

N. SSSI IRZ review addendum



Cambridge Waste Water Treatment Plant Relocation

Nature Conservation and Biodiversity Stage 2
and Stage 3 SSSI Impact Risk Zone Addendum

December 2020

Page intentionally blank for pagination when printed

Mott MacDonald
22 Station Road
Cambridge CB1 2JD
United Kingdom

T +44 (0)1223 463500
mottmac.com

Anglian Water Services
Ltd,
Lancaster House,
Ermine Business Park,
Lancaster Way,
Huntingdon,
PE29 6XU

Cambridge Waste Water Treatment Plant Relocation

**Nature Conservation and Biodiversity Stage 2
and Stage 3 SSSI Impact Risk Zone Addendum**

December 2020

Page intentionally blank for pagination when printed

Document reference: 415458 | 08 | A

Information class: Standard

This document is issued for the party which commissioned it and for specific purposes connected with the above-captioned project only. It should not be relied upon by any other party or used for any other purpose.

We accept no responsibility for the consequences of this document being relied upon by any other party, or being used for any other purpose, or containing any error or omission which is due to an error or omission in data supplied to us by other parties.

This document contains confidential information and proprietary intellectual property. It should not be shown to other parties without consent from us and from the party which commissioned it.

Contents

Executive summary	1
1 Introduction	2
1.1 Background	2
2 Methodology	5
2.1 Stage 2 course screening assessment methodology	5
2.2 Stage 3 Fine screening assessment methodology	6
3 Results	8
4 Discussion	19
4.1 Stage 2 RAG assessment	19
4.2 Stage 3 RAG Assessment	20
5 Conclusion	23
5.1 Stage 2 -Course Screening	23
5.2 Stage 3- Fine Screening	23
Appendices	25
A. Maps	26
A.1 Figure 2: Sites of Special Scientific Interest Impact Risk Zone Location Plan for northern section of Study Area	26
A.2 Figure 3: Sites of Special Scientific Interest Impact Risk Zone Location Plan for southern section of Study Area	27

Executive summary

The report is a nature conservation and biodiversity appraisal addendum to the Stage 2 Course Screening (Mott Macdonald 2020a) and Stage 3 Fine Screening reports (Mott Macdonald 2020b). This addendum, undertaken as part of the back checking exercise for Stage 4 – Final Site Selection, incorporates an updated Red Amber Green (RAG) assessment for Sites of Special Scientific Interest (SSSIs) Impact Risk Zones (IRZs) that fall within the longlisted and shortlisted site boundaries assessed in the Stage 2 and 3 reports, respectively.

This addendum follows advice from Natural England's to factor IRZs into the appraisal to refine and verify the findings and conclusions of the assessment and to demonstrate that risks to statutorily designated sites have been appropriately and robustly considered.

The report assesses each of the 14 longlisted site areas within the Stage 2 report, in relation to the potential impact pathways for SSSIs, identified by the presence of the Natural England IRZ buffers around all SSSI's within a 10km Ecological Zone of Influence (Ezoi). Each of the 14 longlisted site areas was evaluated against SSSI IRZ RAG criteria. The results for each site area were compared to the overall RAG assessment scores presented in the July 2020 Stage 2 report to identify changes to the Stage 2 overall RAG assessment scores.

The RAG assessment results for the Stage 2 July 2020 report were reviewed against the SSSI IRZ RAG assessments. Ten out of the 14 longlisted site area RAG assessment scores (A, B, C, D, E, F, G, J, K and M) were re-assessed to Red due to the presence of SSSI IRZs. Four site areas (H, I, L, N) RAG scores indicated no change and these previously scored a Red RAG score.

The results of the Stage 2 Course screening assessment in July 2020 identified shortlisted sites (A, B, C, H, I, J and L) to be considered for further assessment (progressed to Stage 3) and site areas (D, E, F, G, K, M and N) were removed from further assessment.

The RAG assessment scores for the seven sites in the Stage 3 report were reviewed against the presence of the SSSI IRZs. Two RAG assessment scores for site area A and C changed from Amber to Red due to the presence of SSSI IRZs. The four site areas (B, H, I, J and L) RAG scores did not change and remained as Red. This addendum does not change the conclusions of Stage 2 - Course Screening Report and the Stage 3 – Fine Screening Report decision on the best performing site areas I, J and L, which are referred to in Stage 4 – Final Site Selection as site areas 1, 2 and 3 respectively.

1 Introduction

1.1 Background

Natural England were consulted on 8 July 2020 on the Cambridge Waste Water Treatment Plant Relocation Project following an initial project briefing from Anglian Water on 30 June 2020. Natural England responded on 28 August 2020 and raised comments on the use of Sites of Special Scientific Interest (SSSIs) Impact Risk Zones (IRZs)¹.

As part of the Stage 1 Initial Screening Assessment a 500m buffer was used to identify SSSIs constraints. At the Stage 2 Course Screening Appraisal, a 5km buffer was applied to consider potential pathways. Natural England commented that the application of the IRZs would have provided a more appropriate and robust indication of potential risks to SSSIs and internationally designated sites through the appraisal process. Natural England advise that the IRZs should be used to screen all new development proposals and site options.

Natural England have advised that the Stage 2 and 3 reports are revisited to incorporate a Red Amber Green (RAG) assessment applicable to the SSSIs IRZs. This report serves as an addendum to these reports as part of the back checking exercise for Stage 4 – Final Site Selection. The Natural England comments are:

“Whilst we are not aware that application of the IRZs will significantly alter the screening appraisal or its general conclusions, we believe further consideration should be given to applying the IRZs to refine and confirm the findings of the assessment. Evidence should be provided to support the screening out of potential impacts to SSSIs flagged by the IRZs. In the absence of evidence, a precautionary approach should be applied to ensure that risks to SSSIs associated with short listed sites are highlighted; the appraisal should then explain how these risks will be addressed through the next stages of the assessment.”

“Stage 2 Coarse Screening

Natural England generally agrees with the RAG assessment presented in table B.9 of Appendix B that there is unlikely to be any pathway for impact between any of the sites and the SSSIs listed. We agree that there is a potential pathway for impact to Stow-cum-Quy Fen SSSI, associated with Site L, due to possible hydrological connectivity with Black Ditch. Our advice is that this table, and the Stage 2 screening assessment, should include all of those SSSIs triggered by Natural England’s IRZs for sewage treatment works and associated infrastructure. Evidence should be provided to support any conclusion that there is ‘no pathway for impact’.

“Stage 3 Fine Screening

...our advice is that Natural England’s IRZs should be factored into the appraisal to refine and verify the findings and conclusions of the assessment and to demonstrate that risks to statutorily designated sites have been appropriately and robustly considered.”

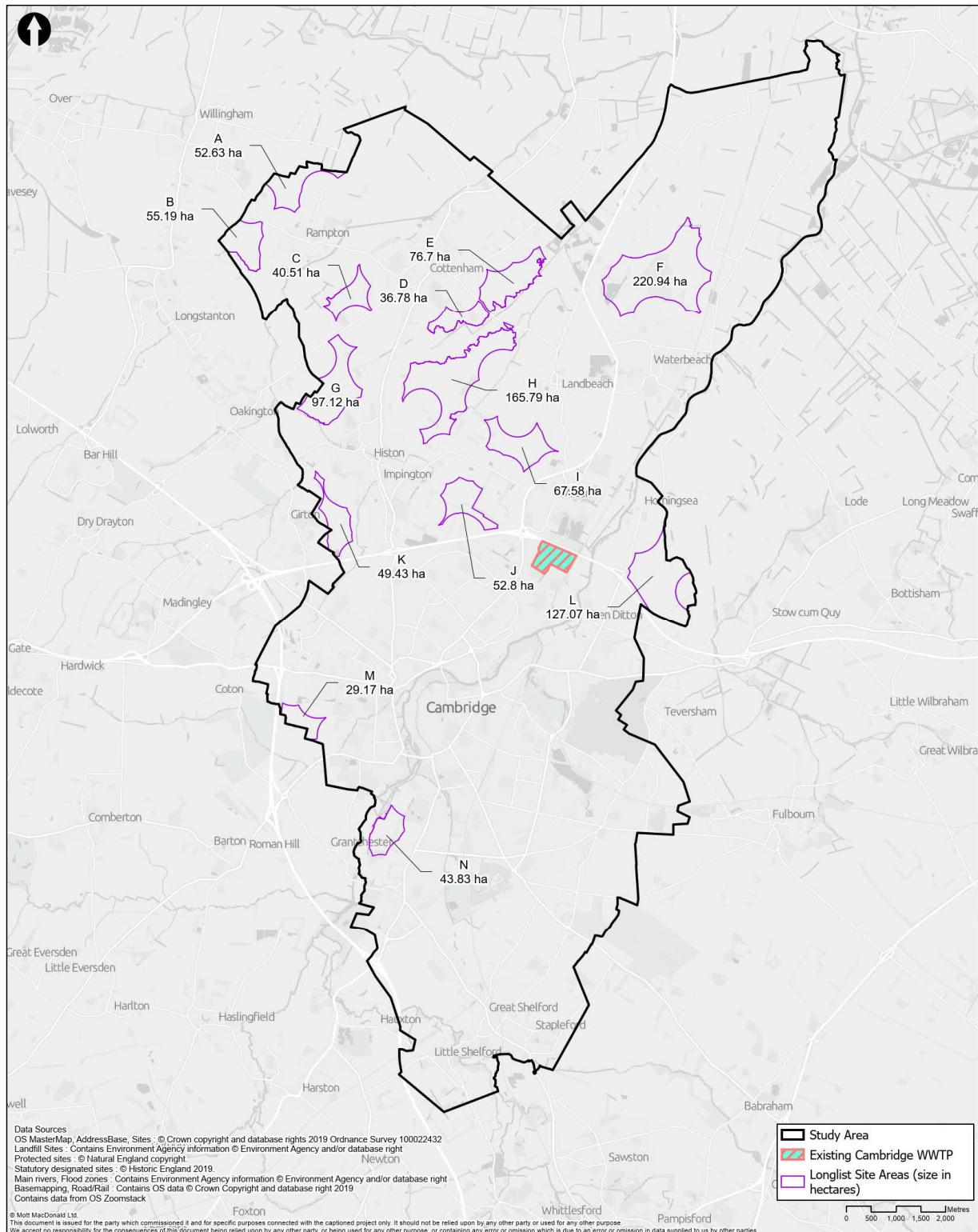
The report aims to review the Stage 2 Course Screening and Stage 3 Fine Screening reports by assessing each of the 14 longlisted site areas (shown in Figure 1 below) in relation to the

¹ SSSI IRZs are a GIS tool developed by Natural England to make a rapid initial assessment of the potential risks to SSSIs posed by development proposals. They define zones around each SSSI which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts. The IRZs also cover the interest features and sensitivities of European Sites, which are underpinned by the SSSI designation and “Compensation Sites”, which have been secured as compensation for impacts on European/Ramsar sites. Available online at https://magic.defra.gov.uk/Metadata_for_magic/SSSI%20IRZ%20User%20Guidance%20MAGIC.pdf

potential impact pathways for SSSIs, identified by the presence of SSSI IRZ buffers (shown in Appendix A).

The results of the IRZs are then compared with the Stage 2 and 3 nature conservation and biodiversity assessments to identify if inclusion of the IRZs would have changed the overall RAG rating of any of the site areas.

Figure 1: Longlisted site areas



Source: Contains OS data © Crown Copyright and database right 2019

2 Methodology

2.1 Stage 2 course screening assessment methodology

The Stage 2 Course Screening assessment report assessed the impact of the Waste Water Treatment Plan (WWTP) development on any designated areas of nature conservation and biodiversity importance at each proposed longlisted site area. The assessment took the form of a desk-based study utilising GIS software and aerial imagery where available. No site visits were undertaken at this stage.

The assessment identified potential pathways for impact on any protected areas and statutory designations within 5km of each site area. The pathways identified comprised natural routes for wildlife migration, such as watercourses or woodland.

Each site area was evaluated against the criteria listed within Table 1 by means of a RAG assessment. The RAG assessment was used to highlight the potential significance of the criteria for each site area. It is important to note that none of the assessments were exclusionary i.e. a red result for a single criterion did not indicate that a site area should be excluded from further consideration.

The assessment criteria adopted at Stage 2 is listed in the Table 1.

Table 1: RAG assessment criteria

Green	Amber	Red
No national, regional or local designations likely to be adversely affected, or effect likely to be positive. i.e. no pathways from site area identified*.	Designation of regional or local importance likely to be adversely affected. i.e. a pathway from site area was identified*. e.g. County Wildlife Sites (CWS), Country Parks etc.	Designation of national and/or international importance and/or Ancient Woodland likely to be adversely affected. i.e. pathway from site area was identified*. e.g. National Nature Reserves (NNR), SSSI, SSSI IRZ, Ancient Woodland (AW), Special Protection Areas (SPA), Special Areas of Conservation (SAC), Local Nature Reserves (LNR), Ramsar sites.

* All protected areas and statutory designations within 5km of each site area have been considered regarding potential pathways for impact.

To ensure completeness of these assessments this report will combine aspects of RAG assessment criteria from the Stage 2 report with information from each SSSI IRZ around the longlisted site areas. The assessment identified potential impact pathways to SSSI sites, within a 10km Ecological Zone of Influence (EZOI). The assessment used a combination of Ordnance Survey (OS) maps, aerial imagery, SSSI Impact Risk Zones, designated site citations and impact pathways from the construction and operation of each proposed site area areas on all SSSIs.

The assessment considered the following factors within the potential impact pathways during construction and these factors could lead to direct and indirect effects on habitats and species (i.e. potential for impact and effects due to proximity despite lack of physical pathway). The points below list development descriptions from the SSSI IRZs, which may be relevant to the WWTP (Natural England 2020):

- Natural routes used for wildlife migration, such as hedgerows, woodland or watercourses.
- Potential air quality connections from combustion processes and this pathway includes sewage treatment works by generating energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion. Emissions from combustion can cause air pollution affecting the habitats and species on SSSIs. More than 500m away from a SSSI, only combustion processes over a certain minimum size are likely to have an impact. A very large project and could cause air pollution on SSSIs up to 10km away.
- Potential discharge connections. Any discharge of water or liquid waste that is discharged to ground (i.e. to seep away) or to surface water, such as a beck or stream (NB This does not include discharges to mains sewer which are unlikely to pose a risk at this location). Description may vary to specify volume thresholds for discharges or to include discharges to main sewer. Most foul water is removed from a development site by a mains sewer. Where this is not the case, foul water is usually treated on site and then discharged either to ground to filter away from the site, or into a nearby watercourse. If the treated water flows towards a SSSI, it has the potential to impact on water quality sensitive features.
- Potential infrastructure connections from Pipeline and any transport proposal including road at site access areas (excluding routine maintenance). Pipelines, pylons and overhead cables can create a collision risk for birds and the footprint of the construction can affect local water supplies, which the SSSIs depend on. An increase in road traffic as a result of new or extended roads can cause local air pollution impacts and significant transport infrastructure projects can have impacts on water supply mechanisms, especially by introducing new drainage. New or extended aviation proposals can cause disturbance to birds, as well as collision with birds.
- Rural non-residential. Any non-residential development outside of existing urban areas where net additional gross internal floorspace following development is 30m² or more. Description may vary to specify different area thresholds. Rural non-residential developments can impact on water quality, cause disturbance to birds and impact on functional land outside SSSIs, which they depend on for feeding.

The area of a proposed development may coincide with more than one SSSI IRZ, the IRZs will be listed where relevant to the development.

2.2 Stage 3 Fine screening assessment methodology

The results of Stage 2 were used in a Stage 3 assessment, to identify seven shortlisted sites (A, B, C, H, I, J and L) out of 14 longlisted sites by performing a RAG assessment score, based upon the following criteria for the nature conservation and biodiversity for site access roads and a treated effluent pipeline to a new outfall north-east of Milton.

- Identification of legally protected and notable species within a 5km Ecological Zone of Influence (EZoI) around each of the site areas.
- Review of historical European Protected Species (EPS) licence applications within a 5 km EZoI around each of the proposed sites.
- Use of Ordnance Survey maps, aerial imagery and the MAGIC website to assess broad habitat types and to identify the presence of Habitats of Principal Importance (HPI; listed under Section 41 of the Natural Environment & Rural Communities (NERC) Act 2006) within each of the indicative WWTP boundaries. Additional high-level assessment of the suitability of identified habitat types to support protected species.
- Assessment of the likelihood of great crested newts (GCN) being present within a 0.5km EZoI around each site area. Ordnance Survey maps and aerial imagery were used to assess

the extent of potential GCN habitats with 0.25km of the indicative WWTP boundaries. The protected species data provided by Anglian Water were also searched to identify all records of GCN within 0.5km of each of the proposed site areas.

- Use of ordinance survey maps and aerial imagery to identify potential pathways for impact during the construction of pipeline routes and access roads on all statutory within a 1.0km EZoI. Pathways identified were generally natural routes for wildlife migration, such as hedgerows, woodland or watercourses. However, where the designated site is within 0.5km of the proposed route, it was considered that increased levels of noise, vibration, light and vehicular movement during construction could lead to habitat disruption and species displacement (i.e. potential for impact due to proximity despite lack of physical pathway).
- The Stage 3 Fine Screening RAG scores were combined with the Stage 2 Course Screening RAG scores to provide an overall assessment of the potential ecological constraints at each of the proposed site areas. The overall RAG rating presented in Stage 3 corresponds to the highest level of risk across the components of the Stage 3 Fine Screening (as described above) and the Stage 2 Coarse Screening.

3 Results

Table 2 provides the combined results for the Stage 2 and Stage 3 assessments in relation to the presence of SSSI IRZs. There are 14 longlisted site areas as reviewed for Stage 2, with seven shortlisted sites (A, B, C, H, I, J and L) taken forward for Stage 3. The seven shortlisted site areas within Table 2 include a review of whether the site areas associated pipeline and access roads also fall within the SSSI IRZ.

Figures 2 and 3 in Appendix A show the location of the site areas, concept access roads and pipelines, the SSSIs and, the IRZs.

Table 2: Site areas and SSSI IRZ

Site area	SSSIs within 10km	Approximate distance (km)	SSSI IRZ	RAG rating
Site area A	Ouse Washes	5.9	Yes-Discharge. Yes- Combustion.	Red
	Berry Fen	6.4	Yes-Discharge. Yes- Combustion.	
	Cam Washes	9.3	Yes-Discharge	
Site area A – Pipeline to new outfall north-east of Milton	Stow-cum-Quy Fen	1.8	Yes -Discharge Yes- Infrastructure	
	Cam Washes	5.6	Yes -Discharge Yes- Infrastructure	
	Upware South Pit	8.6	Yes-Discharge.	
Site A access road	Ouse Washes	6.5	Yes- Combustion.	Red
	Berry Fen	6.8	Yes- Combustion.	
Site area B	Overhall Grove	6.6	No obvious SSSI IRZs present	
	Ouse Washes	6.7	Yes-Discharge. Yes- Combustion.	
	Berry Fen	6.8	Yes-Discharge.	

Site area	SSSIs within 10km	Approximate distance (km)	SSSI IRZ	RAG rating
			Yes- Combustion.	
Site area B – Pipeline to new outfall north-east of Milton	Stow-cum-Quy Fen	1.8	Yes -Discharge Yes- Infrastructure	
	Cam Washes	5.6	Yes -Discharge Yes- Infrastructure	
	Upware South Pit	8.6	Yes-Discharge. Yes- Combustion.	
Site B Access road	Ouse Washes	6.7	Yes- Combustion.	
	Berry Fen	7.0	Yes- Combustion.	
	Overhall Grove	9.1	Yes- Combustion.	
Site area C	Histon Road	5.4	No obvious SSSI IRZs present	Red
	Traveller's Rest Pit	6.4	No obvious SSSI IRZs present	
	Madingley Wood	7.3	No obvious SSSI IRZs present	
	Stow-cum-Quy Fen	8.1	No obvious SSSI IRZs present	
	Ouse Washes	8.4	Yes-Discharge. Yes- Combustion.	
	Cam Washes	8.8	Yes -Discharge Yes- Infrastructure	
	Berry Fen	8.9	Yes-Discharge. Yes- Combustion.	
Site area C – Pipeline to new outfall north-east of Milton	Stow-cum-Quy Fen	1.8	Yes -Discharge Yes- Infrastructure	
	Cam Washes	5.6	Yes -Discharge Yes- Infrastructure	
	Upware South Pit	8.6	Yes-Discharge. Yes- Combustion.	

Site area	SSSIs within 10km	Approximate distance (km)	SSSI IRZ	RAG rating
Site C access road	Histon Road	5.4	Yes-Combustion.	
	Traveller's Rest Pit	6.4	Yes- Combustion.	
	Madingley Wood	7.3	Yes-Combustion.	
	Stow-cum-Quy Fen	8.1	Yes- Combustion.	
	Ouse Washes	9.0	Yes- Combustion.	
	Berry Fen	9.4	Yes- Combustion.	
Site area D	Histon Road	5.1	No obvious SSSI IRZs present	Red
	Stow-cum-Quy Fen	6.0	No obvious SSSI IRZs present	
	Cam Washes	6.5	Yes-Discharge. Yes- Combustion.	
	Traveller's Rest Pit	6.6	No obvious SSSI IRZs present	
	Wicken Fen	8.5	No obvious SSSI IRZs present	
	Upware South Pit	8.7	Yes-Discharge. Yes- Combustion	
	Upware Bridge Pit North	9.8	Yes- Combustion	
Site area E	Cam Washes	5.2	Yes-Discharge. Yes- Combustion.	Red
	Histon Road	5.8	No obvious SSSI IRZs present	
	Stow-cum-Quy Fen	5.8	No obvious SSSI IRZs present	
	Wicken Fen	7.1	No obvious SSSI IRZs present	
	Upware South Pit	7.2	Yes-Discharge.	

Site area	SSSIs within 10km	Approximate distance (km)	SSSI IRZ	RAG rating
			Yes- Combustion.	Red
	Traveller's Rest Pit	7.5	No obvious SSSI IRZs present	
	Upware Bridge Pit North	8.2	Yes-Discharge. Yes- Combustion.	
	Upware North Pit	8.6	Yes-Discharge. Yes- Combustion.	
	Devil's Dyke	9.5	Yes-Discharge. Yes- Combustion.	
Site area F	Cam Washes	2.0	Yes-Discharge. Yes- Combustion.	Red
	Stow-cum-Quy Fen	3.4	Yes-Discharge. Yes- Combustion.	
	Wicken Fen	4.0	Yes-Discharge. Yes- Combustion.	
	Cam Washes	4.2	Yes-Discharge. Yes- Combustion.	
	Upware South Pit	4.2	Yes-Discharge. Yes- Combustion.	
	Upware Bridge Pit North	5.5	Yes-Discharge. Yes- Combustion.	
	Upware North Pit	5.9	Yes-Discharge. Yes- Combustion.	
	Devil's Dyke	6.2	Yes-Discharge. Yes- Combustion.	
Site area G	Histon Road	3.5	No obvious SSSI IRZs present	Red
	Traveller's Rest Pit	4.3	No obvious SSSI IRZs present	

Site area	SSSIs within 10km	Approximate distance (km)	SSSI IRZ	RAG rating
	Madingley Wood	5.3	No obvious SSSI IRZs present	
	Stow-cum-Quy Fen	7.6	No obvious SSSI IRZs present	
	Cam Washes	9.3	Yes-Discharge.	
	Ouse Washes	9.4	Yes-Discharge.	
	Berry Fen	9.8	Yes-Discharge.	
Site area H	Histon Road	2.8	Yes-Discharge.	Red
	Traveller's Rest Pit	4.5	Yes-Discharge.	
	Stow-cum-Quy Fen	5.3	No obvious SSSI IRZs present	
	Cam Washes	6.1	Yes-Discharge. Yes- Combustion.	
	Wicken Fen	8.2	No obvious SSSI IRZs present	
	Upware South Pit	8.4	Yes-Discharge. Yes- Combustion.	
	Upware Bridge Pit North	9.6	Yes -Combustion	
Site area H – Pipeline to new outfall north-east of Milton	Stow-cum-Quy Fen	1.8	Yes -Discharge Yes- Infrastructure	
	Cam Washes	5.6	Yes -Discharge Yes- Infrastructure	
	Upware South Pit	8.6	Yes-Discharge. Yes- Combustion.	

Site area	SSSIs within 10km	Approximate distance (km)	SSSI IRZ	RAG rating
Site H access road	Histon Road	4.0	Potentially -Discharge.	
	Traveller's Rest Pit	5.6	Potentially -Discharge.	
	Stow-cum-Quy Fen	6.4	Yes- Combustion.	
	Cam Washes	8.1	Yes- Combustion.	
Site area I	Stow-cum-Quy-Fen	3.5	Yes – Combustion	Red
	Wilbraham Fens	5.7	Potentially – Combustion.	
	Cam Washes	6.6	Yes – combustion Yes - discharge	
	Great Wilbraham Common	8.1	Potentially – combustion	
	Fulbourn Fen	8.9	No obvious SSSI IRZs present	
	Upware South Pit	9.3	Yes - combustion	
	Devil's Dyke	9.4	No obvious SSSI IRZs present	
Site area I- Pipeline to new outfall north-east of Milton	Stow-cum-Quy-Fen	2.7	Yes -Discharge Yes-Infrastructure	
	Cam Washes	7.1	Yes -Discharge	
	Upware South Pit	9.9	Yes -Discharge	
	Stow-cum-Quy-Fen	2.7	Yes -Discharge	
		1.8	Yes-Infrastructure	

Site area	SSSIs within 10km	Approximate distance (km)	SSSI IRZ	RAG rating
Site I access road	Cam Washes	7.1 5.	Yes -Discharge	
	Upware South Pit	9.9 8.6	Yes -Discharge	
	Stow-cum-Quy-Fen	4.3	Yes – Combustion	
	Wilbraham Fens	6.	Potentially – Combustion.	
	Cam Washes	7.3	Yes – combustion Yes - discharge	
	Great Wilbraham Common	8.5	Potentially – combustion	
Site area J	Fulbourn Fen	9.1	Potentially – combustion	Red
	Histon Road	1.4	Yes- Combustion.	
	Traveller's Rest Pit	3.3	Yes- Combustion.	
	Stow-cum-Quy Fen	4.5	Yes- Combustion.	
	Wilbraham Fens	5.6	Yes- Combustion.	
	Madingley Wood	5.6	No obvious SSSI IRZs present	
	Cherry Hinton Pit	6.6	No obvious SSSI IRZs present	
	Gog Magog Golf Course	7.9	No obvious SSSI IRZs present	
	Great Wilbraham Common	8.0	Yes- Combustion.	
	Roman Road	8.1	No obvious SSSI IRZs present	
	Cam Washes	8.2	Yes- Combustion.	
	Fulbourn Fen	8.6	Yes - Discharge	
	Fleam Dyke	9.8	Yes - Discharge	
	Stow-cum-Quy Fen	1.8	Yes -Discharge Yes-Infrastructure	

Site area	SSSIs within 10km	Approximate distance (km)	SSSI IRZ	RAG rating
	Wilbraham Fens	3.6	Yes - Discharge	
	Great Wilbraham Common	6.0	Yes - Discharge	
	Cam Washes	5.6	Yes -Discharge	
	Upware South Pit	8.6	Yes -Discharge	
Site J access road	Histon Road	2.5	Yes- Combustion.	
	Traveller's Rest Pit	4.5	Yes- Combustion.	
	Stow-cum-Quy Fen	5.1	Yes- Combustion.	
	Wilbraham Fens	6.5	Yes- Combustion.	
	Madingley Wood	6.5	Potentially- Discharge.	
	Cherry Hinton Pit	7.5	Potentially - Discharge	
	Great Wilbraham Common	8.9	Yes- Combustion.	
	Roman Road	8.7	Yes- Combustion.	
	Cam Washes	8.0	Yes- Combustion.	
	Gog Magog Golf Course	9.2	Yes - Discharge	
Site area K	Histon Road	1.1	Yes- Infrastructure.	Red
	Traveller's Rest Pit	1.7	Yes- Infrastructure.	
	Madingley Wood	3.4	Yes-Infrastructure	
	Stow-cum-Quy Fen	7.5	No obvious SSSI IRZs present	
	Caldecote Meadows	8.8	No obvious SSSI IRZs present	
	Gog Magog Golf Course	8.9	No obvious SSSI IRZs present	
	Roman Road	9.3	No obvious SSSI IRZs present	

Site area	SSSIs within 10km	Approximate distance (km)	SSSI IRZ	RAG rating
Site area L	Stow-cum-Quy Fen	1.1	Yes -Discharge Yes-Combustion Yes – Rural non-residential Potential for impact due to connectivity with Site via Black Ditch	Red
	Wilbraham Fens	1.3	Yes -Discharge Yes-Combustion	
	Great Wilbraham Common	3.7	Yes -Discharge Yes-Combustion	
	Fulbourn Fen	4.5	Yes -Discharge Yes-Combustion	
	Cam Washes	6.2	Yes -Discharge Yes - combustion	
	Devil's Dyke	7.8	Potentially – Combustion.	
	Newmarket heath	8.5	Potentially – Combustion.	
	Upware South Pit	9.2	Yes - Combustion	
Site area L- Pipeline to new outfall north-east of Milton	Stow-cum-Quy Fen	2.7	Yes -Discharge Yes-Combustion Yes – Rural non-residential	Red
	Wilbraham Fens	3.5	Yes -Discharge Yes-Combustion	
	Great Wilbraham Common	6.1	Yes -Discharge Yes-Combustion	

Site area	SSSIs within 10km	Approximate distance (km)	SSSI IRZ	RAG rating
	Fulbourn Fen	6.7	Yes -Discharge Yes-Combustion	
	Cam Washes	7.7	Yes -Discharge Yes - combustion	
	Devil's Dyke	9.4	Potentially – Combustion.	
Site access area L	Stow-cum-Quy Fen	1.9	Yes-Combustion Yes – Rural non-residential	Red
	Wilbraham Fens	1.3	Yes-Combustion	
Site area M	Traveller's Rest Pit	1.3	No obvious SSSI IRZs present	Red
	Madingley Wood	2.0	Yes - Combustion	
	Histon Road	3.0	No obvious SSSI IRZs present	
	Cherry Hinton Pit	5.8	No obvious SSSI IRZs present	
	Hardwick Wood	6.4	Potentially – Combustion.	
	Gog Magog Golf Course	6.5	No obvious SSSI IRZs present	
	Eversden and Wimphole Woods	8.8	Yes - Combustion	
	Kingston Wood and Outliers	9.9	Yes - Combustion	
Site area N	Traveller's Rest Pit	3.4	No obvious SSSI IRZs present	Red
	Cherry Hinton Pit	3.6	Yes - combustion	
	Gog Magog Golf Course	4.0	Yes - combustion	
	Histon Road	4.5	No obvious SSSI IRZs present	
	Madingley Wood	4.8	No obvious SSSI IRZs present	
	Roman Road	4.9	Yes - combustion	

Site area	SSSIs within 10km	Approximate distance (km)	SSSI IRZ	RAG rating
	Denford Fen	5.9	No obvious SSSI IRZs present	
	Sawston Hall Meadows	8.1	No obvious SSSI IRZs present	
	Eversden and Wimphole Woods	9.2	Yes - Combustion	

4 Discussion

4.1 Stage 2 RAG assessment

The 14 longlisted sites shown in Table 3 were taken from the July 2020 Stage 2 – Course Screening report. Table 3 lists the Stage 2 RAG assessment scores for the 14 longlisted site areas as reported in July 2020 and the updated Stage 2 RAG scores (based on the SSSI IRZs). The SSSI IRZ RAG scores, which were incorporated to provide the updated Stage 2 RAG scores were added to Table 3 and the Stage 2 RAG assessment scores for 10 sites (A, B, C, D, E, F, G, J, K, and M) were re-assessed Red, based upon the SSSI IRZ RAG assessment.

Table 3: Stage 2 RAG Assessment of 14 longlisted sites

Site area	Updated Stage 2 RAG scores	July 2020 Stage 2 RAG scores	Comment(s)
A	Red	Amber	The presence of SSSI IRZs within the site area changes the RAG assessment score from Amber to Red,
B	Red	Green	The presence of SSSI IRZs within the site area changes the RAG assessment score from Amber to Green.
C	Red	Green	The presence of SSSI IRZs within the site area changes the RAG assessment score from Amber to Green.
D	Red	Amber	The presence of SSSI IRZs within the site area changes the RAG assessment score from Amber to Red,
E	Red	Amber	The presence of SSSI IRZs within the site area changes the RAG assessment score from Amber to Red,
F	Red	Green	The presence of SSSI IRZs within the site area changes the RAG assessment score from Amber to Red,
G	Red	Green	The presence of SSSI IRZs within the site area changes the RAG assessment score from Amber to Red,
H	Red	Red	No change for overall RAG assessment scores for site area H, when SSSI IRZ RAG assessments were considered.
I	Red	Red	No change for overall RAG assessment scores for site area I, when SSSI IRZ RAG assessments were considered.
J	Red	Green	The presence of SSSI IRZs within the site area changes the RAG assessment score from Amber to Green.
K	Red	Green	The presence of SSSI IRZs within the site area changes the RAG assessment score from Amber to Green.
L	Red	Red	No change for overall RAG assessment scores for site area I, when SSSI IRZ RAG assessments were considered.
M	Red	Amber	The presence of SSSI IRZs within the site area changes the RAG assessment score from Amber to Red,
N	Red	Red	No change for overall RAG assessment scores for site area I, when SSSI IRZ RAG assessments were considered.

As part of the Stage 2 assessment each of the 14 longlisted site areas was evaluated against 17 RAG criteria. The results for each site area were compared with one another on a qualitative basis to identify the best performing site areas to be included in the shortlist. Although the results have been reviewed holistically certain criteria were considered to be of greater importance in the context of the WWTP development. In order of importance these were:

- Impacts on local communities;
- Shape of land parcel and construction complexity;
- Green Belt policy;
- Policy, site allocation and planning permissions; and
- Carbon emissions.

Where, based on the RAG assessment and option comparison, site areas were compared with the other site areas these were removed from further assessment. Site areas D, E, F, G, K, M and N were removed on this basis.

The remaining seven site areas fell into two distinct groups.

- Site areas A, B and C – Site areas that are outside of the Green Belt and have higher tunnelling impacts and risk (due to longer tunnels and greater impact on the Lower Greensand, which is designated as a Principal Aquifer).
- Site areas H, I, J and L – Site areas that are within the Green Belt and have lower tunnelling impacts and risk (due to shorter tunnels and reduced impact on the Lower Greensand and Grey Chalk, both of which are designated as Principal Aquifers).

4.2 Stage 3 RAG Assessment

The seven shortlisted site areas (A,B,C,H,I, J, and L) and their infrastructure including the Pipeline to new outfall north-east of Milton and access roads, were RAG assessed against the nature conservation criterion of statutory and non-statutory designated sites, protected species, habitats and GCN presence. Table 4 below shows the overall RAG assessment for Stage 3, which incorporates the updated RAG scores based on the presence of SSSI IRZs. The additional SSSI IRZ RAG assessment results for site areas B, H,I, J, and L did not result in a change in the site's overall Stage 3 RAG assessment scores (Red). Whereas, site area A and C were re-assessed from Amber to Red, due to the presence of SSSI IRZs.

Table 4 Stage 3 Overall RAG Assessment of Seven Shortlisted Sites

July 2020 Stage 2 Coarse Screening	Updated Stage 2 RAG score	Protected species	Habitats	GCN	Access Roads and pipelines	July 2020 Stage 3 RAG Score	Overall updated Stage 3 RAG scores	Comment(s)
Amber	Red	Amber	Amber	Amber	Amber	Amber	Red	Stage 3 report categorised site area A as Red due to the presence of SSSI IRZ within the site elements.
Green	Red	Red	Amber	Amber	Amber	Red	Red	Stage 3 report categorised site area B as Red due to reports of protected species within the site elements and the presence of SSSI IRZ.
Green	Red	Amber	Amber	Amber	Amber	Amber	Red	Stage 3 report categorised site area C as Red due to the presence of SSSI IRZs within site elements.
Red	Red	Amber	Amber	Amber	Amber	Red	Red	Stage 3 report categorised site area H, as Red due to the identification of potential impact pathways between the site area and either statutory or non-statutory designated sites during the Stage 2 Coarse Screening report and there were SSSI IRZs present within the site elements.
Red	Red	Red	Amber	Amber	Amber	Red	Red	Stage 3 categorised site area I as Red due to the identification of potential impact pathways between the site area and both statutory or non-statutory designated sites during the Stage 2 Coarse Screening, the presence of SSSI IRZ, and due to reports of protected species within the indicative WWTP boundary.
Green	Red	Red	Amber	Amber	Amber	Red	Red	Stage 3 report categorised Site area J as Red due to reports of protected species within the indicative WWTP boundary and there were SSSI IRZs present within the site elements.
Red	Red	Red	Amber	Amber	Red	Red	Red	Stage 3 report categorised site area L as Red due to the identification of potential impact pathways between the site area and both statutory or non-statutory designated sites during the Stage 2 Coarse Screening, and the presence of

July 2020 Stage 2 Coarse Screening	Updated Stage 2 RAG score	Protected species	Habitats	GCN	Access Roads and pipelines	July 2020 Stage 3 RAG Score	Overall updated Stage 3 RAG scores	Comment(s)
								SSSI IRZ, and due to reports of protected species within the indicative WWTP boundary.

5 Conclusion

5.1 Stage 2 -Course Screening

To ensure completeness of the Stage 2 -Course Screening Report, each of the 14 longlisted site areas were evaluated against SSSI IRZ RAG criteria. The results for each site area were compared to the overall RAG assessment scores on the basis to identify any changes within the overall RAG assessment scores.

There were changes to the Stage 2 overall RAG assessment scores for 10 of the longlisted sites. Overall, the 14 site areas scored Red due to the presence of SSSI IRZ. Four RAG assessment scores for site areas A, D, E, and M were changed from Amber to Red due to the presence of SSSI IRZs and six sites (B,C,F, G, J, and K) RAG assessment scores were changed from Green to Red. There were no changes to site area H, I, L, and N overall RAG scores as these were assessed as Red in the July 2020 Stage 2 report.

The results of the Stage 2 Course screening assessment identified shortlisted sites (A,B,C,H,I, J and L) to be considered for further assessment and site areas (D, E, F, G, K, M and N) were removed from further assessment.

5.2 Stage 3- Fine Screening

The RAG assessment results for the Stage 3 report were reviewed and there were changes to the Stage 3 overall RAG assessment scores for the shortlisted sites. RAG assessment scores for site area A and C were changed from Amber to Red due to the presence of SSSI IRZs. The five site areas (B, H, I, L J) RAG score did not change and remained as Red.

This addendum does not change the conclusions of Stage 2 - Course Screening Report and the Stage 3 – Fine Screening Report decision on the best performing site areas I, J and L, which are referred to in Stage 4 – Final Site Selection as site areas 1, 2 and 3 respectively.

6 References

Mott MacDonald Ltd. (2020a). Cambridge Waste Water Treatment Plant Relocation Project Stage 2 – Course Screening Report.

Mott MacDonald Ltd. (2020b). Cambridge Waste Water Treatment Plant Relocation Project Stage 3 – Fine Screening Report.

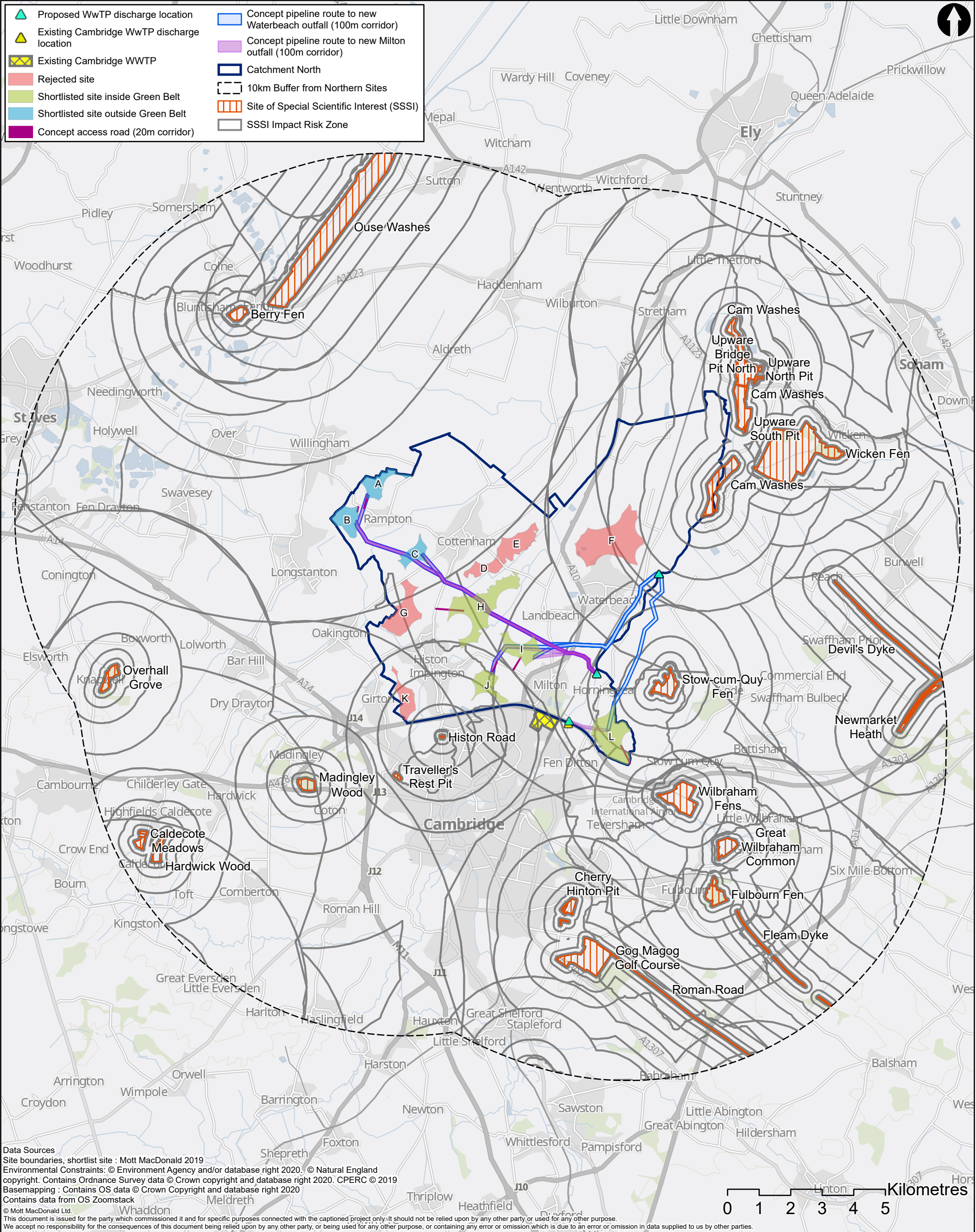
Natural England (2020) Natural England's Impact Risk Zones for Sites of Special Scientific Interest, (For use by Local Planning Authorities to assess planning applications for likely impacts on SSSIs/SACs/SPAs & Ramsar sites and determine when to consult Natural England), User Guidance, Version Magic v3.3. Available online:
https://magic.defra.gov.uk/Metadata_for_magic/SSSI%20IRZ%20User%20Guidance%20MAGIC.pdf

Appendices

A.	Maps	26
----	------	----

A. Maps

A.1 Figure 2: Sites of Special Scientific Interest Impact Risk Zone Location Plan for northern section of Study Area



Data Sources
Site boundaries, shortlist site : Mott MacDonald 2019
Environmental Constraints: © Environment Agency and/or database right 2020. © Natural England copyright. Contains Ordnance Survey data © Crown copyright and database right 2020. CPERC © 2019
Basemapping : Contains OS data © Crown Copyright and database right 2020
Contains data from OS Zoomstack
© Mott MacDonald Ltd.
This document is issued for the party which commissioned it and for specific purposes connected with the captioned project only. It should not be relied upon by any other party or used for any other purpose.
We accept no responsibility for the consequences of this document being relied upon by any other party, or being used for any other purpose, or containing any error or omission which is due to an error or omission in data supplied to us by other parties.

M M MOTT MACDONALD 22 Station Road Cambridge CB1 2JD United Kingdom T +44 (0)20 8774 2000 F +44 (0)20 8681 5706 W mottmac.com	Client anglianwater					Title CWWTPR Project SSSI Impact Risk Zone Map North Region		Drawn	N Critten	
								Checked	J Dye	
								Approved	T Cook	
								Scale at A3 1:110,000		
	Rev Date Drawn Description Ch'k'd App'd					Drawing Number 409071-MMD-00-XX-GIS-Y-0707		Security	Status	Rev
C 04/12/20 NC Final JD TC					STD			PRE	C	

**A.2 Figure 3: Sites of Special Scientific Interest Impact Risk Zone Location
Plan for southern section of Study Area**

