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## **Thames Water Utilities Limited**

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### **Riverside Energy Park Examination – EN010093**

#### **Written Representation on behalf of Thames Water Utilities Limited**

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**20 May 2019**

## 1. **INTRODUCTION**

- 1.1 This submission comprises the written representation of Thames Water Utilities Limited ("TWUL"). It is submitted at Deadline 2 in accordance with the timetable at Annex A of the Examining Authority's Rule 8 letter dated 17 April 2019.
- 1.2 TWUL is the UK's largest water and wastewater services provider. TWUL have 15 million customers and over 6,000 employees. Its service area stretches from the eastern fringes of Gloucestershire and Wiltshire in the west, through London and the Thames Valley, to the western edges of Essex and Kent in the east.
- 1.3 Every day, TWUL supply around 2,600 million litres of tap water to 9 million customers across London and Thames Valley. TWUL remove and treat more than 4 billion litres of sewage for 15 million customers. It also self-generates one fifth of its electricity needs, the equivalent of £30 million a year in energy costs.
- 1.4 TWUL submitted a Relevant Representation to the Examining Authority on 12 February 2019 ("Relevant Representation") registering it as an Interested Party in respect of the Riverside Energy Park ("REP") Examination.
- 1.5 TWUL also submitted a letter at Deadline 1 notifying the Examining Authority of its wish to attend and, where relevant, speak at the Accompanied Site Inspection and June 2019 Hearings.
- 1.6 TWUL's objective in submitting this written representation to the REP Examination is to explain to the Examining Authority the interface between the Riverside Energy Park Project ("the Project") and the Crossness Nature Reserve, Land at Bob Dunn Way and other statutory apparatus, and to outline the importance of the inclusion of measures in the REP Development Consent Order to ensure that its concerns are addressed.

## 2. **CROSSNESS NATURE RESERVE**

### **Proposed Compulsory Acquisition**

- 2.1 TWUL is currently in discussions with Cory Riverside Energy ("the Applicant") about its proposals to compulsorily acquire rights over land owned by TWUL forming part of the Crossness Nature Reserve, and specifically the plots identified in Table 1 of TWUL's Relevant Representation.
- 2.2 As a consequence of these discussions, the Applicant has indicated a commitment that it is no longer seeking to acquire any interest over the Crossness Nature Reserve in order to deliver the Project, and further that no part of the Nature Reserve will be required to deliver the Project.
- 2.3 Subject to this commitment being secured in the draft Development Consent Order ("dDCO") and other updated application documents submitted at Deadline 2 by the

Applicant, a number of TWUL's concerns surrounding the compulsory acquisition of rights over, and any direct consequential impacts on, the Crossness Nature Reserve would be addressed and TWUL does not expand on these further in this submission. In the event that the dDCO and other updated application documents submitted by the Applicant at Deadline 2 does not reflect these discussions, TWUL reserve the right to submit their position on any interest sought to be acquired over the Crossness Nature Reserve at later deadlines.

### **Environmental Impacts**

- 2.4 TWUL is a statutory undertaker for the purposes of the Planning Act 2008 by virtue of it having a water supply and sewerage licence under section 17A of the Water Industry Act 1991.
- 2.5 TWUL is obliged to maintain and enhance the Crossness Nature Reserve pursuant to a section 106 agreement ("S106") dated 21 July 1994. The S106 was entered into in relation to an application for the purposes of a sludge powered generator at the Crossness Sewage Treatment Works to be constructed on the Site, defined in the S106 as the land shown edged red on Plan A to the S106. The S106 binds the Site, the Crossness Nature Reserve and Operational Land, defined as the then operational land at Crossness Sewage Treatment Works shown edged in green on Plan D to the S106. As such, TWUL owns and operates the Crossness Nature Reserve in connection with and as a requirement of its statutory operational activities at the Crossness Sewage Treatment Works, and believes that the impacts of the Project on the Crossness Nature Reserve could prevent it from complying with its obligations in the S106.
- 2.6 Further, TWUL has a statutory duty under section 3 of the Water Industry Act 1991 ("the 1991 Act") in carrying out its functions, to further the conservation and enhancement of natural beauty and the conservation of flora and fauna, and to have regard to the desirability of the public to have freedom of access to places of natural beauty. Related to this duty, the Secretary of State has issued guidance under section 5 of the 1991 Act in the form of a Code of Practice on Conservation Access and Recreation (February 2000). TWUL owns and operates the Crossness Nature Reserve consistent with and for the purposes of complying with these statutory duties.
- 2.7 TWUL has a separate statutory duty under section 40 of the Natural Environment and Rural Communities Act 2006 to, "*have regard so far as is consistent with the proper exercise of [its] functions, to the purposes of conserving biodiversity*".
- 2.8 TWUL believes that the environmental impacts of the Project upon the Crossness Nature Reserve are likely to interfere with its ability to comply with its obligations in the S106 and its statutory duties set out below. TWUL is in discussions with the Applicant about these impacts and the securing of appropriate measures in the dDCO to ensure its concerns are addressed.

## Visual Impacts

- 2.8.1 TWUL has worked hard to engage with the local community for many years, with considerable success. As of 16<sup>th</sup> May 2019, there are 389 members of the Friends of Crossness Nature Reserve scheme of which 154 are LB Bexley residents and 235 live outside of the borough. **Figure 1 at Appendix 1** outlines the boundary of the Crossness Nature Reserve.
- 2.8.2 With so much development proposed on all boundaries of the Crossness Nature Reserve, there is concern that it will create a fragmented, hemmed-in feeling and contribute further to the erosion of the Crossness Nature Reserve and Erith Marshes SINC. Visitors to the Crossness Nature Reserve know that they are coming to an urban nature reserve, but the increasing perception of being in the middle of an industrial estate is, TWUL fear, going to deter visitors and drive away members and volunteers. TWUL considers that the visual impacts of nearby development on the Crossness Nature Reserve could potentially conflict with its obligations secured by the S106 and its statutory duties set out above.
- 2.8.3 TWUL are concerned about the Applicant's proposed stepped roof design for the new incinerator building to be located on Norman Road, between the River Thames and Crossness Nature Reserve. At the consultation phase, the Applicant proposed three design options, one of these being a curved roof design. TWUL considers that the proposal for curved roof buildings is better suited to the local environment and would feel less imposing: there are already curved roof buildings which form distinctive landmarks located in the immediate vicinity of the Crossness Nature Reserve and, with the maximum parameters of the Project being larger than the adjacent existing developments, the curved roof structure would aid the Project to appear visually smaller in mass and scale.
- 2.8.4 Paragraph 9.7.16 of the Environmental Statement, acknowledges that the development would create *'tension between the legibility of the natural open environment and the legibility of the built up enclosed environment'* and that the *'large scale development on what is currently open land, will reduce connectivity between marshland areas and river, and change the character and views in the area.'* TWUL feel that these impacts could have been partially reduced by a curved roof design, with it being more organic and aesthetically-pleasing.
- 2.8.5 Further, the Project cannot be viewed in isolation. Bexley Council has already given consent to the four-storey Data Centre build on the Cory/Borax Fields (to the immediate east of the Crossness Nature Reserve and within the order limits of the Project) ("**the Data Centre**"), which will give rise to additional cumulative visual effects on the open and marshland around the Crossness Nature Reserve. **Figure 2 at Appendix 1** shows the extent of the order limits of the Project and shows the location of the Data Centre build in relation to the Crossness Nature

Reserve. **Figure 3** shows the visual impacts of the Project on the boundary to the Crossness Nature Reserve.

- 2.8.6 Paragraph 9.10.6 of the Environmental Statement cumulative assessment acknowledges that, *'there will be an increased urban developed element nearby, with additional enclosure, potentially increased shading, and less open views due to increased height of buildings on the skyline.'* TWUL consider that the Project would create a moderate/major adverse effect to the openness of Crossness Nature Reserve and Erith Marshes SINC.
- 2.8.7 In conclusion, and for the reasons explained above, TWUL are concerned that the landscape and visual impacts of the Project on the Crossness Nature Reserve may have a detrimental effect on the visitor experience. In compliance with Part 5 of the National Policy Statement EN-1, TWUL would seek the application of appropriate requirements in the dDCO to ensure that the *"Project is designed carefully, taking account of the potential impact on the landscape"*, and that any detrimental effect on the Crossness Nature Reserve is moderated.

### **Visitors/health and well-being**

#### Open Space

- 2.8.8 In combination with the visual impacts discussed above, TWUL is concerned that the cumulative impacts of the proposed nearby developments will have a detrimental impact on the openness of the Crossness Nature Reserve. Specifically, TWUL consider that the loss of open space, residual vistas and an encroached landscape will have a negative effect on the visitor experience.
- 2.8.9 TWUL consider that there are socio-economic mitigation measures that could be delivered by the Applicant to mitigate the loss of open-space impacts on visitor experience. This would include improving views of the bird interest on West Paddock by way of providing an elevated, block-built, bird hide to view the back of the paddock, together with CCTV to deter abuse of infrastructure. The existing bird hide would also benefit from the provision of CCTV.
- 2.8.10 Other potential measures to address impacts could include the provision of power and nest cams on Barn Owl/Kestrel boxes, and the creation of a wildflower meadow. The meadow would serve to add to the visual appearance of the Crossness Nature Reserve and benefit the rare Shrill Carder Bee and scarce Brown-banded Carder Bee present at Crossness as well as other pollinators. The wildflower mix should include Red Clover, Yellow Rattle, Black Horehound, White Dead-nettle, and Comfrey.
- 2.8.11 TWUL consider that it would be reasonable to expect these mitigation measures to be secured through appropriate provisions in the dDCO.

### Other Impacts

- 2.8.12 TWUL believes that impacts arising from noise, dust, and plant movement during construction, as well as increased vehicle movement, and adverse air quality during operation, will deter visitors.
- 2.8.13 In relation to noise, TWUL consider that elevated noise levels during construction (for example from piling rigs) are not conducive to the relative peace and tranquillity that visitors expect when visiting a nature reserve. Many people visit for enrichment of their health and well-being.
- 2.8.14 Paragraph 5.6.10 of the Applicant's Planning Statement (Document 7.1) acknowledges that at construction and decommissioning stages, the main potential air quality effects include dust deposition and associated elevation in PM<sub>10</sub> concentrations, and emissions of NO<sub>x</sub> from road traffic, plant and equipment. During the operational stage, the main potential air quality effects include NO<sub>x</sub> emissions from increased road and river traffic, as well as stack emissions.
- 2.8.15 TWUL is concerned that the operation of the Anaerobic Digestion Plant would have an ecological impact. The Anaerobic Digestion Plant is located within the Order Limits of the Project to the south-west and is thereby closest to the nature reserve. It processes food and green waste and exports outputs by road. The Plant would result in potentially significant localised NO<sub>x</sub> concentrations where the hourly mean NO<sub>2</sub> concentrations are predicted to be above 10% of the assessment level and could affect terrestrial biodiversity receptors in the Crossness Nature Reserve in the immediate vicinity of the Project – for example, changes to habitats as described in 11.9.25 of the Applicant's Environmental Statement, include an increase in dominant grass species with a subsequent reduction in broadleaved species.

### **Proximity to areas of ecological value**

- 2.8.16 There is particular concern to the Project's proximity to the ecologically sensitive West Paddock, shown highlighted on **Figure 4 at Appendix 1**. The proposed main vehicle circulation route on the Project will be alongside Crossness Nature Reserve's West Paddock and Sea Wall Field, and that the anaerobic digestion output collection route, as well as the tipping hall, will also be alongside the more ecologically-sensitive West Paddock where disturbance is a concern.
- 2.8.17 Lapwing are ground-nesting birds that breed on the West Paddock immediately south of the Project. Paragraph 11.9.11 of the Environmental Statement, states that the elevated noise levels during the construction/decommissioning phase

may cause displacement of breeding birds in the vicinity, but suggests that the effects are Not Significant due to an abundance of alternative habitats.

- 2.8.18 However, the West Paddock is the only area within the Crossness Nature Reserve which provides the water levels and vegetation structure for Lapwing to breed. TWUL has worked hard to ensure that the West Paddock provides suitable conditions for breeding waders.
- 2.8.19 TWUL is concerned that the construction/decommissioning phase of the Project could create significant disturbance, and despite the reference to an abundance of alternative habitats, this is not the case for Lapwing at Crossness Nature Reserve or in the immediate vicinity. TWUL considers that the potential loss of breeding Lapwing – a UK red list species of conservation priority – would be of at least Moderate Significance and therefore Significant. Lapwing have bred in 2019, and a pair of Little Ringed Plover (LRP), a ground-nesting wader that is a Schedule 1 species of conservation concern which nests on open shingle-covered habitat, have also been recorded on the West Paddock this Spring (2019). LRPs have previously nested on the consented Data Centre site, as well as on the area identified as Main Temporary Construction Compounds. These areas will be lost to them as breeding habitat. Though uncommon, LRPs have been known to breed on areas of bare mud in wet grassland habitat (such as the Ouse Washes in Norfolk). TWUL have created similar breeding conditions on the West Paddock in the hope of encouraging breeding.
- 2.8.20 Due to the ecological sensitivity of the West Paddock, and the fact that it is used as a night-time roost by waders and wildfowl, TWUL would like to see lighting impacts during construction and operation reduced. In particular, TWUL considers that there should be no broad-spectrum lights (particularly blue-white light) with high UV, no metal halide and mercury and no lighting above the horizontal plane which would otherwise illuminate foraging habitat and contribute to sky-glow. Instead they would prefer to see use of narrow spectrum lights with no UV content, low pressure sodium and warm white LED lighting, and directional downlights to avoid light trespass into the surrounding environment. Lights fitted with movement sensors would further reduce impacts, or use of variable lighting regimes could be used in order to switch off or dim lights for key periods of the night or when human activity is low.

## **Wildlife Impacts**

### Barn Owls

- 2.8.21 TWUL has concerns over negative impacts to wildlife on the adjacent Crossness Nature Reserve. Four artificial Barn Owl nest boxes have been erected in the Crossness area, three of which have been used by breeding Barn Owls and/or

Kestrels (a Schedule 1 and amber-list species respectively). **Figure 5 at Appendix 1** identifies the location of the Barn Owl nest boxes within the Crossness Nature Reserve.

- 2.8.22 The nest box closest to the Project, is mounted onto the east-facing wall of the Environment Agency's Great Breach Pumping Station, and fortunately, has not been used. TWUL consider that this could be because of existing disturbance and lighting impacts from the pumping station and the Riverside Resource Recovery Facility. The increased disturbance and lighting from the proposed Project would likely render this potential nest site unsuitable.
- 2.8.23 The remaining nest boxes are on the wader scrape complex (where a Barn Owl was sighted as roosting/potentially breeding on 11<sup>th</sup> May 2019), the southern end of the Protected Area (an area with restricted access to members) and on Norman Road Field, all of which are shown on **Figure 4 at Appendix 1**. All boxes have been used previously, but the latter pole-mounted box, shown on Norman Road in **Figure 5 at Appendix 1**, is currently occupied. Barn Owls bred in the lower compartment in 2018, whilst Kestrels nested in the upper compartment. Barn Owls are currently roosting in this location (winter 2018, spring 2019), and will likely make a breeding attempt this year.
- 2.8.24 This nest site is in close proximity to both the consented Data Centre on the Borax Fields, and the proposed Main Temporary Construction Compounds on Norman Road. TWUL is concerned that disturbance during construction could potentially deter breeding, and that lighting could have adverse impacts on this nocturnal species (as a Schedule 1 species, it is illegal to disturb breeding Barn Owls while at or building the nest). As Barn Owls are incredibly site faithful and will stay in their home range their whole lives (Barn Owl Trust), it is important to avoid desertion of this nest site at Crossness.
- 2.8.25 In terms of mitigation, TWUL would recommend that no dusk/night time construction works are permitted on the Main Construction Compounds and Data Centre land to minimise direct disturbance and lighting impacts. TWUL would suggest that lighting impacts during construction and operation is reduced by implementing the lighting design as suggested for the West Paddock in paragraph 2.8.20 above.
- 2.8.26 TWUL would suggest the erection of Barn Owl nest boxes on the Project or nearby so that if the Project causes abandonment of a nest box, the owls will have other nesting opportunities available to them. A Barn Owl tower (as seen on the Barn Owl Trust website) would be welcomed at Crossness Nature Reserve or adjacent Crossness Sewage Treatment Works. This is a very small building which provides nesting opportunities for Barn Owls, as well as bats, invertebrates and birds.

- 2.8.27 TWUL would also welcome the creation of tussocky grassland habitat that is favourable to small mammals and therefore provides additional foraging areas for Barn Owls.

#### Bats

- 2.8.28 Bats are present at Crossness Nature Reserve, including the rare Nathusius's Pipistrelle and scarce Leisler's bat. All bat species are of conservation concern and as such, are listed as European Protected Species.
- 2.8.29 According to the Bat Conservation Trust, there is a lot of evidence to suggest that bat commuting and foraging routes are avoided if there is artificial light spill onto these areas, and that lighting can affect the feeding behaviour of bats when away from the roost. Slower flying species (such as *Myotis* spp) avoid illuminated areas and therefore lose foraging grounds if they are lit. Some faster-flying bat species may opportunistically feed under certain streetlamps (insects are frequently attracted to the short wave length light (UV) that some lights emit), but this leaves them in danger of predation. Peregrine Falcons – a species frequently seen at Crossness Nature Reserve and often observed on the chimney of the Riverside Resource Recovery Facility – have been recorded hunting bats in lit cities.
- 2.8.30 The slower flying, broad-winged species, such as Long-eared bats and *Myotis* species (which include Daubenton's bats found at Crossness Nature Reserve) generally avoid external lights, and lighting can be particularly harmful if it illuminates important foraging habitats such as river corridors, woodland edges and hedgerows used by bats.
- 2.8.31 Subsequently, there is a concern that the cumulative lighting impacts of Project, the Main Temporary Construction Compounds and the Data Centre, could have an adverse impact on bat foraging and commuting behaviour.
- 2.8.32 As mentioned as part of the mitigation measures discussed in relation to the West Paddock and Barn Owls above, TWUL would like to ensure that there is no unnecessary lighting, both temporally and spatially. In addition, TWUL would also invite the reduction to the height of light units which would keep light as close to the ground as possible and potentially give bats the chance to fly over the lighting units where it would be darker. There could also be increased spacing between lighting units in order to retain dark refuges between them. Creating light barriers to restrict the amount of light reaching the nature reserve could also be used.

#### Birds

#### Lighting Impacts

- 2.8.33 There are several aspects of changes to bird behaviour attributed to lighting. The phenomenon of robins and other songbirds singing by the light of external lighting installations is thought to be detrimental to birds' survival and disrupt the long-term circadian rhythm that dictates the onset of the breeding season due to the continual lack of sleep. Other UK bird species that are particularly sensitive to artificial lighting are long-eared owls, black-tailed godwit and stone curlew.
- 2.8.34 The Applicant has provided an Outline Lighting Strategy in Chapter 15 of the Environmental Statement which TWUL have no concerns with. However, until TWUL see the final lighting design for both the Project and the Data Centre, TWUL cannot be confident that all impacts have been addressed. Therefore, the mitigation measures suggested in paragraph 2.8.20 above should be considered.

#### Noise Impacts

- 2.8.35 Sudden noise causes a flight response in birds. Construction noise (piling activities, ground excavation, etc.) can cause birds to be alarmed and fly away due to the perceived danger. This could be particularly harmful – for example, causing a parent bird to abandon its nest.
- 2.8.36 In an RPS report on the effects of construction noise on birds, they cite a study investigating construction noise disturbance on a SSSI on the south bank of the Humber, where the University of Leeds observed that Golden Plover and Common Gulls were slightly more sensitive to noise and that 'Lapwings were found to be significantly more sensitive'. Paragraph 11.9.19 of the Environmental Statement does state that none of the predicted noise increases are above 70dB. If accurate, this shouldn't present a problem. However, since Lapwings are more sound-sensitive than some avian species, and as a ground-nesting species breeding immediately south of the proposed development area, this disturbance should be a consideration, especially when viewed cumulatively with the increased predation risks as described in paragraph 2.8.46 below.
- 2.8.37 As part of its embedded mitigation, the Applicant intends on following the standard Code of Construction Practice by restricting core construction hours from 7am – 7pm, using quiet working methods and suitable plant.
- 2.8.38 The Applicant states in paragraph 8.8.1 of the Environmental Statement that the site was chosen in part due to its distance from noise sensitive receptors. In considering noise sensitive receptors, it is clear from the Applicant's Environmental Statement that it is thinking about residential areas and not about wildlife or nature reserve visitors.

- 2.8.39 TWUL considers that the orientation of key components of the Project, for example those forming part of The Energy Recovery Facility, do not assist in reducing noise impacts on the Crossness Nature Reserve. In paragraph 8.8.2 of the Environmental Statement, the Applicant has attempted to place some of the noisier elements, such as the stack, furthest away from the noise sensitive receptors. However, TWUL does not necessarily agree with this approach: TWUL does not consider the stack to be particularly noisy (the stack on their existing facility is on the nature reserve side). To TWUL, the tipping hall and food waste delivery areas would appear to be the noisiest elements. The Applicant is proposing to place the tipping hall and food waste delivery adjacent to the West Paddock.
- 2.8.40 TWUL considers that the orientation of these components of the Project should have been switched so that the stack is to the south and tipping hall and delivery areas to the north/north-east, to ensure that the tipping hall and delivery areas are furthest from the West Paddock.

#### Cumulative Impacts

- 2.8.41 In addition, TWUL considers that the Project has not adequately taken into account the cumulative biodiversity impacts of its proposals with the Data Centre on birds in the Crossness Nature Reserve.
- 2.8.42 The Data Centre is on open-mosaic habitat that support a number of rare and scarce breeding birds. Paragraph 11.10.6 of the Environmental Statement, references '*potential impacts to...common breeding birds from construction of the data centre*' and is concluded to be Not Significant.
- 2.8.43 However, Skylark (a red list species of conservation concern) breeds here annually and at least two pairs appear to be breeding again this year (2019). Ringed Plover (a red list species), Cetti's Warbler (Schedule 1 species) and Linnet (red list species) all breed on the Cory/Borax Fields. These are not common breeding birds.
- 2.8.44 The land immediately to the south of the Data Centre (Norman Road Field), supports breeding Kestrels (amber species of conservation concern) and Barn Owls, also not common breeding birds. Some of these species will be lost to the Data Centre development (Skylark and Ringed Plover have specific habitat requirements and so limit their breeding opportunities in the area) while others (Linnet, Cetti's Warbler) will be impacted but can hopefully use nearby habitat as an alternative.
- 2.8.45 The removal of the invertebrate-rich open mosaic habitat for the Data Centre, and subsequent loss of forage to other fauna, will likely result in an impact on

bird life on the immediately adjacent Crossness Nature Reserve and Erith Marshes SINC.

- 2.8.46 Predation (of eggs and chicks by fox and corvids – crows/magpies) are considered to be amongst the most important predators of wader eggs in the UK, and there is strong evidence for the importance of avian predators, particularly Carrion Crows, as predators of Lapwing clutches. The extreme close proximity of the proposed Project and Data Centre to the ground nesting birds in the West Paddock will provide increased perching opportunities for avian predators, and thus further threaten the success of breeding Lapwing on the paddock, as well as that of other ground-nesting species such as Ringed Plover and Gadwall.
- 2.8.47 Although the loss of this habitat is said to be compensated through the creation of smaller open mosaic within the application boundary and a financial contribution to Environment Bank, it will not eliminate the impacts to species on Crossness Nature Reserve, and there is not enough space within the Project's footprint to provide the same size habitat as that being lost.
- 2.8.48 The Project is not large enough to recreate the equivalent area of open mosaic habitat lost to the Data Centre and Project. Load-bearing limitations of the flood embankment will limit the area of habitat creation proposed as mitigation. Therefore, off-site open mosaic creation is required and it needs to be as close as possible to the Thames foreshore to provide continued breeding habitat for Ringed and Little Ringed Plover: species that will be displaced as a result of the Data Centre.
- 2.8.49 There isn't the scope to create open mosaic habitat on Crossness Nature Reserve as it would result in altering one ecologically-valuable habitat - grazing marsh – for another. TWUL wonders whether there is potential to create open mosaic on the former Thamesview Golf Course (currently owned by Peabody Estates) or on the north section of Norman Road Field (formerly owned by Tilfen Land, now Peabody Estates). TWUL has made these suggestions to the Applicant during recent discussions, and they have taken away those ideas for further exploration.
- 2.8.50 Additionally, in order to compensate for the loss of breeding Skylark and Ringed Plovers on the Data Centre footprint, the inclusion of green and/or brown roofs on the Data Centre could provide continued breeding opportunities for these rare bird species. Green roofs could also be incorporated into the Project's infrastructure, including the waste incinerator building. Biosolar green roofs have been shown to successfully integrate green roofs with solar technologies, and research has shown that Biosolar increases the effectiveness of solar panels, as well as providing the obvious benefit to biodiversity. Dusty Gedge is the

leading UK authority on green roofs, and the Green Infrastructure page of his website ([livingroofs.org](http://livingroofs.org)) includes detailed information and links to relevant case studies and research. Green roofs should be a condition of any planning consent granted for the Project and could help offset the impacts.

#### Shading

- 2.8.51 The Project will create shading on the Crossness Nature Reserve. Increased shading on narrow drainage ditches, such as those in Sea Wall Field and the West Paddock, can reduce species diversity of plant and invertebrate communities within the ditches. This in turn can have a negative impact on Water Voles and on insectivorous bird species.
- 2.8.52 From the solar studies in the Design and Access Statement (Paragraph 6.4.2), it appears that most of Sea Wall Field will be shaded out year round by the Project, but particularly during March and September. The West Paddock and East Paddock will be heavily shaded in winter by the Data Centre, and most of the scarce plant, Dittander (*Lepidium latifolium*) – present in the East Paddock and the Borax/Cory Fields – will be shaded out year-round and could potentially have a detrimental impact on its continued survival at Crossness.
- 2.8.53 Paragraph 11.9.26 of the Environmental Statement provides that changes in the botanical assemblage as a result of shading are said to be minor. However, it is an impact that the nature reserve would only suffer as a direct result of the Project.
- 2.8.54 By way of mitigating the effect of shading on the Crossness Nature Reserve, TWUL consider there is an opportunity to enhance existing habitats, by way of improving the condition of some of the water vole-populated ditches and carrying out wetland enhancements by creating shallow scrapes and pools, and mechanically removing encroaching vegetation.

#### Contamination Risks

- 2.8.55 TWUL are concerned about potential soil and water contamination risks to Crossness Nature Reserve as a result of the Project.
- 2.8.56 Paragraph 13.7.11 of the Environmental Statement identified a High potential for contamination hazard associated with asbestos during the construction phase with 12 of 28 samples containing asbestos. Given that shallow groundwater is present within the Alluvium, typically within 1m of the ground surface, and that this groundwater is likely tidal-influenced, this presents a water contamination risk.

- 2.8.57 Paragraph 13.7.5 of the Environmental Statement also identified the presence of hazardous ground gas concentrations and a Moderate hazard potential in relation to naturally occurring hazardous ground gases at the Project from underlying peat. The same High potential for significant asbestos contamination and hazardous ground gases were similarly identified at the Main Temporary Construction Compound and the consented Data Centre, see paragraph 13.7.26 of the Environmental Statement.
- 2.8.58 In paragraph 4.1.72 of the Non-Technical Summary (Document 6.4), it states that appropriate mitigation measures will be identified and included in the construction of the Proposed Development. TWUL are currently in discussions with the Applicant to agree mitigation methods.

### **National Policy Statement EN-1**

- 2.8.59 The Crossness Nature Reserve is designated as Metropolitan Open Land. Policy 7.17 of the adopted London Plan relates to Metropolitan Open Land (MOL) and sets out that:

#### *Strategic*

*A The Mayor strongly supports the current extent of Metropolitan Open Land (MOL), its extension in appropriate circumstances and its protection from development having an adverse impact on the openness of MOL.*

#### *Planning decisions*

*B The strongest protection should be given to London's Metropolitan Open Land and inappropriate development refused, except in very special circumstances, giving the same level of protection as in the Green Belt. Essential ancillary facilities for appropriate uses will only be acceptable where they maintain the openness of MOL.*

- 2.8.60 Paragraph 5.10.17 of the National Policy Statement EN-1 states that "Very special circumstances will not exist unless the harm by reason of inappropriateness, and any other harm, is outweighed by other considerations. In view of the presumption against inappropriate development, the IPC will attach substantial weight to the harm to the Green Belt when considering any application for such development ...".
- 2.8.61 TWUL consider that the impacts discussed above in relation to the Crossness Nature Reserve should be considered as "any other harm" as a result of the Project on the Crossness Nature Reserve, to which substantial weight should be attached by the Examining Authority.

## **3. LAND AT BOB DUNN WAY**

- 3.1 The Applicant is seeking to compulsorily acquire new rights for the purposes of construction and installation of an electrical connection over the plots identified in the table below and, in relation to the plot referred to in the second row of the table, temporary possession for the use as a temporary construction compound, as well as intrusive maintenance rights.

Sheet of Land Plans	Plot No. as shown on the Land Plans
13 of 16	13/02, 13/04, 13/05, 13/08, 13/09, 13/11, 13/13
13 of 16	13/12

- 3.2 These plots comprise TWUL operational land related to the Creekworks Sewage Pumping Station (South of Bob Dunn Way) together with retained operational land (North of Bob Dunn Way). It is therefore land held for the purposes of its undertaking for the purposes of section 127(1)(a) Planning Act 2008.
- 3.3 Section 94 of the Water Industry Act 1991 places a statutory duty on sewerage undertakers to provide a sewerage system so as to ensure that that area is and continues to be effectively drained.
- 3.4 TWUL has reviewed the Applicant's proposals in respect of this land and is content that the works to be carried out do not prejudice its undertaking, provided that protective provisions securing the protection of its assets are agreed and included in the dDCO. TWUL intends on entering into discussions with the Applicant to secure these protective provisions, see reference below.

#### 4. **STATUTORY APPARATUS**

- 4.1 The dDCO gives the Undertaker powers to carry out street works over streets where TWUL have existing apparatus, including, but not limited to, altering the layout of streets (Article 11) and the ability to break up or open the street; drill, tunnel or bore the street; place apparatus in the street; maintain apparatus in the street; and execute any works required for or incidental to any of these works (Article 10). Article 32 provides related powers to acquire TWUL's rights and to relocate apparatus.
- 4.2 TWUL does not consider that the protective provisions in favour of Statutory Undertakers (including TWUL) at Part 2 of Schedule 10 of the dDCO extend to cover TWUL's concerns. TWUL considers that it would be reasonable to require bespoke protective provisions to TWUL which would ensure an agreement is entered into with the Applicant and TWUL prior to works being undertaken by the Applicant in respect of any apparatus and the appropriate consents are obtained prior to the alteration, extension, removal or relocation of such apparatus.

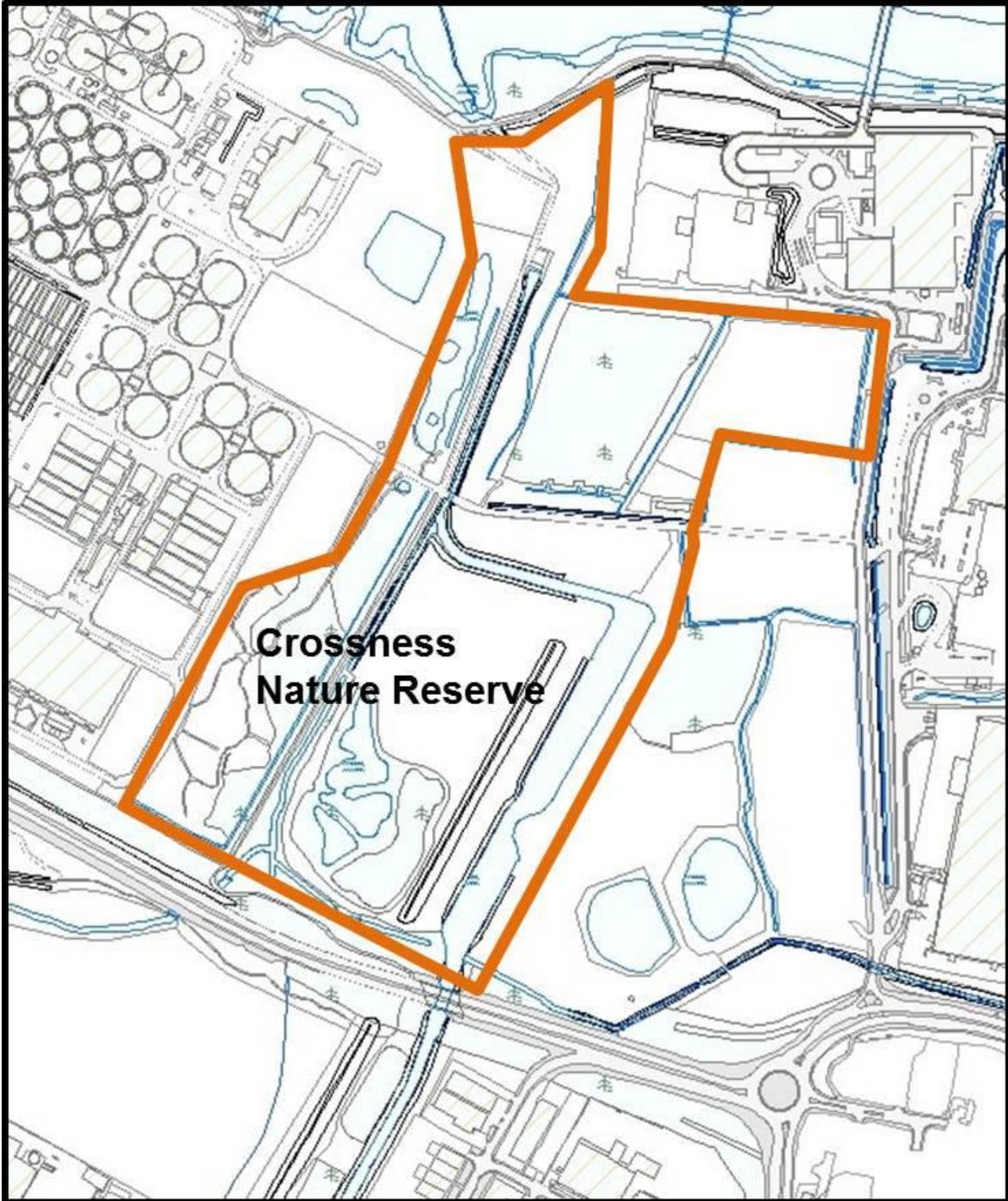
- 4.3 Given the property rights that TWUL retains over streets where it has existing apparatus, TWUL will enter into discussions with the Applicant to promote bespoke suitable protective provisions for TWUL to enable continued use of its powers over these streets now and in the future in an unfettered matter.
- 4.4 TWUL will provide the Examining Authority with an update at the Issue Specific Hearing on the draft Development Consent Order scheduled for 6 June 2019.
5. **Agreement between the Applicant and TWUL**
- 5.1 TWUL is working with the Applicant outside of the Examination process towards concluding an agreement to satisfactorily address its concerns in relation to the matters discussed in this Written Representation.
- 5.2 TWUL will update the Examining Authority with the progress of agreement of these matters throughout the Examination.

**Eversheds Sutherland (International) LLP**

## Appendix 1

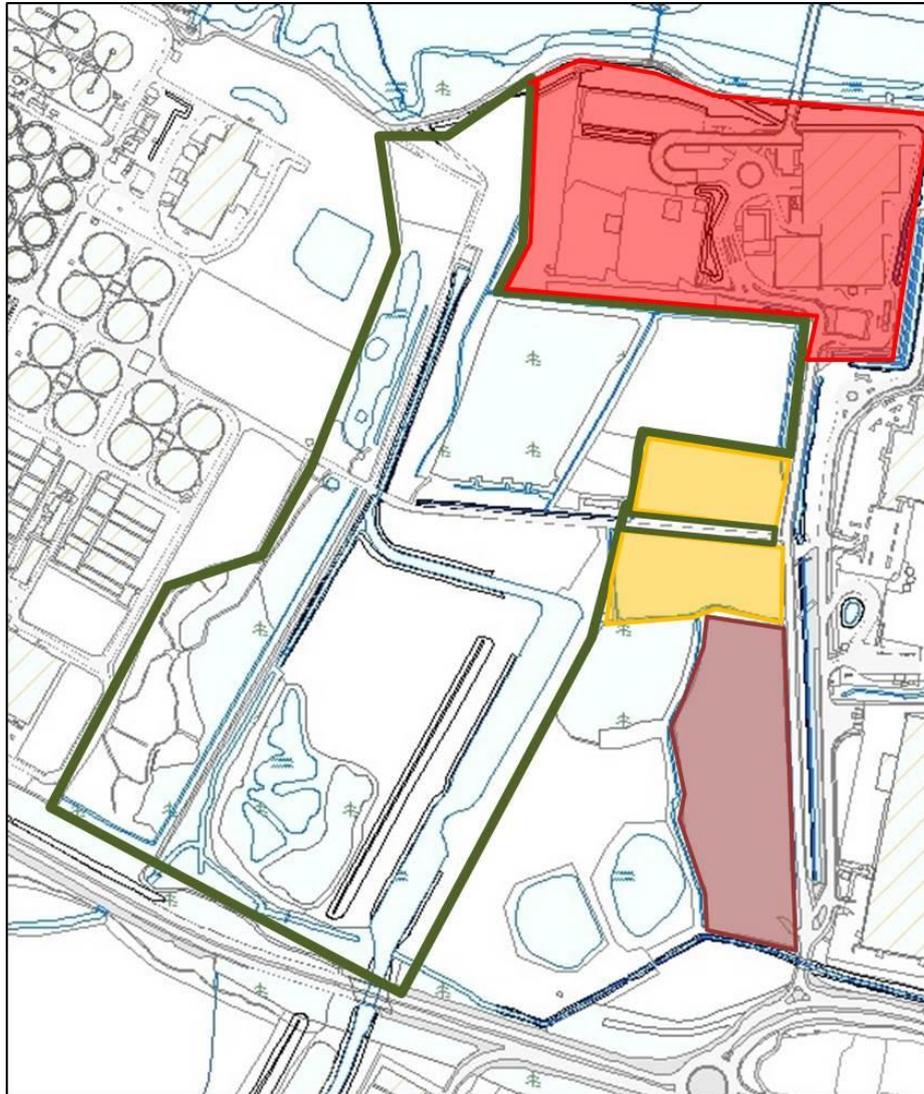
**Figure 1**

Crossness Nature Reserve boundary



**Figure 2**

Order Limits of the Project and location of the Data Centre build in relation to the Crossness Nature Reserve



-  Crossness Nature Reserve site boundary
-  Cory's proposed REP and existing RRRL facility
-  Cory's consented Data Centres
-  Cory's proposed Main Temporary Construction Compounds

**Figure 3**

Visual Impacts of Project on the boundary of the Crossness Nature Reserve



**Figure 4**

Schematic of Crossness Nature Reserve highlighting the West Paddock



**Site Access**

-  Public Footpath
-  Path in Protected Area
-  Public Footpath & Cycleway
-  Protected Area
-  Stables

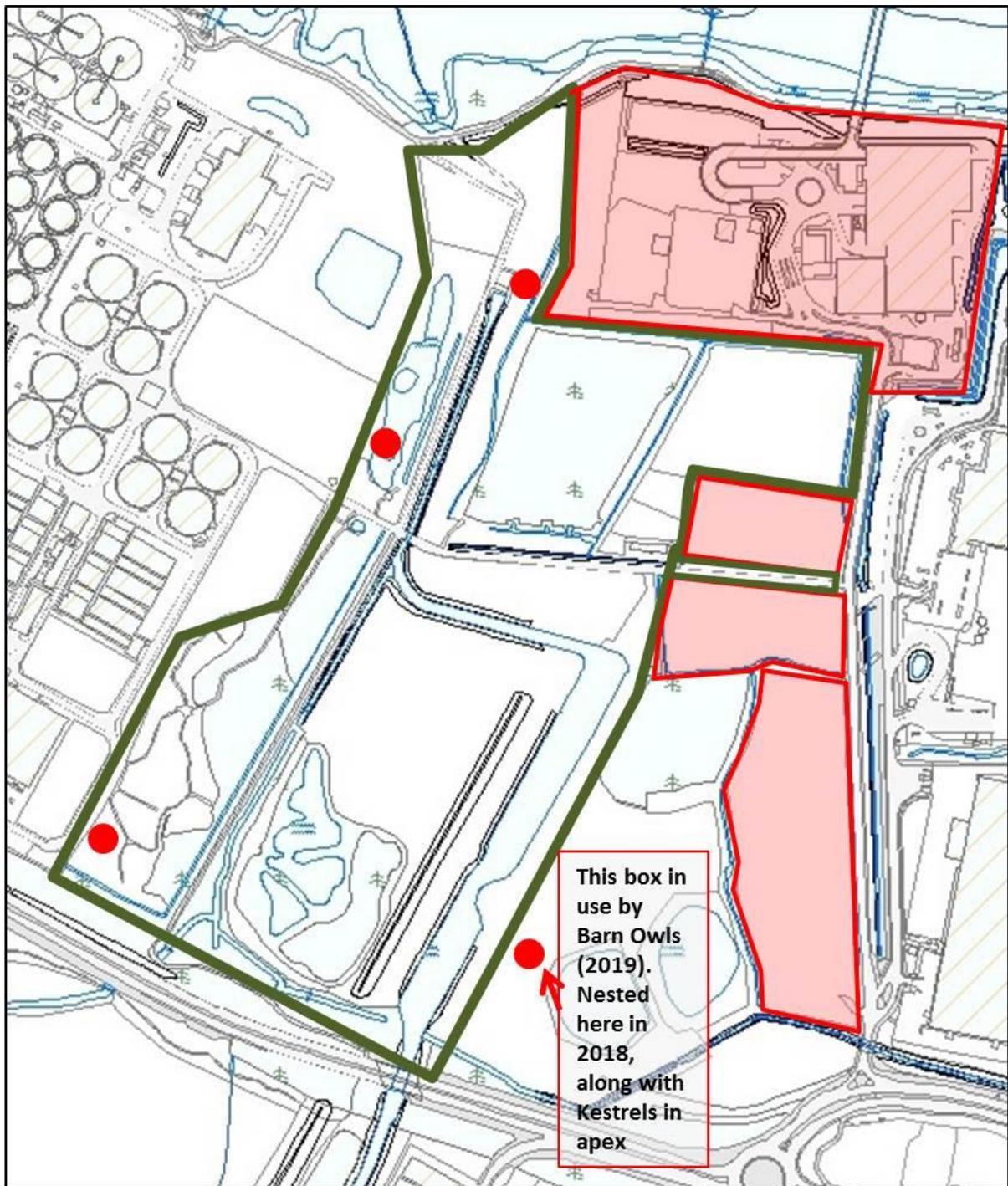
**Site Features**

-  Waterbodies
-  Trees/Scrub
-  Reedbed
-  Boardwalk
-  Wind Pump

-  Bird Hide
-  Bat Cave
-  Sand Martin Wall
-  Viewing Screens
-  Kissing Gates

**Figure 5**

Location of Barn Owl nest boxes



 Cory's proposed development areas

 Location of Barn Owl/Kestrel nest boxes