despite the potential for a temporary reduction in access. There is likely to be a temporary disruption in use of Milton Park and Ride, Mere Way and Milton Country Park. Only a small portion of these receptors are likely to be impacted.</p>	Amber
Site area 2 – Option B	<p>Impacts are the same as for Option A. Except for the following:</p> <p>There is the potential for disruption to Milton Park Footgolf, the Milton Maize Maze, Milton Cemetery and the allotments located between Ely Road and the A10, rather than Milton Country Park.</p>	Amber

Site area 2 – Operation

- C.2.20 Temporary and permanent land requirements were considered as part of the construction impacts. Since the use of the permanent land take starts from the construction period and have been reported during this period, these impacts are not further considered as part of the operational assessment.
- C.2.21 Similar to site area 1, there will be increased traffic along Butt Lane where there are existing businesses, access to these businesses will be maintained. A separate entrance will be created for the water treatment plant off Butt Lane. As such, there is not envisaged to be an impact on the viability of these businesses or an impact on employment.

Table C.60: Land take, property and business viability – unmitigated RAG evaluation during operation for site area 2 Option A and Option B

Site area	Evaluation	Unmitigated RAG rating
Site area 2 – Option A	<p>No additional land is required temporarily or permanently during operation and no limitations to access will be required during operation.</p> <p>Although there will be increased traffic along Butt Lane, where there are existing businesses, there is no change in access. As such, there is not envisaged to be an impact on the viability of these businesses or an impact on employment.</p>	Green
Site area 2 – Option B	<p>Impacts are the same as above as the presence of a discharge point is not confirmed and not likely to have a substantial impact on residential, business and community receptors.</p>	Green

Site area 3 – Construction

- C.2.22 Similar to site areas 1 and 2, agricultural land is required to construct the WWTP as well as the ancillary infrastructure. As land will be required from the construction stage, permanent land requirements are included within the construction impacts rather than the operational impacts. This loss of land is likely to have both permanent and temporary impacts businesses operations for the existing owners. The areas required for ancillary infrastructure are smaller than those required for site areas 1 and 2.
- C.2.23 It is understood that the land required to construct the WWTP as well as the ancillary infrastructure is part of large land holdings, so although there may be a partial impact on the viability of the property, there will not be a loss of key features or elements which would make the whole business unviable.
- C.2.24 There will be a temporary impact on access to PRowS in close proximity to the site. In particular, Low Fen Drove Way byway which is located to the east of site 3 and follows the existing routing of the unpaved dirt track section of Low Fen Drove Way.
- C.2.25 The closest business receptors are located to the west of the intersection between the A1303 and High Ditch Road and on the eastern edge of Horningsea. Although there will be increased traffic from construction activity, access to these properties will be maintained so there is not envisaged to be an impact on the operation of the business.
- C.2.26 Similar to site areas 1 and 2, the construction of the Waterbeach transfer pipeline requires the temporary use of agricultural land between site area 3 and Waterbeach. The key difference between site area 3 and site areas 1 and 2, is that is it the shortest route and therefore less temporary land will be required for the transfer pipeline. However, the impact of this difference, when comparing site area 3 with 1 and 2 is considered to not be significant.
- C.2.27 The construction of the treated effluent transfer if constructed as a pipeline would have a temporary impact on a relatively small area of agricultural land between site area 3 and the River Cam.

Table C.61: Land take, property and business viability – unmitigated RAG evaluation during construction for site area 3

Site area	Evaluation	Unmitigated RAG rating
Site area 3	Similar to site area 2, there is the potential for both temporary and permanent impacts on the use and viability of agricultural land. However, based on current information, the permanent land requirements are part of larger holdings, so the acquisition of land is only likely to partially compromise the viability of the business. There will be temporary disruption to access the PRoW on a portion of Low Fen Drove Way. Current potential employment impacts are not known. No disruptions to businesses are envisaged.	Amber

Site area 3 – Operation

- C.2.28 Temporary and permanent land requirements were considered as part of the construction impacts. Since the use of the permanent land take starts from the construction period and have been reported during this period, these impacts are not further considered as part of the operational assessment.
- C.2.29 The operation of the WWTP at site area 3 will not impact the operation of businesses as there are none in close proximity to the site. In the unmitigated scenario, access to site area 3 would be provided using a new priority T-junction off Horningsea Road. Although there will be increased traffic along Horningsea Road, this will not compromise access to businesses.

Table C.62: Land take, property and business viability – unmitigated RAG evaluation during operation for site area 3

Site area	Evaluation	Unmitigated RAG rating
Site area 3	No additional land is required temporarily or permanently during operation and no limitations to access will be required during operation. Although there will be increased traffic along Horningsea Road, there is no change in access to businesses as a result of operation of WWTP at site area 3. Therefore, there is not envisaged to be an impact on the viability businesses or an impact on employment.	Green

Mitigation identification

- C.2.30 The following mitigation measures would be implemented to manage effects of land take on property and business viability.
 - Temporary and permanent land take of agricultural land during construction will be informed by the following principles:
 - Minimise land take as far as possible
 - Take into consideration the existing use of the land, to reduce potential impacts on farm viability by implementing measures such as keeping close to field boundaries and working with land owners and tenants to gain access so that existing operational planning can take into account the construction requirements.
 - Return the temporary land take to its former condition prior to its use for construction activities.

- Access to properties, including businesses, will be maintained at all times during construction and the relevant management measures included within the Construction Environmental Management Plan.

Assessment of mitigated options

C.2.31 Based on the mitigation outlined above, Table C.63 re-evaluates the impacts on the community for each of the options during the construction and operational phases.

Table C.63: Land take, property and business viability RAG evaluation (with mitigation)

Site area	Evaluation	Unmitigated RAG rating	Mitigated RAG rating
Construction – site area 1			
Site area 1 – Option A	The construction of the WWTP is likely to compromise the viability of the fruit farm as the permanent land take is essential to the operation of the business. There is also likely to be a loss of employment affecting a substantial proportion of existing employees as the business is unlikely to be able to operate. As an alternative site is not part of the package of mitigation, the impacts from the business no longer being viable, and the potential loss of employment, have not been mitigated. Therefore, the RAG rating between the mitigated and unmitigated options stay the same.	Red	Red
Site area 1 – Option B	The main difference in the construction effects of the treated effluent pipeline for Option B. However, there will still be an impact on the viability of the fruit farm and loss of employment. Therefore, the RAG rating between the mitigated and unmitigated options stay the same.	Red	Red
Operation - site area 1			
Site area 1 – Option A	No additional land is required temporarily or permanently during operation and no limitations to access will be required during operation. Although there will be increased traffic along Butt Lane, where there are existing businesses, access to these businesses will be maintained. As such, there is not envisaged to be an impact on the viability of these businesses or an impact on employment. The RAG rating between the mitigated and unmitigated options stay the same.	Green	Green
Site area 1 – Option B	Impacts are the same as above as presence of a discharge point is not confirmed and not likely to have a substantial impact on business receptors. The RAG rating between the mitigated and unmitigated options stay the same.	Green	Green
Construction – site area 2			
Site area 2 – Option A	Mitigation required temporary land take to be minimised as much as possible and will reduce disruption to the operation of existing businesses. As the full extent of the land take on the operation of the land is not yet known, there is the potential for a partial impact on the viability of the business, even with mitigation applied. Therefore, the RAG rating between the mitigated and unmitigated options has stayed the same.	Amber	Amber

Site area	Evaluation	Unmitigated RAG rating	Mitigated RAG rating
	There are number of businesses on Butt Lane which are likely to experience temporary impacts as a result of construction activity from disruption to access. This will be reduced with adherence to mitigation measures associated with traffic management.		
Site area 2 – Option B	The main difference in the construction effects of the treated effluent pipeline for Option B, compared to Option A, the potential impacts on more receptors around the north of Milton and Horningsea. Mitigation requires this to be minimised and to avoid businesses and recreational facilities, such as Cambridge Foot Golf Centre. Therefore, the RAG rating has been downgraded from Red to Amber.	Red	Amber
Operation - site area 2			
Site area 1 – Option A	No additional land is required temporarily or permanently during operation and no limitations to access will be required during operation. Although there will be increased traffic along Butt Lane, where there are existing businesses, access to these businesses will be maintained. As such, there is not envisaged to be an impact on the viability of these businesses or an impact on employment. The RAG rating between the mitigated and unmitigated options stay the same.	Green	Green
Site area 1 – Option B	Impacts are the same as above as presence of a discharge point is not confirmed and not likely to have a substantial impact on business receptors. The RAG rating between the mitigated and unmitigated options stay the same.	Green	Green
Construction – site area 3			
Site area 3	As stated within the Access Assessment, safe access will be maintained to the nearby PRoW via Horningsea Road and via Low Fen Drove Way, with the exception of a few periods. Mitigation required temporary land take to be minimised as much as possible and will reduce disruption to the operation of existing businesses. As the full extent of the land take on the operation of the land is not yet known, there is the potential for a partial impact on the viability of the business, even with mitigation applied. Therefore, the RAG rating between the mitigated and unmitigated options has stayed the same.	Amber	Amber
Operation – site area 3			
Site area 3	No additional land is required temporarily or permanently during operation and no limitations to access will be required during operation. Although there will be increased traffic along High Ditch Road, there is no change in access to businesses as a result of operation of WTP at site 3. Therefore, there it is not envisaged that there will be an impact on the viability businesses or an impact on employment. The RAG rating between the mitigated and unmitigated options has stayed the same.	Green	Green

Incorporating feedback

C.2.32 Phase one non-statutory consultation was held in order to share the proposals for relocating the WWTP with the public and stakeholders. This section provides a summary of the feedback received from the public in relation to community and how the concerns, issues and opportunities raised have been considered within the assessment criteria for Stage 4 final site selection.

Table C.64: Community feedback

Sub-Theme	Site (if specific)	Feedback Summary	Response
		Comments regarding local amenities often concerned odour impacts detracting from these facilities. Again, it was commented that these impacts may be exacerbated by a prevailing westerly wind.	This is addressed within the odour section. The preliminary odour modelling used in the odour assessment utilised local meteorological information (prevailing wind directions and speeds) to estimate the dispersion of odour from a new WWTP on each site area. The results of the odour assessment have been used within the amenity assessment. An amenity effect reported if there is a combination of at least two effects on a receptor. The potential effects that were taken into consideration were air quality, odour, noise, landscape and visual and traffic.
	General	Concern was also raised regarding potential leakage of waste into the River Cam. This concern is also reported under 'Water Quality and Flood Risk'.	This is addressed within the water quality section. Potential impacts during operation of the scheme, for example due to excessive variations in discharge, or discharge of treated effluent of an unacceptable quality, will be controlled by engineering features, operational practices included in the design and management of the scheme, and by the discharge licence.
		As is to be anticipated, comments received regarding impacts on local amenities have the greatest significance for both community, as well as environmental criteria as part of Stage 4 site selection. Although most comments relating to the local amenity of outdoor space at Site 3 also referenced its designation as Green Belt as a planning constraint. Odour and wind direction were the most common impacts raised, however, comments in relation to local amenity largely tended to focus on the presence of community and environmental receptors to odour rather than operational factors themselves.	The proximity of local amenities to construction and operation of the WWTP were taken into consideration within the individual environmental assessments which were used to establish amenity effects. The potential effects that were taken into consideration were air quality, odour, noise, landscape and visual and traffic. Green belt has been considered in the planning assessment, specifically the Green Bely study in Appendix J.
	Site area 1	Again, given their proximity, a number of concerns applied to both Site 1 and Site 2, and concerned impacts to local residential, educational, and recreational amenities.	The proximity of local residential, education and recreational amenities were taken into consideration within the individual environmental assessments which were used to establish amenity effects. The potential effects that were taken into consideration were air quality, odour, noise, landscape and visual and traffic. The access to these amenities is considered within the land take, property and business viability assessment.

Sub-Theme	Site (if specific)	Feedback Summary	Response
		Impacts to guided busway were referenced a number of times, as was the consideration that the northern edge of Cambridge (including Orchard Park) is already underserved for high quality green space and these proposals would further detract from that.	The impact on the quality of areas in close proximity to the three sites has been assessed within the amenity assessment, rather than an assessment of how the WWTP development may further detract from high quality green space for areas which are underserved.
		In relation to Site 1 in particular, historic character was often cited as providing valuable amenity to local residents owing to features such as the Tithe Barn and other thatched buildings, the Roman road (Akeman street) and Mere Way, as well as other local points of interest including Milton Maize Maze, Milton Cemetery, and Milton Recreation Ground.	The potential impacts on heritage assets are assessed in the historic environment assessment. The proximity of local amenities to construction and operation of the WWTP were taken into consideration within the individual environmental assessments which were used to establish amenity effects. The potential effects that were taken into consideration were air quality, odour, noise, landscape and visual and traffic.
		In addition to a number of points above also being considered to apply to Site 2, particular concern was raised regarding potential impacts to the Wendy House Nursery in Impington, who have an ethos of learning in nature through Forest Schools etc. Comments suggested this would be compromised by air quality and visual impacts if the plant is located on Site 2. Concern was also submitted regarding impacts to Impington Village College.	The proximity of local amenities to construction and operation of the WWTP were taken into consideration within the individual environmental assessments which were used to establish amenity effects. The potential effects that were taken into consideration were air quality, odour, noise, landscape and visual and traffic.
	Site area 2	There were also comments on the potential impacts to existing farmland that currently provides visual amenity, walking and exercise opportunity, and employment opportunity to local communities. Other amenities referenced include: Impington recreation park, Histon Football Club and recreation ground, Lea Hospital, the Mere Way, and the bus and cycle way.	The potential impact of the use of agricultural land for the WWTP development is considered within the land take, property and business viability assessment. This included the assessment of employment opportunities. Potential amenity effects are a separate assessment which have been considered for amenities, including recreational receptors, walking and cycling routes and community receptors. For the amenity assessment, potential effects that were taken into consideration were air quality, odour, noise, landscape and visual and traffic.
		Other respondents considered Site 2 to be preferable as they viewed impacts to be relatively lower, considering local amenities to be fewer and already compromised by the recycling centre. One respondent described the site as 'quasi-industrial' and suggested a well screened waste water treatment plant could be an improvement.	These elements have been considered as part of the landscape and visual assessment which formed part of the amenity assessment.
	Site area 3	Those commenting on the impact on local amenities of Site 3 predominantly noted its designation within the Green Belt in relation to this, often with a perception that Sites 1 and 2 already contain areas of brownfield and as such provided less amenity. Noting that Site 3 contains valuable open space necessary to protect from 'urban sprawl' and provide access to the outdoors for local residents for activities including walking, cycling, and horse riding etc.	Access to walking, cycling and horse riding routes have been considered within the land take, property and business viability assessment. The amenity of the users of these routes during construction and operation is a separate assessment.

Sub-Theme	Site (if specific)	Feedback Summary	Response
		<p>A number of comments cited concern in reference to the Green Corridor flanking the River Cam between Cambridge and the Wicken Fen – described as the city’s ‘green lungs’. In addition to this, locating the plant at Site 3 would be seen as incompatible with developing the Wicken Fen Vision, linking with the Landmark East Bridge of Reeds project, which ultimately aims to extend the Wicken Fen wetland to the A14 boundary.</p>	<p>The potential impact on the amenity of walking and cycling routes near to site area 3 has been considered within the amenity assessment. The Wicken Fen Vision is considered within the landscape and visual, and nature conservation and biodiversity assessments and also in the planning assessment.</p>
		<p>The Quy Fen was also cited numerous times, in regard to its importance for recreational space, addressing the climate emergency, and supporting mental health of the local community, as well as Fen Ditton being a statutorily designated Conservation Area and concern for historical landmarks such as Fleam Dyke.</p>	<p>The potential impacts on recreational spaces, in relation to both disruption to access, land take and amenity have been considered as part of the community assessment. No impacts are anticipated on public access to Quy Fen. Potential impacts on Stow-cum-Quy Fen SSSI are considered in the nature conservation and biodiversity assessment. The potential impacts on heritage assets are assessed in the historic environment assessment.</p>
		<p>Other comments referred to Lower Fen Drove Way (at Snout's Corner opposite Biggin Abbey) being a public path leading to a popular circular walk, while some respondents referred to potentially impacted local amenities more generally, including schools, pubs, rowing, sailing & boat clubs.</p>	<p>The potential impacts on Low Fen Drove Way, in relation to both disruption to access, land take and amenity have been considered as part of the community assessment.</p>
		<p>One comment claimed that a relocation to this site was expressly ruled out when the Marleigh/Wing development was agreed.</p>	<p>Anglian Water is not aware of any representations included in the application for the Marleigh/Wing development indicating that Cambridge WWTP would not be relocated in the vicinity of site area 3. However, Anglian Water have carried out a comprehensive site selection exercise to choose the best performing site area for relocation.</p>
		<p>However, another comment described Site 3 as offering an opportunity to be innovative and think more holistically about the new waste water treatment facility. They requested a transformative vision that includes creating a new local amenity such as a lake (that can act as a reservoir), being carbon positive with really ambitious renewable energy generation capacity, and enhancing or creates new high quality, large habitat areas. They claimed the other two sites are ‘too hemmed in’ and so don’t offer this opportunity.</p>	<p>This feedback is noted. For any site which is chosen a vision will be developed to further progress the design and implementation of the WWTP.</p>

C.3 Amenity

Assessment methodology

C.3.1 The introduction of construction works and the operation of the WWTP has the potential to impact on amenity – the pleasantness or attractiveness of a place. Changes in the amenity of an area primarily affect residents, businesses, and users of community and recreational resources. The following factors contribute to a change in amenity value in an area:

- Air quality – changes to air quality levels
- Odour – changes to odour levels
- Noise – changes to noise levels
- Landscape and visual effects – potential visual effects from key receptors
- Traffic – effects from increased traffic

C.3.2 Potential changes in amenity arise as a result of the above impacts (air quality, odour, noise, landscape and visual, and traffic) combining to affect a receptor in a location. Amenity effects arise in addition to the individual environmental effects and there is considered to be a change in amenity where **two or more factors** are impacted to a moderate or greater degree in a location. This **combination of effect** has been assessed to determine whether there is a change in amenity for each of the sites, informing the RAG rating.

C.3.3 The methodology for assessing landscape and visual amenity, noise, odour and air quality for each option are outlined in Appendix B. RAG assessment for both mitigated and unmitigated options have been undertaken and included within the respective sections in Appendix B for each of these topics.

C.3.4 The methodology for assessing traffic impacts is outlined in the following section. RAG assessment for both mitigated and unmitigated options have been undertaken and included within Appendix B.

Table C.65: Amenity assessment – RAG definitions

Green	Amber	Red
<ul style="list-style-type: none"> ● No changes to relevant environmental factors (air quality, odour, noise landscape and visual, and traffic) affecting the resource. ● Changes to the environment from only one of air quality, odour, noise landscape and visual, and traffic effects. ● Changes are unlikely to impact on the amenity of any resources in the area. 	<ul style="list-style-type: none"> ● Changes to the environment from a combination of at least two of air quality, odour, noise, landscape and visual effects, and traffic affecting a resource. ● The changes in amenity affect few resources in the area and represent a minor change from the baseline position. 	<ul style="list-style-type: none"> ● Changes to the environment from a combination of at least two of air quality, odour, noise, landscape and visual effects and traffic. affecting a resource. ● The changes in amenity affect many resources in the area and represent a major change from the baseline position.

C.3.5 The Interim Phase 1 Community Report has been used to supplement findings for the amenity and community criteria. Feedback has been reviewed to ascertain whether any additional impacts on community receptors have been identified or if the magnitude of an already identified impact is considered to be greater or lesser. Professional judgement, in addition to a review of

the findings from other relevant environmental topics, such as noise, air quality, landscape and visual and traffic, has been used to draw these conclusions and set out as part of the assessment.

Assessment of unmitigated options

Site area 1 – Construction

Site area 1 Option A

- C.3.6 As noted above, potential changes in amenity arise as a result of five environmental factors already considered (air quality, odour, noise, landscape and visual and traffic) combining to further affect a receptor in a location.
- C.3.7 There are anticipated to be temporary adverse impacts on amenity where tunnel or pipeline corridors navigate close to sensitive receptors on the outskirts of Waterbeach, Landbeach and Milton. This is due to adverse impacts from a combination of changes to air quality, noise and landscape and visual effects.
- C.3.8 The businesses located along Butt Lane are likely to experience a reduction in amenity due to a temporary reduction in air quality, from dust deposition effects, in combination with landscape and visual effects, as the construction activity would be visible from this location, as well as increases in traffic.
- C.3.9 The landscape and visual assessment states that nearby PRow, including Mere Way, would have clear views of the construction works. As no changes to air quality, noise or traffic are anticipated, no additional amenity effects on users of this PRow have been identified.

Site area 1 Option B

- C.3.10 Subject to the precise location of the treated effluent waste tunnel/pipeline associated with Option 1B, construction noise and vibration of the tunnel/pipeline has the potential to impact a greater number of receptors on the northern edge of and surrounding Milton and Horningsea compared to Option 1A.
- C.3.11 As a result, a combination of air quality and noise effects are predicted. There is therefore anticipated to be a temporary reduction in amenity, which is likely to be worse than Option A, as a result of the receptors being closer to the construction activity.

Table C.66: Amenity impacts – unmitigated RAG evaluation during construction for site area 1

Site area	Evaluation	Unmitigated RAG rating
Site area 1 – Option A	The construction of the tunnel or pipeline corridors construction is located close to sensitive receptors on the outskirts of Waterbeach, Landbeach and Milton and businesses along Butt Lane. Unmitigated, amenity impacts are likely to be a notable change from the baseline position as there is the potential to impact many receptors on the outskirts of Waterbeach, Landbeach and Milton. These receptors are primarily residential and the occupants are likely to experience a reduction in amenity for the duration of construction activities.	Red
Site area 1 – Option B	Impacts are the same as above, except that the discharge location is closer to a greater number of receptors, compared to Option A. Overall, the difference between Option A and B are not significant enough for the RAG rating to be different.	Red

Site area 1 – Operation

Site area 1 Option A

- C.3.12 It is assumed that all site traffic will enter and exit the site via Butt Lane off A10 Ely Road. Due to combination of increased traffic, reduced air quality and landscape and visual effects in this location, there will be a reduction in amenity for businesses and other properties along this road.
- C.3.13 There is the potential for odour impacts for residential properties on the west side of the High Street and to the south of Akeman Street in Landbeach. As there are visual receptors in Landbeach that would have a clear view of the new structures during operation, there is an impact on amenity at this location, from the combination of odour impacts and landscape and visual effects.
- C.3.14 Additionally, there is the potential for a reduction in amenity for users of Mere Way which is to the west of site 1. This is due to a combination of odour impacts and landscape and visual effects. It is noted that this is likely to occur for only a portion of Mere Way.

Site area 1 Option B

- C.3.15 The impacts on the community are very similar to Option A. The only difference is that, subject to the precise location of the discharge location, there is the potential for this feature to be closer to receptors in Option B compared to Option A. As a result there may be different noise impacts. However, the operation of this part of the water treatment infrastructure is not likely to have significant adverse effects on these receptors.
- C.3.16 The table below summarises the RAG evaluation for community during operation (unmitigated) for site area 1 Option A and Option B.

Table C.67: Unmitigated RAG evaluation during operation for site area 1 Option A and Option B

Site area	Evaluation	Unmitigated RAG rating
Site area 1 – Option A	<p>There is likely to be reduction in amenity for businesses located on Butt Lane and for users of Mere Way.</p> <p>There is the potential for a reduction in amenity at residential properties on the west side of the High Street and to the south of Akeman Street in Landbeach.</p> <p>At these two locations, unmitigated, amenity impacts are likely to represent a minor change from the baseline position from a combination of changes to two environmental factors. Only a small number of resources in the area will be impacted. Additionally, the reduction in amenity for the businesses on Butt Lane is only a minor change from the baseline position as the area already contains activities which affect the amenity of the environment, including the recycling facility and the Milton Park and Ride.</p>	Amber
Site area 1 – Option B	<p>Impacts are the same as above as presence of a discharge point is not confirmed and not likely to have a substantial amenity impact on community receptors.</p>	Amber

Site area 2 – Construction

Site area 2 -Option A

- C.3.17 Similar to site area 1, there are expected to be temporary adverse impacts on amenity where tunnel or pipeline corridors navigate close to sensitive receptors on the outskirts of Waterbeach, Landbeach and Milton. This is due to adverse impacts from a combination of changes to air quality, noise and landscape and visual effects during construction.
- C.3.18 The businesses located along Butt Lane are likely to experience a reduction in amenity due to a temporary reduction in air quality, from dust deposition effects, in combination with landscape and visual effects (as the construction activity would be visible from this location), as well as increases in traffic.
- C.3.19 The landscape and visual assessment states that receptors on the Blackwell caravan site, which is a travellers’ site, would have clear and partially filtered views of the construction works. This, in combination with a reduction in air quality, is likely to have an adverse impact on the amenity in this location.
- C.3.20 The landscape and visual assessment states that nearby PRoW, including Mere Way, would have clear views of the construction works. As no changes to air quality, noise, odour or traffic are anticipated, no amenity effects on users of this PRoW are reported.

Site area 2 Option B

- C.3.21 Similar to site area 1, subject to the precise location of the treated effluent waste tunnel/pipeline associated with Option 1B, construction noise and vibration of the tunnel/pipeline has the potential to impact a greater number of receptors on the northern edge of and surrounding Milton and Horningsea compared to Option 1A. Air quality effects, as a result of increased dust effects due to construction, are also reported to be worse for this option as the construction is closer to residential receptors.

C.3.22 A combination of air quality and noise effects are predicted, so there is anticipated to be a temporary reduction in amenity, which is likely to be worse than Option A, as a result of the receptors being closer to the construction activity.

Table C.68: Amenity impacts – unmitigated RAG evaluation during construction for site area 2

Site area	Evaluation	Unmitigated RAG rating
Site area 2 – Option A	<p>There are anticipated to be temporary adverse impacts on amenity where tunnel or pipeline corridors navigate close to sensitive receptors on the outskirts of Waterbeach, Landbeach and Milton.</p> <p>The businesses located along Butt Lane and the Blackwell caravan site are also likely to experience a reduction in amenity</p> <p>Unmitigated, amenity impacts are likely to be a major change from the baseline position as there is the potential to impact many receptors on the outskirts of Waterbeach, Landbeach and Milton. These receptors are primarily residential receptors. The occupants are likely to spend long periods of time within their properties and are likely to experience a reduction in amenity for those periods. The number of potential receptors affected, in addition to the reduction in amenity for businesses along Butt Lane and the Blackwell caravan site, means there will be a major change in amenity from the baseline position.</p>	Red
Site area 2 – Option B	<p>Impacts are the same as above, except that the discharge location is also closer to a greater number of receptors, compared to Option A. Overall, the impacts between Option A and B are not significant enough for the RAG rating to be different.</p>	Red

Site area 2 – Operation

Site area 2 Option A

C.3.23 Similar to site area 1, it is assumed that the all site traffic will enter and exit the site via Butt Lane and A10 Ely Road. Due to combination of increased traffic, reduced air quality, landscape and visual effects, noise effects and potential odour impacts (at Evolution Business Park), there will be a reduction in amenity for businesses, and other properties, along Butt Lane.

C.3.24 Additionally, there is the potential for a reduction in amenity for users of Mere Way which is to the west of site 2. This is due to a combination of odour impacts and landscape and visual effects. It is noted that this is likely to occur for only a portion of Mere Way.

C.3.25 It is noted that the potential odour impacts at the Evolution Business Park and on Mere Way are classified as negligible in the odour assessment, in accordance with IAQM guidance. These impacts alone would not constitute a reduction in Amenity at these receptors. However, when combined with the other potential impacts they contribute to a reduction in Amenity.

Site area 2 Option B

C.3.26 Similar to site area 1, the impacts on the community are very similar to Option A. The only difference is that subject to the precise location of the discharge location, there is the potential for the discharge location to be closer to community receptors in Option B when compared to Option A. However, the operation of this part of the water treatment infrastructure is not likely to have significant adverse amenity effects on these receptors.

C.3.27 The table below summarises the RAG evaluation for community during operation (unmitigated) for site area 1 Option A and Option B.

Table C.69: Unmitigated RAG evaluation during operation for site area 2 Option A and Option B

Site area	Evaluation	Unmitigated RAG rating
Site area 2 – Option A	There is likely to be reduction in amenity for businesses located on Butt Lane and for users of Mere Way. There are a small number of businesses located on Butt Lane. The area already also contains activities which reduce the amenity of the environment, including the recycling facility and the Milton Park and Ride. Due to the small number of businesses impacted and the amenity of the existing environment, the proposed changes represent a minor change from the baseline position.	Amber
Site area 2 – Option B	Impacts are the same as above as presence of a discharge point is not confirmed and not likely to have a substantial impact on community receptors change the RAG score.	Amber

Site area 3 – Construction

C.3.28 There are anticipated to be temporary adverse impacts on amenity where tunnel or pipeline construction corridors navigate close to sensitive receptors on the outskirts of Waterbeach, Horningsea and Clayhithe. This is due to adverse impacts from a combination of a reduction in air quality and potential noise impacts.

C.3.29 The area around site area 3 understood to be an area which is popular recreational activities, in particular walking and cycling. There is a shared-use pedestrian and cycleway on Horningsea Road. PRow 85/14 is located to the east of site 3 and follows the existing routing of the unpaved dirt track section of Low Fen Drove Way. Surrounding site 3 there are numerous other PRow including an extensive network of footpaths connecting the rural settlements of Stow-cum-Quy, Lode, Waterbeach and Horningsea. The landscape and visual assessment states that visual receptors on many PRow in the area would have clear or partially filtered views of the new structures. Construction will temporarily introduce new elements into the landscape and views that are uncharacteristic of the existing rural landscape and views over farmland. Additionally, the traffic assessment states that the increase in traffic would have a significant impact on PRow and the shared-use pedestrian and cycleway on Horningsea Road. The changes to recreational receptors views in combination with traffic effects will reduce amenity for recreational receptors using walking and cycling routes near to the site.

C.3.30 The table below summarises the RAG evaluation for community during construction (unmitigated) for site area 3.

Table C.70: Unmitigated RAG evaluation during construction for Site 3

Site area	Evaluation	Unmitigated RAG rating
Site 3	<p>There are anticipated to be temporary adverse impacts on amenity where tunnel or pipeline corridors navigate close to sensitive receptors on the outskirts of Waterbeach, Horningsea and Clayhithe. Additionally, there is anticipated to be a temporary reduction in amenity for users of cycling and walking routes near to the site.</p> <p>Unmitigated, amenity impacts are likely to be a major change from the baseline position as there is the potential to impact many receptors on the outskirts of Waterbeach, Horningsea and Clayhithe. The number of potential receptors, in addition to the reduction in amenity for users of cycling and walking routes near to the site are considered to be a major change from the baseline position.</p>	Red

Site area 3 – Operation

- C.3.31 Vehicular access to the site during operation will be via Horningsea Road. The location of the new access road may result in minor adverse noise effects at individual receptors on Horningsea Road. At these locations, operational traffic may also have an impact on the air quality for these receptors. The noise and air quality impacts, in combination with traffic effects, is likely to reduce amenity for receptors on Horningsea Road as a result of operational activities.
- C.3.32 The landscape and visual assessment concluded that users of PRoW in the area, including Low Fen Drove Way, would have clear or partially filtered views of the new structures during operation. Additionally, the odour assessment states that a section of Low Fen Drove Way PRoW is located within an area that could experience odour impacts. These potential impacts in combination with the traffic impacts on Low Fen Drove Way PRoW and the shared-use pedestrian and cycleway on Horningsea Road, will cause a reduction in amenity for walkers and cyclists using these routes.
- C.3.33 It is noted that the potential odour impacts on Low Fen Drove Way are classified as negligible in the odour assessment, in accordance with IAQM guidance. These impacts alone would not constitute a reduction in Amenity at this receptor. However, when combined with the other potential impacts they contribute to a reduction in Amenity.

Table C.71: Unmitigated RAG evaluation during operation for Site 3

Site area	Evaluation	Unmitigated RAG rating
Site 3	Amenity impacts are predicted for residential receptors located on Horningsea Road and walkers and cyclists using routes and PRoW near to the site. Unmitigated, amenity impacts are likely to be a minor change from the baseline position as few receptors are impacted. Furthermore, the users of walking and cycling routes are likely to temporarily experience a reduction in amenity as the PRoW/routes which are impacted are likely to only be a portion of their total route.	Amber

Mitigation identification

9.1.3 Noise, air quality and odour measures are listed in the respective sections above and are relevant to managing amenity effects on community receptors. In addition, the following mitigation measures would be implemented to manage effects on the community

- When determining the exact location of construction activities for the ancillary infrastructure, the proximity to recreational areas, residential properties, businesses and community receptors (such as schools, early childcare centres, GPs, hospitals) will be considered so the greatest distance is maintained between the receptors and construction activities.
- To ensure the negative impacts on amenity value and disruption are reduced as far as possible during the construction stage on walking and cyclists, the following mitigation measures would be incorporated into a CEMP.
 - Any temporary diversionary works or closure of PRoW would be undertaken following consultation with affected individuals, groups, and the local authority.
 - The public would be informed of the nature, timing and duration of particular activities during the construction stage and the duration of any works by newsletter and other forms of appropriate communication.
 - All diversions and alternative routes would be clearly sign-posted.

Assessment of mitigated options

C.3.34 Based on the mitigation outlined in above, Table C.72 reevaluates the impacts on the community for each of the options during the construction and operational phases.

Table C.72: Amenity RAG evaluation B (with mitigation)

Site area	Evaluation	Unmitigated RAG rating	Mitigated RAG rating
Construction – site area 1			
Site area 1 – Option A	In the unmitigated assessment a reduction in amenity for sensitive receptors located on the outskirts of Waterbeach, Landbeach and Milton was due to a combination of noise, air quality and landscape and visual effects. Mitigation measures are proposed to reduce noise and air quality effects. As a result of this, there will be a reduction in the number receptors impacted by this option as noise and air quality effects will be appropriately managed, and no amenity effects anticipated at these locations.	Red	Amber

	<p>Businesses on Butt Lane are likely to still experience a reduction in amenity from a combination of landscape and visual effects and traffic effects, as a result of construction activity. The reduction in amenity for the businesses on Butt Lane is only a minor change from the baseline position as the area already contains activities which affect the amenity of the environment, including the recycling facility and the Milton Park and Ride. Therefore, the RAG rating has been changed from Red to Amber, as less receptors are impacted as a result of mitigation measures.</p>		
Site area 1 – Option B	<p>Impacts are the same as above, except that the discharge location is also closer to a greater number of receptors, compared to Option A. Overall, the difference in impacts between Option A and B are not significant enough for the RAG ratings to be different between Option A and Option B.</p>	Red	Amber
Operation - site area 1			
Site area 1 – Option A	<p>In the unmitigated scenario, amenity impacts were anticipated for certain properties within Landbeach as a result of a combination of odour, and landscape and visual effects. With mitigation, odour effects will be effectively managed so amenity effects at this receptor are no longer anticipated at this location.</p> <p>There is likely to be reduction in amenity for businesses located on Butt Lane from a combination of traffic and landscape and visual effects. Both of these assessments report similar levels of effects, even with mitigation. As a result of this, the RAG assessment has not been downgraded as amenity effects, which are a minor change from the baseline position, are still anticipated.</p>	Amber	Amber
Site area 1 – Option B	<p>Impacts are the same as above. The discharge location is also closer to a greater number of receptors, compared to Option A. Overall, the difference in impacts between Option A and B are not significant enough for the RAG ratings to be different between Option A and Option B</p>	Amber	Amber
Construction – site area 2			
Site area 2 – Option A	<p>Similar to site 1, in the unmitigated assessment a reduction in amenity for sensitive receptors located on the outskirts of Waterbeach, Landbeach and Milton was due to a combination of noise, air quality and landscape and visual effects. Mitigation measures are proposed to reduce noise and air quality effects. As a result of this no amenity effects anticipated at these locations.</p> <p>Amenity impacts are no longer anticipated at the Blackwell caravan site as a result of mitigation of air quality effects.</p> <p>Businesses on Butt Lane are likely still to experience a reduction in amenity from a combination of landscape and visual effects and traffic effects, as a result of construction activity. The reduction in amenity for the businesses on Butt Lane is only a minor change from the baseline position as the area already contains activities which are likely to affect the amenity of the environment, including the recycling facility and the Milton Park and Ride.</p>	Red	Amber

	Therefore, the RAG rating has been changed from Red to Amber, as fewer receptors are affected as a result of mitigation measures.		
Site area 2 – Option B	Impacts are the same as above. The discharge location is also closer to a greater number of receptors, compared to Option A. Overall, the difference in impacts between Option A and B are not significant enough for the RAG ratings to be different between Option A and Option B	Red	Amber
Operation - site area 2			
Site area 1 – Option A	<p>The unmitigated assessment reported that there would be a reduction in amenity for businesses and properties along Butt Lane and users of Mere Way as a result of a combination of increased traffic, reduced air quality, landscape and visual effects, noise effects and potential odour effects (at Evolution Business Park only). Proposed mitigation measures effectively manage air quality and noise effects.</p> <p>There is still likely to be a reduction in amenity for businesses located on Butt Lane from a combination of traffic, landscape and visual effects and odour impacts and on Mere Way from a combination of landscape and visual effects and odour impacts. The assessments of all these criteria report similar levels of effects, even with mitigation. As a result of this, the RAG assessment has not been downgraded as amenity effects, which are a minor change from the baseline position, are still anticipated.</p> <p>It is noted that the potential odour impacts at the Evolution Business Park and on Mere Way are classified as negligible in the odour assessment. These impacts alone would not constitute a reduction in Amenity at these receptors. However, when combined with the other potential impacts they contribute to a reduction in Amenity.</p>	Amber	Amber
Site area 1 – Option B	Impacts are the same as above. The discharge location is also closer to a greater number of receptors, compared to Option A. Overall, the difference in impacts between Option A and B are not significant enough for the RAG ratings to be different between Option A and Option B.	Amber	Amber
Construction – site area 3			
Site area 3	<p>As stated in Appendix sections B.6 and B.7, the proposed mitigation is anticipated to reduce air quality and noise impacts to non-significant or negligible effects. Therefore, amenity impacts can only arise from a combination of landscape and visual and traffic impacts at a specific location.</p> <p>Unmitigated, amenity effects are anticipated for walkers and cyclists using Low Fen Drove Way PRow and the Horningsea Road shared-use pedestrian and cycleway as a result of change to views and traffic effects. Taking into consideration mitigation, the traffic assessment reported that the highway improvements and temporary traffic measures (outlined in Appendix D.2) there will still be an impact on users of Low Fen Drove Way PRow. Additionally, there will still be visual effects on recreational receptors using this route. As a result of this, the RAG assessment has not been</p>	Amber	Amber

downgraded as amenity effects, which are a minor change from the baseline position, are still anticipated.			
Operation – site area 3			
Site area 3	<p>As stated in Appendix sections B.6 and B.7, the proposed mitigation is anticipated to reduce air quality and noise impacts to non-significant or negligible effects. Therefore, amenity impacts will only arise from a combination of landscape and visual, odour and traffic impacts at a specific location, taking into consideration the specific mitigation proposed by these environmental topics.</p> <p>The landscape and visual assessments reported that even with mitigation, the development would remain an uncharacteristic addition to the landscape and views would be of a similar level of effects to the unmitigated scheme. This included views from Low Fen Drove Way PRow. The traffic assessment reports that the operational access to site 3 would have a moderate negative impact on Low Fen Drove Way PRow. In addition, a section of Low Fen Drove Way PRow is located within an area that could experience odour impacts, but does not require mitigation due to the low sensitivity of this receptor. Therefore, amenity impacts are predicted walkers and cyclists using Low Fen Drove Way PRow, due to the combination of visual, odour and traffic effects.</p> <p>Amenity impacts are likely to be a minor change from the baseline position as receptors are limited to walkers and cyclists near to the site. Furthermore, the users of walking and cycling routes are likely to temporarily experience a reduction in amenity as the PRow/routes which are impacted are likely to only be a portion of their total route.</p> <p>It is noted that the potential odour impacts on Low Fen Drove Way are classified as negligible in the odour assessment. These impacts alone would not constitute a reduction in Amenity at this receptor. However, when combined with the other potential impacts they contribute to a reduction in Amenity.</p>	Amber	Amber

Incorporating feedback

- 9.1.4 Phase one non-statutory consultation was held in order to share the proposals for relocating the WWTP with the public and stakeholders. A summary of the feedback received from the public in relation to community and how the concerns, issues and opportunities raised have been considered within the assessment criteria for Stage 4 final site selection is provide in the Appendix C.2.

C.4 Traffic-related impacts of construction and operation on local communities

Assessment methodology

- C.4.1 The assessment criterion considered the potential traffic impacts of the unmitigated options on residents, business' and communities in relation to congestion and road safety.
- C.4.2 The assessment consisted of a high-level desktop review of the access routes to each proposed site and analysed the relevant traffic related impacts along the route, during both the construction and operation phase of development.
- C.4.3 Assessment for each traffic related impact during both construction and operation began at the nearest appropriate junction with the A14 and terminated at the site location itself. Impacts along the main carriageway of the A14 are to be considered negligible and were therefore not considered further for the purposes of this assessment.
- C.4.4 The assessment conducted used available aerial imagery, OS mapping, Cambridgeshire County Council's 'My Cambridge' interactive maps, operational flow data obtained at existing sites and predicted construction flows to consider the following:
- The potential areas that would be affected by increased congestion on the route to site during construction and operation.
 - Sensitive receptors along the routes, for example; residential communities, schools, nurseries, playgrounds, local businesses and elderly care facilities.
 - Safety of other road users, such as pedestrian crossings and cycling routes.
 - Local Public Rights of Way (PRoW)
 - Accident clusters along the routes (Cambridgeshire County Council, 2019).
 - Any existing Heavy Goods Vehicle (HGV) restrictions located along each route (Cambridgeshire County Council, 2019).
 - A consideration of the cumulative impacts of local committed developments on the proposed accesses to site.
- C.4.5 The RAG definitions adopted for the traffic impact of construction and operation on local residents are shown below in Table C.73.

Table C.73: Traffic impact of construction and operation on local communities - RAG definitions

Green	Amber	Red
Overall impact on local residents/communities from option construction and operation expected to be minor: Minor localised disturbance/ delays caused by construction traffic/traffic management measures: Minor increase in traffic within localised area during construction and/or operation: Sensitivity of route to site area from strategic network is low; and, No negative impact upon nearby Public Rights of Way.	Overall impact on local residents/communities from option construction or operation expected to be moderate: Moderate traffic delays/congestion during peak hours (7.30-9.30am/4.30-6.30pm) including road closures/diversions during construction; or Moderate increase in traffic during operation; or Sensitivity of route to site area from strategic network is moderate; or, Moderate impact to nearby Public Rights of Way.	Overall impact on local residents/communities from option construction and/or operation has the potential to be severe: Potentially severe traffic delays/congestion diversions/ extinguishments during peak hours (7.30-9.30am/4.30-6.30pm); or Potentially severe traffic Impacts within and beyond local area during construction and/or operation; or Sensitivity of route to site area from strategic network is high; or, Significant negative impact to nearby Public Rights of Way.

- C.4.6 For the purposes of assessing the traffic related impacts of each site, the differences in scheme sub-options such as 1A and 1B were considered negligible. Each option is therefore grouped together as a singular site-based option. The associated ancillary infrastructure options will cause an impact on the local highway, as spoil that cannot be backfilled will need to be removed. However, this level of impact is consistent across site area options and is therefore not considered to be of relevance to the assessment.
- C.4.7 Once a preferred site option is chosen, further assessment may include assessing the traffic related construction impacts of ancillary tunnelling works; including the impacts of further “off-site” HGV movements. Mitigations of these impacts will be outlined within a Construction Management Plan.

Assessment of unmitigated options

- C.4.8 A summary of the screening assessment for each site area regarding the traffic related impacts of construction and operation on the community and the resulting RAG evaluation are provided below. Greater detail regarding site access and site routing is provided in the preliminary transport assessment in Appendix K.

Site areas 1 and 2

- C.4.9 Sites 1 and 2 both provide site routing from the A14 Milton Interchange via the A10 and Butt Lane during both construction and operation.
- C.4.10 The proposed access locations during both construction and operation do not encourage routing past numerous sensitive receptors.
- C.4.11 Access to site area 1 is not considered to have an impact upon nearby PRoWs such as Mere Way.
- C.4.12 Access to site area 2 is considered to have a moderate impact upon PRoWs as HGVs, like all vehicles, would have to cross Mere Way to reach the site.

Operational Impacts

- C.4.13 As highlighted in the Preliminary TA, the A10 and the A14 Milton Interchange already experience significant levels of congestion and delay, particularly during peak traffic periods (7:30-9:30AM and 4:30-6:00PM). However, the operational impact of site relocation to site area 1 or 2 is unlikely to worsen the impact on the strategic highway network as operational vehicles will continue to access the site via the Milton Interchange.
- C.4.14 A similar number of HGVs will still use the Milton Interchange; but instead perform a different turning movement at the junction, dependent upon their respective origin and destination. The community-based impact of this is considered negligible.
- C.4.15 As highlighted in the Preliminary TA, there will be a moderate increase in operational traffic at the new site due to its increased capacity. However, this increase is expected to have a negligible effect on current levels of delay/congestion experienced along the A10 and at the Milton interchange.
- C.4.16 As discussed in the Preliminary TA, the preferred site will need to be assessed cumulatively alongside committed developments such as Waterbeach New Town to assess the capacity of local junctions. However, it is worth noting that the operational increase in traffic for WWTP is considered minor compared to the increase in traffic associated with Waterbeach New Town.

- C.4.17 There will be a moderate increase in operational traffic delay at the A10/Butt Lane junction during peak periods; as vehicles exiting southbound towards the A14, exit onto the A10 via a separate Milton Park & Ride junction. However, given the fact that operational vehicles accessing/egressing the site will do so throughout a 12-hour operational period, the overall impact is considered to be moderate.

Construction Impacts

- C.4.18 It is important to note that during construction of site areas 1 or 2, the existing site will remain operational at all times, resulting in a compound effect of traffic related impacts.
- C.4.19 During peak levels of construction, such as the large concrete pour, there will be increased levels of delay, particularly on approach to the A10/Butt Lane junction and at the Milton Interchange. This level of impact is considered to be significant given that the Milton Interchange is currently operating at capacity.
- C.4.20 There is also potential for temporary localised road closures on sections of Butt Lane, particularly to construct the site access junction. However, the impact of such is considered moderate at this stage as diversion via the A14, would not significantly impact upon journey time.

Site area 3

- C.4.21 The unmitigated option for site area 3 provides routing from Junction 34 of the A14, via Horningsea Road during both construction and operation.
- C.4.22 The proposed access location during both construction and operation does not encourage routing past sensitive receptors and does not pass any Air Quality Management Areas (AQMAs).

Operational Impacts

- C.4.23 As site area 3 utilises access from Junction 34 of the A14 instead of the Milton Interchange, operational traffic associated with the new site will be re-assigned to the strategic highway network accordingly. Operational flow at the Milton interchange will likely decrease; whilst, flow at Junction 34 will likely increase.
- C.4.24 The reassignment of operational flow is likely to have an impact on current levels of delay/congestion experienced along Horningsea Road. However, given the fact that operational vehicles accessing/egressing the site will do so throughout a 12-hour operational period, the overall impact is considered to be negligible.
- C.4.25 The major residing concern over operational access via Horningsea Road is the functionality of Junction 34 itself. As Junction 34 is a west-only junction, operational vehicles accessing to/from the east would need to perform a U-turn movement at the Milton Interchange, which is already operating at capacity during peak periods.
- C.4.26 As discussed in the Preliminary TA, the preferred site will need to be assessed cumulatively alongside committed developments such as land north of Newmarket Road and Land north of Cherry Hinton to assess the capacity of local junctions. However, it is worth noting that the operational increase in traffic for WWTP is considered minor compared to the increase in traffic associated with the aforementioned developments.

C.4.27 Unmitigated access to site area 3 is considered to have a significant negative impact upon nearby PRowS and upon the shared-use pedestrian and cycleway on Horningsea Road, highlighted in the preliminary transport assessment (Appendix K).

Construction Impacts

C.4.28 During peak levels of construction, such as the large concrete pour, there will be significant increases to levels of flow, particularly on approach to Junction 34 of the A14. However, this level of impact is far lower than that of sites 1 and 2 as Junction 34 is not currently operating at capacity.

C.4.29 Site area 3 utilises a different interchange with the A14 to the existing site, so construction impacts are far less likely to be compounded with the existing operational impact.

C.4.30 There is potential for lengthy diversions and localised road closures on sections of Horningsea Road, particularly to construct the site access junction. Road closures at this location, severing the villages of Horningsea and Fen Ditton, are likely to have a significant community impact.

C.4.31 Unmitigated access to site area 3 is considered to have a significant negative impact upon nearby PRowS and upon the shared-use pedestrian and cycleway on Horningsea Road, highlighted in the preliminary transport assessment (Appendix K).

Table C.74: Unmitigated traffic related impacts of operation on local communities – RAG summary

Site	Unmitigated RAG score
1	Amber
2	Amber
3	Red

Table C.75: Unmitigated traffic related impacts of construction on local communities – RAG summary

Site	Unmitigated RAG score
1	Red
2	Red
3	Red

Mitigation identification

C.4.32 Mitigation measures for potential traffic impacts are outlined in the access assessment in Appendix D.2.

Assessment of mitigated options

C.4.33 A summary of the screening assessment for each site area regarding the traffic related impacts of construction and operation on the community and the resulting RAG evaluation, after mitigation, are provided below. Greater detail regarding site access and site routing is provided in the preliminary transport assessment in Appendix K.

Site areas 1 and 2

- C.4.34 As outlined in Appendix D.2, it is not considered at this stage that the preferred access routes into site areas 1 and 2 require further physical mitigation measures.
- C.4.35 Although a CTMP would mitigate the impacts of construction to some degree; flow would still route via the Milton Interchange and produce a significant impact upon the junction, adding to the existing operational flow experienced here.
- C.4.36 As a result, the RAG evaluations regarding the traffic related impacts of construction and operation on local communities for sites 1 and 2 are unchanged from the unmitigated assessment.

Site area 3

Operational Impacts

- C.4.37 The mitigated operational access for Site 3 provides routing from Junction 35 of the A14, the Quy Interchange, via High Ditch Road and Low Fen Drove Way.
- C.4.38 As site area 3 utilises access from Junction 35 of the A14 instead of the Milton Interchange, operational traffic associated with the new site will be re-assigned to use a different junction of the strategic highway network. Operational flow at the Milton interchange will likely decrease; whilst, flow at Junction 35 may moderately increase.
- C.4.39 The reassignment of operational flow may have an impact on current levels of delay/congestion experienced along High Ditch Road. However, given the fact that operational vehicles accessing/egressing the site will do so throughout a 12-hour operational period, the overall impact is considered to be minor.
- C.4.40 The Preliminary TA has considered the potential cumulative impact of local committed developments to site area 3, namely the development of land both North of Cherry Hinton (S/1231/18/OL)⁷³ and North of Newmarket Road (S/2682/13/OL) (also known as the Marleigh/Wing development).
- C.4.41 The junction performance data associated with these developments highlights the potential for the A14 Junction 35 roundabout (Quy interchange) to be over capacity with the Marleigh/Wing development in place, but as this assessment dates back to 2013, should site area 3 be taken forward, there would need to be an up-to-date traffic assessment of the area which considers the cumulative impact.
- C.4.42 The proposed access location during operation does not encourage routing past numerous sensitive receptors.
- C.4.43 Operational access to Site 3 is considered to have a moderate negative impact upon nearby PRoWs such as Low Fen Drove Way and the proposed pedestrian access from the Marleigh development south of the High Ditch Road junction. However, improved access to this route can be incorporated into the design for the improvements to the bridge over the A14 (outlined in Appendix D.2).

⁷³ North of Cherry Hinton Development: S/1231/18/OL - 1200 residential dwellings (including retirement living facility (within Use Class C2/C3)) a local centre comprising uses within Use Class A1/A2/A3/A4/A5/B1a/D1/D2 primary and secondary schools community facilities open spaces allotments landscaping and associated infrastructure.

Construction Impacts

- C.4.44 During peak levels of construction, such as the large concrete pour, there will be significant increases to levels of flow, particularly on approach to Junction 34 of the A14. However, this level of impact is lower than that of sites areas 1 and 2 as Junction 34 is not currently operating at capacity.
- C.4.45 Site area 3 utilises a different interchange with the A14 to the existing site, so construction impacts are far less likely to be compounded with the existing operational impact.
- C.4.46 With the formation of a CTMP there is potential for a reduced impact upon the nearby residents of Fen Ditton and Horningsea as diversions and localised road closures along Horningsea Road can be kept to a minimum.
- C.4.47 Sourcing construction vehicles and construction materials from the north (A1 via A14 west), south (M11 via A14 west) or west (A14), where possible, will reduce the number of vehicles performing a U-turn manoeuvre at the Milton Interchange or Histon Interchange.
- C.4.48 Given the highway improvements and temporary traffic measures (outlined in Appendix D.2), mitigated construction access to site area 3 will have little impact upon the shared-use pedestrian and cycleway on Horningsea Road and will not significantly impede access to the nearby PRoW from Horningsea Road. It is likely however, that access to the PRoW via High Ditch Road will be temporarily disrupted during construction of the operational access and during the improvements to the Low Fen Drove Way A14 bridge.

Table C.76: Traffic related impacts of operation on local communities – RAG summary

Site	Mitigation Measures	Unmitigated RAG score	Mitigated RAG score
1	No further mitigation needed following preferred access option assessment	Amber	Amber
2	No further mitigation needed following preferred access option assessment	Amber	Amber
3	Change of routing from access option HSR-01 to HDR-01. Access from Junction 35 of the A14 via Newmarket Road, High Ditch Road and Low Fen Drove Way to avoid routing through sensitive receptors at Fen Ditton. Highways improvements to High Ditch Road. Junction improvements to High Ditch Road/Newmarket Road and High Ditch Road/Low Fen Drove Way Junction Infrastructure improvements to bridge over the A14, maintaining safe access to PRoW. Improved signage regarding access only weight restrictions	Red	Amber

Table C.77: Traffic related impacts of construction on local communities – RAG summary

Site	Mitigation Measures	Unmitigated RAG score	Mitigated RAG score
1	CTMP	Red	Red
2	CTMP	Red	Red
3	Introduce temporary speed reduction along Horningsea Road. Maintain safe access to PRow. Maintain safe access to Low Fen Drove Way itself for existing road users. Construction Management Plan.	Red	Amber

Incorporating feedback

9.1.5 Phase one non-statutory consultation was held in order to share the proposals for relocating the WWTP with the public and stakeholders. A summary of the feedback received from the public in relation to traffic and access and how the concerns, issues and opportunities raised have been considered within the assessment criteria for Stage 4 final site selection is provide in the Appendix D.2.