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The Planning Inspectorate  
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30<sup>th</sup> April 2018

Dear Sir/Madam

**RE: Application by Port of Tilbury London Limited for an Order Granting Development Consent for a Proposed Port Terminal at the Former Tilbury Power Station ('Tilbury2')**

Buglife maintains its previous positions outlined in the comments dated 16<sup>th</sup> March 2018, but would like to submit further comments to clarify its position in response to the Tilbury 2 Document Ref PoTLL/T2/EX/60 document, titled 'Response to the written representations, local impact reports and interested parties' responses to first written questions'.

The comments below specifically relate to Port of Tilbury London Ltd (PoTLL) responses in the document highlighted above, with comments grouped by the 'Source Reference' listed in section 1.2. Biodiversity and 1.11 Habitats Regulation Assessment for ease of reference:

- **Source Reference: Summary (pg. 31)**

Buglife maintain the position that the ES fails to accurately assess the extent of the Open mosaic habitat on previously developed land (OMHPDL), a habitat of conservation priority listed under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. OMHPDL is widely acknowledged as a diverse and difficult to define habitat, as reflected in the Priority Habitat criteria and addressed later in this document.

- **Source Reference: The presence of an outstanding invertebrate assemblage of SSSI quality (pg. 31) & Loss of Local Wildlife Sites and potential SSSI habitat (pg.32)**

PoTLL has requested evidence to support Buglife's suggestion that the site "*one of the most important in the Thames Estuary area*" or "*one of the most valuable sites yet surveyed*", stating that, "*No statistical comparison with other Thames Estuary brownfields is offered.*" The 2016 and 2017 surveys undertaken by Colin Plant Associates and Mark Telfer jointly recorded 1,397 species.

It is important to note that Buglife is not a record holding organisation, but to support its position, the data below has been collated from publicly available surveys submitted with planning applications, Buglife funded survey reports and reports by the respected Essex entomologist Peter Harvey, who is President of the Essex Field Club and has undertaken entomological surveys at a significant proportion of the region's best brownfield sites, including Tilbury Power Station, Canvey Wick Site of Special Scientific Interest (SSSI) and West Thurrock Marshes SSSI. The data is presented here with his permission. Buglife are aware that Natural England are undertaking additional comparison and suggest that they may be better positioned to provide statistical comparison. The data below demonstrates significant variation in survey effort, but is intended to frame the site within the context of known brownfield sites where data is available in South Essex.

Site name	No. of Species	Red Data Book species	Nationally Scarce species	Local species
Canvey Wick SSSI, Canvey	c.1,400	c.30	c.110	c.330
Tilbury Power Station	1,397	29	121	Unknown
West Thurrock Marshes SSSI/Oliver Road Lagoons LoWS	1,243	35	116	352
Orsett East Quarry/Orsett Camp Local Wildlife Site	1,073	24	97	296
Chafford Gorges Nature Park (2014 surveys)	816	20	58	197
Buckingham Hill Pit Local Wildlife Site	659	Unknown	Unknown	Unknown
Vopak Terminal, Thurrock	597	15	44	134
Thurrock Thameside Nature Park (Essex Wildlife Trust)	510	11	49	114
Mill Wood Pit, Chafford Hundred	480	16	56	122
Purfleet Centre, Purfleet	476	6	20	45
Untidy Industries, Pitsea	590	9	41	111
Chemical Industries	356	6	33	104
Gaylor Rd/Thames Distribution Park	321	2	13	35
Goshems Farm, Thurrock	191	2	16	48
Thames Haven, Canvey Island	154	6	11	33

*Table of invertebrate survey data for a selection of South Essex sites*

- The above table identifies the application site as having comparable species records, including rare and threatened species to Canvey Wick and West Thurrock Marshes, both widely acknowledged as being nationally important brownfield sites representing some of the best invertebrate habitat in the Thames Gateway. Indeed both Canvey Wick and West Thurrock Marshes are acknowledged widely as of national significance, with SSSI designations and having received significant survey effort comparable with that of Tilbury Power Station (e.g. 2-3 survey seasons). It is important to note that additional survey data may be missing from the above data, however, although equally the Tilbury Power Station species list excludes the 2008 survey data. The PoTLL response rightly states that *“It is not clear whether any allowance is made for uneven recording effort in the context that the Tilbury 2 site has been subject to three rounds of intensive recording activity since 2007 while many other sites identified in the Thames Gateway area have had very little recording effort”*. It is of course difficult to compare survey effort and this would be a lengthy exercise, complicated by changes in conservation status as a result of status reviews, making straight forward comparison without access to the full raw data difficult, but regardless, the application site is demonstrably comparable with the best known brownfield sites which have been statutorily designated for their interest. Many of the sites above are of course significantly less surveyed than Tilbury Power Station, but as Mark Telfer states in the 2017 invertebrate survey report of the application site *“the simple fact that such a large number of Key Species (159) has been found at Tilbury2, including a large number (31) of Britain’s rarest and most threatened species, is indicative of a site of national importance.”* In this context, PoTLL should consider that their own ecological submissions provide ample evidence of the site’s value.
- Comparison with other sites is also complicated by variation in survey period, frequency of visits, the taxonomic coverage of surveys, survey methodologies (e.g pitfall traps, pan traps, malaise traps or light traps), but this is an issue across all invertebrate surveys so should not be used in any way to weaken the strength of the species list recorded. Comparability may be best delivered by undertaking a Species Quality Index assessment for the data discussed, a method which attributes a rarity value to each species and then divides by the total number of species to provide a comparable value.
- Finally, it should be the responsibility of the applicant to prove that the site is not one of the most important in the Thames Gateway. The site has been identified as nationally important by Buglife, both Mark Telfer & Colin Plant Associates who were contracted to survey the site, and Natural England. In addition, there has been statistical evidence supporting this view through the ISIS and Pantheon outputs which assess the value and status of key invertebrate assemblages. Buglife’s position is also supported by the Royal Society for the Protection of Birds, Bumblebee Conservation Trust, Essex Wildlife Trust and Essex Field Club. Currently, only PoTLL appear to challenge the widely held opinion that the site is nationally important in its own right.
- Source Reference: Loss of open mosaic habitat on previously developed land (pg. 32)**  
 Buglife maintains the stance that the entire application site needs to be considered as a wide mosaic of high quality for invertebrates, rather than a series of sub-sites and compartments, and that the invertebrate interest must be considered beyond the simple boundaries of the already recognised Lytag Local Wildlife Site (LoWS).  
 PoTLL has stated that *“If Buglife are putting forward the suggestion that the ecological status of the infrastructure corridor is of greater than national significance, that is not a position supported by NE and moreover it is offered without any evidential basis.”* Buglife’s reference to the infrastructure corridor was not that it is of greater than national significance, but served to highlight that all parts

of the site need to be considered within the overall importance of the site, not merely the Lytag Local Wildlife Site (LoWS). This view is supported by Thurrock Council's recent Local Wildlife Site review which extends the LoWS and renames it the Tilbury Power Station LoWS, as addressed during the April 'Issue Specific Hearing on Planning Policy and Environmental Matters'. As the applicants own commissioned surveys by Mark Telfer state, "The Infrastructure Corridor itself is of middle-ranking importance compared to the other sub-sites but still probably of national importance in its own right." Buglife suggests that this should form the "evidential basis" which the applicant suggests is missing from Buglife's claim that the infrastructure corridor should also be considered as important. The value of the entire site is reflected here, as even the "middle-ranking" sub-site is considered of national importance in its own right, let alone when considering its value in concert with the other survey compartments.

- Buglife accept that the limited areas of plantation woodland are themselves of significantly less interest than the rest of the site, as was the rationale for the area to be removed from the LoWS boundary at one stage, but are still of the opinion that the resource of OMHPDL has been underestimated significantly due to individual habitat units have been identified in the Phase 1 assessment rather than identifying them as part of the wider OMHPDL mosaic. It is worth noting that the UK Biodiversity Action Plan Priority Habitat Descriptions entry for OMHPDL itself starts with the suggestion that, "the guidance cannot cover all potential scenarios and an element of expert judgement is therefore needed" and that "rough vegetation or cover" may be required by invertebrates, such as the areas of unmanaged neutral grassland which although species-poor can still serve a valuable function within the habitat mosaic. The PoTLL responses also suggest that these areas "being grass-dominated and herb poor, offers little in the way of supporting habitat", however it is important to note that the sheer extent of unmanaged grassland habitat within the site mosaic does remain a valuable feature within the site-wide interest.
- **Source Reference: Incorrect assessment of current site status and quality (pg.33)**

Buglife do not deny that some successional processes are taking place across the site as is expected on all wildlife habitats, be they SSSI/National Nature Reserve heathland, chalk downland, wetland, etc, however, of crucial note is that the invertebrate assemblage itself remains unaffected which PoTLL repeatedly overlook. This is stated with confidence thanks to the 2016 invertebrate survey report from Colin Plant Associates which explicitly states, "More detailed comparison with the results of a survey conducted on the Lytag Brownfield nine years ago shows that whilst there are small changes to the actual composition of the species list, the overall inventory is more or less unchanged". The Colin Plant Associates report goes on to state that, "There is very little difference, and perhaps none of ecological consequence, between the 2008 and 2016 species lists and as a consequence, identical summary conclusions can be drawn from both works." Central to the ongoing conversations about site quality is the issue of the outstanding invertebrate assemblage, which is of course tied to the habitat features available on site. Colin Plant Associates confirm that there are no differences of "ecological consequence" between the survey periods, so far from being a site in decline in the absence of management, the application site has retained its invertebrate interest. There is therefore little to suggest that the site is in decline in the manner which the applicant and ES propose. Buglife also wholeheartedly reject the suggestion that as "no mechanism to secure or enforce the management interventions that Buglife see as appropriate", the loss of the site can be justified.
- Vegetation changes across part of the site are to be expected over time as agreed by all parties, however, the linking changes in soil chemistry from a single sample to site-wide vegetation change

remains extremely speculative. As already discussed, the habitats on site have retained their invertebrate interest, suggesting a robust invertebrate population.

- PoTLL go on to query Buglife’s proposal that disturbance management be used on site while objecting to the translocation of materials. Firstly, Buglife have been clear from the very beginning should the application be successful and all habitat works are to be off-site that the re-use and translocation of site materials should be undertaken without question, but that this remains the last resort in the worst case scenario that the site is entirely lost. The rotational disturbance and exposure of underlying aggregates across a site is of a completely different level of magnitude to uprooting the entire functioning ecosystem and depositing it on a donor site which may or may not be able to support the interest. Translocations do not transpose the varied hydrology, compaction, soil character, topography and localised microclimate variation that are currently found on the site. In contrast, localised disturbance/exposure work as suggested by Buglife in rotation effectively diversifies a mosaic over time and retains small-scale early successional features, building on the existing high quality habitats in place. The two are not an “analogous activity” as suggested by PoTLL’s response, which demonstrates a lack of understanding of brownfield ecological processes underlying the site’s value.

- **Source Reference: Unclear and untested mitigation plans and unacceptable net losses of biodiversity and habitat (pg. 33-35)**

At the time of writing, the most up-to-date iteration of the Ecological Mitigation and Compensation Plan (EMCP), Tilbury Doc Ref: PoTLL/T2/EX/59, which still lacks any detail concerning:

- Receptor site location for brownfield habitat recreation.
- A detailed management plan outlining the extend of habitat features, details over creation methodologies.
- Attempting to create the full suite of microhabitats associated with site’s invertebrate interest.
- Details on proposed management techniques.
- Buglife still challenge PoTLL’s suggestion that brownfields can be recreated due to *“anthropogenic processes that cause such sites to come about, and the restricted timescales over which such interest develops in the wake of cessation of industry.”* Brownfields contain a fine-scale mosaic of compaction, hydrology, topography and profile of soil chemistries that develop over many years as a result of cycles of disturbance and abandonment. Such subtleties have not yet been demonstrably successfully created at a large scale as was made evident during April’s ‘Issue Specific Hearing on Planning Policy and Environmental Matters’. The applicant’s suggestion that positive short-term monitoring of small-scale habitat creation of PFA habitats suggests a nationally important invertebrate site can be recreated to support a diverse assemblage with multiple habitat requirements and specific niches is completely inappropriate. No evidence has yet been provided that such large-scale habitat creation can mimic the habitats found across the application site, leaving very significant unknowns and a high level of risk.
- Micro-scale variation which provides interest can be as localised as small scrapes or exposures of aggregates of only a few metres within a site and are difficult to measure and identify let alone effectively recreate. The complete loss of a nationally important invertebrate site with the sole biodiversity compensation or mitigation being entirely experimental and unproven is unacceptable. Such an approach should not be considered due to the site being a brownfield, in the same way that such an approach would be deemed inappropriate for any other habitat type. In addition, the timescales are much longer than PoTLL’s response suggests, with many sites taking ten to twenty

years to reach maturity and support a diverse invertebrate assemblage. Much of the interest in the application site would have begun to develop during the active phase of the site's industrial past, while the habitats until their survey in 2008 still had over 20 years to develop. The current plan for proposed off-site compensation is only a 25 year commitment- by this time the site would only just be reaching the age of many areas of the application site, leaving a significant time lag. Of course at this stage it is also likely that without any commitment to manage the site, the compensation land itself would then be lost to redevelopment or alternative uses. Currently, should the off-site compensation site even be successful in recreating the interest of Tilbury 2, the off-site compensation could be completely lost in only 25 years, leaving a significant net biodiversity loss equivalent to entire site. This is an unacceptable outcome for a site of national importance.

- Buglife completely reject the comment by PotLL that in reference to the proposed off-site compensation site *“that Buglife are on record as having described the same piece of land as suitable for invertebrate habitat creation (in: “Greater Thames Marshes Nature Improvement Area Objective 2.1.1 – Thames Terrace Invertebrates: A Masterplan for Landscape Scale Conservation in the Greater Thames Marshes”.* None of the sites assessed in the Greater Thames Marshes Nature Improvement Area (NIA) as part of Buglife’s work were arable sites at all, leaving it unclear what site is being referenced. Regardless, Buglife’s engagement with the NIA’s was very limited and was not a particularly high reaching or aspirational piece of work, with the main work areas being:
  - Baseline Habitat Assessments and management recommendations. This was based on very narrow site selection criteria led by Essex County Council, namely that sites were local authority or conservation organisation owned. The proposals were also identified as being those which would improve sites for invertebrates through some form of habitat creation, a relatively modest aim, as opposed to creating habitat intended to offset a nationally significant brownfield habitat. The scope of the work proposals was necessarily aimed at low level improvements across the wider landscape as opposed to large-scale habitat creation.
  - Biodiversity Offsetting pilot- habitat creation proposals for a former landfill site were proposed, with no other sites potentially available in its place. Recommendations were made to maximise its value for wildlife to use funds remaining available from S.106 monies for a development on grazing marsh with a small brownfield component completed ten years previously. The money had to be spent within a limit time period and any plans were created long after the site had been lost. The proposed site was considered far from ideal but despite land searches throughout Thurrock by the project lead, they were unable to find any alternative sites. In this instance, Buglife were working with partners to try to maximise the invertebrate benefits that could be realised through a small area, rather than supporting the technique as best practice or recreating anything approaching wildlife-rich brownfield habitats. Again, the context is far from that of designing a scheme to mitigate/compensate for the loss of a nationally important brownfield site.
  - Training courses in bumblebee identification

To infer from a list of suggestions to enhance existing sites, developed with partners under very strict site selection criteria, that one of the UK’s most significant brownfield site’s habitats can be recreated is both disingenuous and a misinterpretation of the NIA work entirely. None of the work above in any way support PotLL’s statement that, *“this suggests that Buglife recognise that provided the issues of soil fertility are addressed there is no inherent unsuitability in the use of arable land for invertebrate habitat creation”.* PotLL’s claim is without any foundation and Buglife maintain the stance that an arable field is an inappropriate starting point for any off-site habitat

creation. As a final note, the final NIA invertebrate masterplan documents were developed without Buglife's input, which consisted of reports which were then re-packaged by the NIA team, including the addition of significant text, which Buglife were unable to review or input on. Regardless, the document itself contains no materials in support of PoTLL's spurious claim.

- **Support Reference: Cumulative impacts of the proposals on invertebrate metapopulations and habitat connectivity (pg. 35)**

Buglife maintain the stance that a Cumulative Impact Assessment is relevant in this instance due to the extent of ongoing development in Thurrock, including the Nationally Significant Infrastructure Projects (NSIPs) related to the Lower Thames Crossing and Tilbury Energy Centre. This is of great importance considering the significant losses of brownfield habitat which have taken place in the Thames Estuary and the long-term threat to the region's nationally significant invertebrate populations. Buglife's concerns are as outlined in the original March comments, but Buglife are happy for Natural England to lead on this area of discussion.

- **Support Reference: Additional support for Buglife's stance (pg. 35-36)**

In addition to the 74,300 strong petition, Buglife's objection also benefits from the support of the Royal Society for the Protection of Birds (RSPB), Essex Wildlife Trust, Bumblebee Conservation Trust and Essex Field Club. In total this represents the interest of a significant proportion of the conservation community active in the region and strong national support for the refusal of the application.

- **Support Reference: Planning policy position (pg.36)**

PoTLL claim the project will deliver short-term losses to OMHPDL and nationally significant invertebrate assemblages and that *"every effort will be made to fully compensate for those losses in the medium or long-term through a combination of on and off-site mitigation and compensation"*. Without a detailed EMCP, a site identified, a full management plan in place, such claims simply cannot be made. The full mitigation and compensation plans must be available for consideration prior to any decision being made. In its present state the application does not represent sustainable development and is expected to lead to significant losses of biodiversity. Finally, as all proposals are off-site compensation only, and likely to only be in place for a 25 year period, it is simply impossible to claim that the development will be compensated for in the long-term. Regardless of the suitability of the habitat creation methods, the simple fact that all of the meaningful invertebrate aspects of the EMCP will be off-site and most likely receive no protection in only 25 year's time and be open to destruction, is thoroughly inappropriate for the loss of a SSSI quality habitat.

- **Additional comments**

Having reviewed the recordings of April's 'Issue Specific Hearing on Planning Policy and Environmental Matters', Buglife would also like to make a number of further stand alone points:

- Steve Plumb, representing Thurrock Council, indicated that the recent review of Thurrock's Local Wildlife Sites had resulted in the LoWS being enlarged from the Lytag portion of the site to a greater extent, leading to its change in name to Tilbury Power Station LoWS. Buglife were unaware of this as the ES fails to acknowledge this throughout. This independent assessment supports

Buglife's consistent stance that the site as a whole be considered as a single large unit rather than individual compartments and that the site's interest goes beyond the Lytag area itself but the wider mosaic of habitats supported at Tilbury Power Station.

- Buglife strongly disputes the notion that the site is not nationally important in its own right. Buglife agree that the site does of course, due to its size and position in the landscape act as host to part of a nationally important invertebrate populations, but the overwhelming invertebrate survey data alone and the uniqueness of the habitats and their composition, and the outcomes of assemblage assessments by both the site's invertebrate surveyors (documented in the two submitted invertebrate reports) and Natural England's specialists.
- PoTLL's ecologists refer to the Buglife 'All of a Buzz in the Thames Gateway' work undertaken between 2005 and 2008, as part of their wider suggestion that the site is comparable to other brownfield sites. This work has been strongly misrepresented during the hearings and Buglife wish to make the following clarifications:
  - It was suggested that over 50% of brownfield were of very high potential. The actual figure was 41% were either of medium or high potential, not very high.
  - The assessment of Medium or High Potential suggests the potential to support rare or scarce species as part of a regionally or local important assemblage. This is very different from a site of national importance with one of the largest invertebrate species lists recorded on a brownfield site.
  - Buglife reviewed the 198 sites identified in 2013 '*The State of Brownfields in the Thames Gateway*', a publicly accessible document. The outcome was that of the 198 medium or high potential sites, 51% had been identified as either lost, destroyed, damaged or had an outstanding planning permission which would remove the site's interest, within only a six-year period.
  - The above two reports demonstrate sharply the ongoing degradation of habitats in the Thames Gateway, with a significant amount of brownfield habitat having already been lost, and making the most valuable site, such as Tilbury Power Station, even more important.
- PoTLL have suggested that they do not consider the approval and agreement of the off-site mitigation and brownfield receptor site to be essential before a decision can be made. Buglife strongly believe that the full details of the off-site mitigation scheme must be available prior to a decision to be made. Simply agreeing criteria for a receptor site with Natural England is unacceptable as the mitigation for a nationally important, SSSI-quality assemblage. Buglife would like to see not only confirmation of a site being secured, but a detailed mitigation plan which includes:
  - Maps and diagrams of the proposed habitat scheme.
  - Information on habitat creation methodologies, including evidence of how the applicant intends to provide the diverse mosaic of features, substrates, habitats, hydrology and topography.
  - An assessment of the site's invertebrate assemblage, ensuring that the requirements of all specific assemblages are fulfilled by the scheme.
  - A management plan to ensure that is appropriate for the Tilbury Power Station's interest.

Without the above information, no informed Environmental Impact Assessment can be undertaken, nor can any reassurance that the off-site mitigation is suitable be made.

- Finally, Buglife are disappointed that it has not been provided with any further information regarding progress around the off-site mitigation. Buglife acknowledges the consultation with Natural England, as the relevant statutory body, but remains disappointed that the applicant has not provided us with any more up-to-date information on progress around the mitigation, regardless of sensitivities about the site.

In summary, Buglife maintains its position as outlined on 16<sup>th</sup> March 2018 and remains opposed to the application.

Please do get in touch if I can be of any further assistance

Yours Sincerely

A solid black rectangular box used to redact the signature of Jamie Robins.

Jamie Robins

Projects Manager