

Revisions

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Executive Summary

The Biodiversity Impact Assessment has been prepared using the Department for the Environment Farming and Rural Affairs (DEFRA) Biodiversity Metric 2.0 to measure the net biodiversity impacts of the Proposed Development, in terms of habitat loss, and to ascertain the potential to deliver a net gain in Habitat Units taking into consideration the proposed suite of on-site habitat creation and enhancement measures, and additional off-site measures.

The assessment has demonstrated that, in the absence of off-site mitigation, the Proposed Development will result in the net loss of -1211.08 Habitat Units and would only be capable of achieving a net gain in Habitat Units through the provision of significant off-site compensation.

As the Proposed Development will also result in significant residual effects on a range of important ecological features, a range of off-site habitat creation and enhancement measures are proposed to compensate for these effects. These measures will generate additional Habitat Units, albeit as an incidental result rather than this being the primary objective.

The Applicant is still in the process of acquiring the full extent of off-site land required to compensate for on-site impacts, however a large proportion of this land has now been secured. The information on existing and proposed habitats within the two compensation sites that have been secured has been added to the DEFRA Biodiversity Metric. This shows that net gain Habitat Units delivered across the two off-site compensation sites exceeds the net loss which is predicted on-site. The total net unit change is therefore positive i.e. +456.10 (13.61%).

Additional off-site land is being acquired to fulfil all the necessary compensation objectives. This land will be subject to further habitat creation and/or enhancement and would therefore result in an even greater net increase in Habitat Units overall. However, national policy and guidance makes it clear that, unless measures provide a significant benefit beyond that required to compensate for negative effects, this cannot be described as biodiversity net gain.

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Chapter One ◆ INTRODUCTION

- 1.1. This Biodiversity Impact Assessment (BIA) has been prepared by The Environmental Dimension Partnership Ltd (EDP) on behalf of London Resort Company Holdings Limited (hereafter referred to as 'the Applicant'). This report presents the BIA calculations (enclosed in full as Annex 1.0) of the proposed London Resort (hereafter referred to as 'the Proposed Development', 'the Project Site', or the 'Kent Project Site'/'Essex Project Site' dependent on context). The extents of the Project Site are displayed on the Illustrative Masterplan (Document Reference 6.3.3.1).
- 1.2. The BIA has been undertaken using DEFRA Biodiversity Metric 2.0 (as updated 19 December 2019)¹. The assessment has been undertaken by a suitably experienced ecological consultant and reviewed by a member of the Chartered Institute of Ecology and Environmental Management (CIEEM).
- 1.3. The BIA has been undertaken to objectively measure the net biodiversity impacts of the Proposed Development, in line with the Applicant's aspirations to achieve a net gain in biodiversity units.
- 1.4. The assessment has been produced to inform and supplement the Ecological Impact Assessment (EIA), included within the *Terrestrial and Freshwater Ecology and Biodiversity* chapter of the Environmental Statement (ES) (Document Reference 6.1.12).
- 1.5. As set out within the Ecology ES Chapter, the Proposed Development will result in significant residual effects on a range of important ecological features, most notably Swanscombe Peninsula Site of Special Scientific Interest (SSSI). Measures are proposed to compensate for these effects and these measures are likely to result incidentally in a net gain in Habitat Units in comparison with the pre-development baseline. However, national policy and guidance makes it clear that, unless measures provide a significant benefit beyond that required to compensate for negative effects, this cannot be described as biodiversity net gain.

¹ Available at

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Chapter Two ◆ METHODOLOGY

ON-SITE HABITATS

- 2.1 The ‘baseline’ assessment of on-site habitats has been undertaken using the Phase 1 Habitat survey and botanical survey information included within the Ecology Baseline Report (Document Reference 6.2.12.1).
- 2.2 The ‘proposed’ habitat areas on-site are derived from the Illustrative Landscape Masterplan (Document Reference 6.3.11.15), enclosed within the Landscape Strategy (Document Reference 6.2.11.7), taking into consideration any supporting design information including the Car Parking Provision and Illustrative Masterplan (Document Reference 6.3.3.1).
- 2.3 Geographic Information System (GIS) software has been used to accurately calculate areas of existing ‘baseline’ habitats on-site as shown on the *Biodiversity Impact Assessment – Existing Habitats* (Document Reference 6.3.12.42), and habitat areas to be retained, retained and enhanced, or newly created on-site as shown on the *Biodiversity Impact Assessment – Proposed Habitats* (Document Reference 6.3.12.43). It should be noted that the mapping used to inform the calculations is illustrative and demonstrates what the likely impacts are based on the design information submitted along with the application for development consent. Therefore, whilst these measurements are considered accurate in the context of existing information submitted as part of the application, they may be subject to change at the detailed design stage, particularly with regards to the Principal Development. The BIA will be updated in line with any design changes that may emerge, and resubmitted as an addendum to the ES.
- 2.4 No linear assessment has been undertaken due to the absence of linear hedgerow features across the Project Site. Ditches, where present, have been included within the spatial habitat calculations (A1-3) within Annex 1.0 below.
- 2.5 Due to the limitations of the DEFRA Biodiversity Metric 2.0 tool, in that indirect (degradation) impacts upon linear features cannot be calculated, no assessment of impacts upon rivers has been made within the metric. No direct, measurable (for the purposes of BIA calculations) loss of length of either the River Thames or River Ebbsfleet are anticipated as a result of the Proposed Development.
- 2.6 The condition of all habitats has been assessed using the condition assessment criteria provided within the ‘Technical Supplement’ accompanying the DEFRA Biodiversity Metric 2.0², where available, using the professional judgement of the assessor to interpret such

² Available at

criteria. The assessor is a qualified ecologist with 6 years of experience in habitat survey and condition assessment. The classification of habitats and assessment of their condition has taken into account comments made through the Preliminary Environmental Information Report (PEIR) consultation, in particular those made by Kent Wildlife Trust (KWT). Full copies of consultation responses are provided within the *Statutory consultee responses to the Preliminary Environmental Information Report* (Document reference: 6.2.12.6) and *Non-statutory consultee responses to the Preliminary Environmental Information Report* (Document reference: 6.2.12.7).

- 2.7 In line with recommendations made by KWT, habitats have been entered as ‘Within area formally identified in local strategy’ where that habitat has been specifically referenced within strategies set out as part of Nature Improvement Areas (NIA; specifically the Greater Thames Marshes NIA) or Biodiversity Opportunity Areas (BOA; specifically the Thames-Side Green Corridors).
- 2.8 The following section breaks down the various components of the BIA to provide further clarity on how individual elements have been entered into the metric. The following should be read in conjunction with the detailed BIA calculations provided in Annex 1.0, along with the baseline and proposed plans (Document Reference 6.3.12.42 and 6.3.12.43), and the supporting documents provided along with the application as referenced above.
- 2.9 The various parts of the Project Site referred to are illustrated on the *Project Site Areas* (Document reference 6.3.12.1).

On-site Baseline Habitats

- 2.10 On-site baseline habitats (Document Reference 6.3.12.42) have been entered into the metric as follows:
- **Amenity grassland** - Areas of amenity grassland (predominantly alongside the HS1 railway and associated infrastructure) entered as ‘Amenity grassland’ in ‘Poor’ condition due to an intensive management regime and lack of species diversity;
 - **Cereal crops** - Small slivers of arable fields along the A2 corridor entered as ‘Cereal crops’;
 - **Developed land** - All hardstanding and buildings entered as ‘Developed land; sealed surface’;
 - **Ditches** - Ditches mapped outside of the wetland floodplain mosaic category were entered as ‘Ditches’ with ‘Moderate’ condition. Similar to the ponds, the ditches show some minor signs of contamination and many dry or almost dry in summer, but support a range of invertebrate, amphibian and bird species;
 - **Floodplain wetland mosaic** - Habitats within Botany Marsh (west and east) have been

grouped within the 'Floodplain Wetland Mosaic CFGM³' category as it was considered that mapping and assessing individual components of this mosaic underestimated their value to biodiversity. The condition scores for Botany Marsh were divided as follows:

- Botany Marsh west, which largely comprises Coastal and Floodplain Grazing Marsh (CFGM) priority habitat, with an extensive ditch network and large scrapes and temporary pools, was given a 'Moderate' condition score despite supporting an improved grassland sward and being mostly dry for much of the year, due to it supporting an important wetland bird assemblage during winter; and
 - Botany Marsh east was given a 'Fairly poor' condition rating due to supporting an improved grassland sward (where grassland is present), being extensively artificially drained and having a significant coverage of undesirable species (predominantly nettle) and scrub.
- **Intertidal mudflats** - Intertidal mudflats around the Swanscombe peninsula have been entered as 'Littoral mud' in 'Good' condition due to the presence of rare invertebrates and an important winter bird assemblage;
 - **Lowland calcareous grassland** - Small areas of calcareous grassland adjacent to Black Duck Marsh have been entered as 'Lowland calcareous grassland' in 'Moderate' condition due to the presence of calcareous indicator species, moderate species diversity, but with large areas of bare ground;
 - **Lowland mixed deciduous woodland** - Semi-natural woodland has been entered as 'Lowland mixed deciduous woodland' in 'Moderate' condition. This woodland varies significantly over the Kent Project Site. Mature woodland along the A2 corridor situated between ancient woodland and the A2 is considered to be of 'Moderate' condition due to a fairly uniform age structure and the lack of significant dead wood presence and despite the presence of a reasonably diverse canopy and ground-flora. Woodland through the former landfill, sportsground and along the river Ebbsfleet are similarly fragmented, more isolated and less mature but display a more varied age structure. Woodland to the south of Black Duck Marsh is dominated by sycamore (*Acer pseudoplatanus*) in the north but displays a good age structure and ecotone to scrub in the south. There is some evidence of artificial drainage into the marsh in this woodland;
 - **Mixed scrub** - Scrub has been entered into the calculator in three conditions under 'Mixed scrub':
 - Large areas of scrub, particularly within the Swanscombe peninsula, have been entered as 'Fairly poor' condition due to a lack of species diversity. This scrub is dominated (>75%) by hawthorn (*Crataegus monogyna*), although dogwood

³ Coastal and Floodplain Grazing Marsh – Priority Habitat listed under Section 41 of the Natural Environment and Rural Communities (NERC) Act (2006)

(*Cornus sanguinea*) and dog rose (*Rosa canina*) are present. All scrub is fairly immature, having established in the last c.10 years and some stands are extensive and very dense;

- Areas of scrub around the southern edge of the peninsula, around Black Duck Marsh and along the Ebbsfleet valley are more species diverse and display a ruderal edge, glades and a greater diversity of age, although weighted towards younger scrub and lacking very mature scrub. These areas have been given a 'Moderate' condition score; and
 - Remaining scrub has been given a 'Poor' condition score due to forming dense stands of single species, single-age scrub with a hard-edge (as in Botany Marsh east) or due to the presence of large amounts of non-native buddleia (*Buddleja davidii*).
- **Modified grassland** - The majority of grassland across the Project Site has been entered as 'Modified grassland', as a direct translation of 'poor semi-improved grassland' from the Phase 1 habitat survey information. This grassland is species-poor across the Project Site and dominated by grasses, but has been entered with varying condition scores, as outlined below:
 - Grassland with significant scrub encroachment (>15%) has been entered with a condition score of 'Fairly poor'. The Biodiversity Metric Technical Supplement suggests a score of 'Poor' for grassland in this condition, but the presence of some nationally scarce plant species is considered to merit a slight increase;
 - Grassland with less or no scrub encroachment and with slightly higher forb diversity was given a condition score of 'Moderate'; and
 - Small slivers of agriculturally improved grassland along the edge of the A2 were given a condition of 'Poor'.
 - **Open mosaic habitats on previously developed land** - Land that had a verifiable history of industrial disturbance (through the use of historic aerial photographs/satellite imagery) was compared with the areas of Open Mosaic Habitats on Previously Developed Land (OMHPDL) included as part of the Priority Habitats layer on the DEFRA Multi-Agency Geographic Information for the Countryside (MAGIC) website and the approximate extent then mapped using professional judgement and knowledge of the Project Site. Because of the nature of OMHPDL and the difficulty in accurately defining this mosaic, the mapped extent takes in a wide range of individual habitats, including bare ground, ephemeral vegetation and open grassland. Because of the prevalence of scrub across the Swanscombe peninsula, some areas of mapped OMHPDL included scrub, but large blocks of dense scrub (larger than 2500m², or smaller, adjacent blocks making up a similar area) were excluded. OMHPDL was assessed for condition based on the spatial diversity (more uniform habitats were scored lower) and the prevalence of scrub. As a result, OMHPDL that showed less evidence of succession to contiguous open grassland was assessed as being in 'Good'

condition. Areas with a denser, more homogenous sward and with scrub encroachment were assessed as being in 'Moderate' condition;

- **Other neutral grassland** - Areas of more species-rich grassland along the sea wall near Black Duck Marsh were entered as 'Other neutral grassland' and given an assessment of 'Moderate' condition. 'Good' condition was not achieved due to the presence of some perennial rye grass (*Lolium perenne*) and being subject to an irregular maintenance schedule, with cutting sometimes occurring during the main flowering season;
- **Other woodland; broadleaved** - Plantation woodland was entered as 'Other woodland; broadleaved' and given a condition assessment of 'Fairly poor' based on poor age class diversity and obvious evidence of planting (straight lines);
- **Ponds (Non-priority habitat)** - Waterbodies with significant evidence of contamination by Cement Kiln Dust (CKD) leachate were entered as 'Ponds (Non- Priority Habitat)' in 'Poor' condition. These ponds support very little to no plant or invertebrate life due to their pH;
- **Ponds (Priority habitat)** - Other waterbodies were entered as 'Ponds (Priority Habitat)' in 'Moderate' condition due to having moderate water quality. Some ponds are uniformly shallow (Black Duck Marsh), are man-made and connected to drainage systems (alongside HS1) or are stocked with carp and have significant litter pollution (Bamber Pit), but all have a semi-natural riparian edge and support a range of waterfowl and invertebrates;
- **Reedbeds** - Reedbeds have been entered as 'Reedbeds' in 'Moderate' condition. Habitat is relatively uniform and contains >60% common reed but shows some signs of scrub encroachment; particularly around the HS1 portal within the Channel Tunnel Rail Link (CTRL) wetland. Drier areas of reedbeds also support some undesirable species, such as nettle;
- **Ruderal and ephemeral vegetation** - Stands of ruderal vegetation and ephemeral vegetation not included within the OMHPDL category were entered as 'Ruderal/Ephemeral' in 'Fairly poor' condition due to the lack of significant species diversity and limited extent;
- **Saltmarsh** - Saltmarsh surrounding the peninsula and a small amount next to a ditch in the centre of the peninsula has been entered as 'Saltmarshes and saline reedbeds' in 'Poor' condition due to the presence of extensive litter and CKD contamination and its relative isolation and fragmentation; and
- **Vacant/derelict/bare ground** - Pathways with exposed soil/gravel and areas of land that have no ground cover not included under the OMHPDL category were entered as 'Vacant/derelict land/bare ground' with 'Poor' condition.

On-site Retained and Enhanced Habitats

- 2.11 Areas of land clearly outside of the building footprint have been entered as either enhanced or retained, dependent on the type of habitat and the details of the Ecological Mitigation and Management Framework (EMMF) (Document reference 6.2.12.3) and any species-specific mitigation strategies included therein.
- 2.12 Land outside of the actual development footprint but within areas where temporary loss may be necessary (for instance to allow the placement of site compounds or small areas of land within large areas of loss that cannot realistically be protected) has been entered as lost on a precautionary basis.
- 2.13 Retained and enhanced habitats have been entered into the metric as follows:
- **A2 corridor** - The majority of retained habitat is situated throughout the A2 corridor, where works are anticipated to be limited to signage and, in the Ebbsfleet Valley, where the construction corridor will be restricted to the new road and associated drainage features. Habitats including woodland, grassland, ponds and scrub will be retained in these areas;
 - **Ditches** - Ditches will be enhanced from 'Moderate' to 'Good' condition through profiling, sensitive management and water management;
 - **Floodplain wetland mosaic** - Floodplain wetland mosaic within Botany Marsh east has been entered as enhanced from 'Fairly poor' to 'Fairly good' condition. Enhancement will involve sensitive management of ditches, addition of new water vole habitat, extension of reedbed, management of the water table and removal/management of scrub;
 - **Mixed scrub** - Scrub along the top of the chalk spine, along the railway through Swanscombe and around the boundary of Botany Marsh east will be retained without enhancement;
 - Scrub across Broadness Grasslands, Botany Marsh and Bamber Pit will be enhanced from 'Fairly poor' to 'Fairly good', 'Moderate' to 'Good' or 'Poor' to 'Moderate'. This will be achieved through planting to increase species diversity, sensitive management to maintain opportunities for scrubland birds and dormice and creation of glades and ecotone edges;
 - **Modified grassland** - Small areas of modified grassland will be enhanced to 'Other neutral grassland' through seeding and sensitive management to create a richer, more structurally diverse grassland;
 - **OMHPDL** - A strip of OMHPDL habitat will be retained and enhanced along the northern boundary of the Leisure Core around the electricity pylon. This habitat is known to support distinguished jumping spider (*Attulus distinguendus*), based on previous survey findings, and will be enhanced sympathetically from 'Moderate' to 'Good' condition;

- A large amount of OMHPDL within the Broadness grassland area of the Kent Project Site will be enhanced from 'Moderate' to 'Good' condition through the rotational removal of vegetation, the creation of temporary pools and sensitive management of grassland and scrub to maintain the mosaic of habitats there and introduce a greater degree of spatial variation; and
- **Saltmarsh** - Saltmarsh around the perimeter of the Swanscombe peninsula will be enhanced by removing fly-tipping and limiting contamination through increased leachate management.

On-site Proposed Habitats

2.14 On-site proposed habitats have been entered into the metric as follows:

- **Amenity grassland and shrub planting, wildflower lawns and developed land** - The ratio of developed land to green space within the Principal Development has been estimated based on the Illustrative Masterplan (Document Reference 6.3.11.15), with 60% of the area entered as 'Developed land; sealed surface' and the remaining 40% split evenly between 'Amenity grassland' in 'Fairly poor' condition and 'Other neutral grassland' in 'Fairly poor' condition. This will be achieved through the use of species-rich lawn mixtures. Amenity areas will be managed more regularly, but areas of 'Other neutral grassland' will be allowed to flower between cutting to create structural and floral diversity. In reality, areas of the Principal Development will also be planted with shrubs for amenity value, but as these are valued at the same level as amenity grassland within the calculator, this is not considered to be a limitation of the calculation;
- **Broad-leaved woodland** - New woodland planting has been entered as 'Other woodland; broadleaved' with a 'Moderate' target condition. This is predominantly around Gate 2 of the Proposed Development and within the existing sportsground area;
- **Ditches** - New 'Ditches' have been entered with a target condition of 'Good' and will be profiled and managed for maximum biodiversity value;
- **Floodplain wetland mosaic** - A small amount of new 'Floodplain wetland mosaic (CFGM)' has been entered with a target of 'Moderate' condition to account for the removal of dense scrub within wetland areas in Botany Marsh east;
- **Gravel/Hoggin paths** - New paths have been entered as 'Vacant/derelict land/bareground' in 'Poor' condition;
- **Green/brown roofs** - A number of buildings will be built with 'Brown roofs' or 'Extensive green roofs' for invertebrate/floral value (1.33hectares (ha) and 2.06ha respectively), which have been given a target condition of 'Moderate';
- **Leachate treatment lagoons** - A number of new leachate treatment ponds will be

created. These have been entered in the same way as existing leachate ponds, as 'Ponds (Non-priority Habitat)' in 'Poor' condition;

- **Mixed scrub** - New 'Mixed scrub' planting with a target condition of 'Fairly good' will take place around the peripheries of the Resort, to replace lost scrub within Bamber Pit and around the A2 Highway Works, and small areas within the Broadness grassland area to create or maintain habitat connectivity;
- **OMHPDL** – 'OMHPDL' will be created with a 'Fairly good' target condition in the Broadness grassland area, predominantly where dense scrub has been removed;
- **Other neutral grassland** - 'Other neutral grassland' with a 'Fairly good' target condition will be established to replace loss associated with the new junction around the A2 Highways Work, the new road, landscaping in Bamber Pit, within landscaped areas within the Principal and Associated Developments as defined within the *Landscape Strategy* (Document reference 6.2.11.7);
- The existing grassland along the sea wall north-west of Black Duck Marsh will be lifted and replaced following works, so has been precautionarily entered as lost and recreated to account for any loss in condition;
- **Reedbeds** - New reedbeds associated with the boundary of the Proposed Development have been entered as 'Reedbeds' with a target condition of 'Good'. Scrub and water quality and levels will be managed continuously through operation to ensure this target is achievable;
- **Saltmarsh** - New saltmarsh created as part of the managed retreat around the north-east of the peninsula has been entered as 'Saltmarshes and saline reedbeds' with a target condition of 'Moderate', expanding on existing saltmarsh;
- **Street trees** - An estimate of 2000 street trees was used to calculate an area of 0.9ha of 'Street tree' planting, of a 'Moderate' condition; and
- **Sustainable urban Drainage Systems (SuDS)** - New drainage features have been entered as 'Sustainable urban drainage feature' with a target of 'Moderate' condition. It is likely that the distinctiveness of these features will be higher as they will be designed with ecology in mind.

2.15 The BIA calculations do not account for other protected species enhancement measures such as the provision of bird and bat boxes, dormouse boxes or habitat piles/refuges for reptiles, amphibians and invertebrates, as illustrated on the *Ecology Mitigation Strategy: Species Measures* (Document reference: 6.3.12.44).

OFF-SITE HABITATS

2.16 Based on initial BIA calculations for on-site habitats only, it was clear that the Proposed Development would only be capable of achieving a net gain in Habitat Units through the provision of significant off-site compensation. As noted within Chapter 1 above, the

Proposed Development will result in significant residual effects on a range of important ecological features, most notably Swanscombe Peninsula SSSI. A range of off-site habitat creation and enhancement measures are proposed to compensate for these effects, which are likely to result in a net gain Habitat Units, albeit as an incidental result rather than this being the primary objective.

- 2.17 Details of the proposed compensation for all relevant ecological features are set out within the *Ecological Compensation Framework* (ECF) report (ES Appendix 12.10, Document Reference 6.2.12.10). As described in this report, the Applicant is still in the process of acquiring the full extent of off-site land required to compensate for on-site impacts, however a large proportion of this land has now been secured.
- 2.18 Details of the two compensation sites which have been secured, namely Harty Marshes and Leysdown Marshes, are provided within Annex EDP 1 and Annex EDP 2 respectively within the ECF. The existing habitats present within these sites are illustrated on ES Figure 12.61 (Document Reference 6.3.12.61) and Figure 12.62 (Document Reference 6.3.12.62) respectively. Indicative layouts showing proposed habitat retention, creation and enhancement, are illustrated on ES Figure 12.63 (Document Reference 6.3.12.63) and Figure 12.64 (Document Reference 6.2.12.64) respectively.
- 2.19 The offsite land measures 354.24ha in total and is predominantly arable and improved grassland, which has been entered into the metric as 'Cereal Crops' and 'Modified Grassland' of poor condition respectively. The land is to be converted to a range of high value habitats including coastal floodplain grazing marsh; wetlands including reedbed, ponds and ditches; and open mosaic habitat including scrub, grassland, sparsely vegetated and bare ground, and shallow pools.
- 2.20 The information on existing and proposed habitats within these two compensation sites has been added to the DEFRA Biodiversity Metric to provide an indication of the net balance of Habitat Units.

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Chapter Three ◆ RESULTS

- 3.1 The BIA calculations pertaining to habitat areas within the Project Site and within the two compensation sites are provided in Annex 1.0. The headline results are provided within Table 3-1.

Table 3-1: Headline Results of Biodiversity Impact Assessment

	Habitat Units
On-site baseline	3350.03
On-site post-intervention (including habitat retention, creation and enhancement)	2138.95
<i>On-site net unit change</i>	-1211.08
Off-site baseline	2463.82
Off-site post-intervention (including habitat retention, creation and enhancement)	4131.00
<i>Off-site net unit change</i>	+1667.18
Total net unit change	+456.10
Total net % change	+13.61%

- 3.2 As noted in the table above, the Habitat Units delivered across the two off-site compensation sites exceeds the net loss which is predicted on-site. The total net unit change is therefore positive (+13.61%).
- 3.3 Additional off-site land is being acquired to fulfil all the necessary compensation objectives. This land will be subject to further habitat creation and/or enhancement and would therefore result in an even greater net increase in Habitat Units overall.

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Annex

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Annex 1.0 Biodiversity Metric 2.0 – Habitat Units (edp5988_r018)

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Headline Results

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On-site baseline	<i>Habitat units</i>	3350.03
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
On-site post-intervention (Including habitat retention, creation, enhancement & succession)	<i>Habitat units</i>	2138.95
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
Off-site baseline	<i>Habitat units</i>	2463.82
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
Off-site post-intervention (Including habitat retention, creation, enhancement & succession)	<i>Habitat units</i>	4131.00
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
Total net unit change (including all on-site & off-site habitat retention/creation)	<i>Habitat units</i>	456.10
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
Total net % change (including all on-site & off-site habitat creation + retained habitats)	<i>Habitat units</i>	13.61%
	<i>Hedgerow units</i>	0.00%
	<i>River units</i>	0.00%

A-2 Site Habitat Creation

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Main Menu Instructions

Proposed habitat	Area (hectares)	Distinctiveness	Score	Condition	Score	Post development/ post intervention habitats										Habitat units delivered	Comments		
						Ecological connectivity			Strategic significance			Temporal multiplier		Difficulty multipliers			Assessor comments	Reviewer comments	
						Ecological connectivity	Connectivity	Connectivity multiplier	Strategic significance	Strategic significance	Strategic position multiplier	Time to target condition/years	Time to target multiplier	Difficulty of creation category	Difficulty of creation multiplier				
Urban - Brown roof	1.33	Medium	4	Moderate	2	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	5	0.837	Medium	0.67	5.97			
Urban - Developed land; sealed surface	64.97	V.Low	0	N/A - Other	0	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	0	1.000	Low	1	0.00	23.75ha amenity grassland		
Urban - Extensive green roof	2.06	Medium	4	Moderate	2	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	3	0.899	Medium	0.67	9.92			
Urban - Amenity grassland	23.75	Low	2	Fairly Poor	1.5	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	2	0.931	Low	1	66.35			
Heathland and shrub - Mixed scrub	4.08	Medium	4	Fairly Good	2.5	High	Highly connected habitat	1.15	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	5	0.837	Low	1	39.26			
Urban - Sustainable urban drainage feature	2.07	Low	2	Moderate	2	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	3	0.899	Medium	0.67	4.99			
Urban - Open Mosaic Habitats on Previously Developed Land		High	6	Fairly Good	2.5	Medium	Moderately connected habitat	1.1	Area/compensation not in local strategy/ no local strategy	High Strategic Significance	1.15	7	0.779	Medium	0.67	0.00			
Grassland - Other neutral grassland	20.99	Medium	4	Fairly Good	2.5	High	Highly connected habitat	1.15	Within area formally identified in local strategy	High Strategic Significance	1.15	12	0.652	Low	1	181.02			
Woodland and forest - Other woodland; broadleaved	3.28	Medium	4	Moderate	2	Medium	Moderately connected habitat	1.1	Within area formally identified in local strategy	High Strategic Significance	1.15	30	0.343	Medium	0.67	7.64			
Lakes - Ponds (Non- Priority Habitat)	0.63	High	6	Poor	1	Medium	Moderately connected habitat	1.1	Within area formally identified in local strategy	High Strategic Significance	1.15	1	0.965	Low	1	4.61			
Wetland - Reedbeds	1.85	High	6	Good	3	High	Highly connected habitat	1.15	Within area formally identified in local strategy	High Strategic Significance	1.15	15	0.586	Medium	0.67	17.29			
Coastal Saltmarsh -saltmarshes and saline reedbeds	3.31	High	6	Moderate	2	Medium	Moderately connected habitat	1.1	Within area formally identified in local strategy	High Strategic Significance	1.15	10	0.700	High	0.33	11.61			
Lakes - Ditches	1.85	Medium	4	Good	3	Low	Unconnected habitat	1	Within area formally identified in local strategy	High Strategic Significance	1.15	10	0.700	Low	1	17.88			
Urban - Vacant/derelict land/ bareground	0.38	Low	2	Poor	1	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	1	0.965	Low	1	0.73			
Grassland - Floodplain Wetland Mosaic (CFGM)		High	6	Moderate	2	Medium	Moderately connected habitat	1.1	Within area formally identified in local strategy	High Strategic Significance	1.15	20	0.490	High	0.33	0.00			
Grassland - Other neutral grassland		Medium	4	Fairly Poor	1.5	High	Highly connected habitat	1.15	Within area formally identified in local strategy	High Strategic Significance	1.15	5	0.837	Low	1	0.00			
Urban - Street Tree	0.9	Low	2	Moderate	2	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	27	0.382	Low	1	1.38			
Totals	130.55															Total Units	368.65		

D-1 Off Site Habitat Baseline

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Baseline ref	Habitats and areas			Habitat distinctiveness		Habitat condition		Ecological connectivity			Strategic significance			Suggested action to address habitat losses	Ecological baseline Total habitat units	Retention category biodiversity value						Bespoke compensation agreed for unacceptable losses	Comments			
	Broad habitat	Habitat type	Area (hectares)	Distinctiveness	Score	Condition	Score	Ecological connectivity	Connectivity	Connectivity multiplier	Strategic significance	Strategic significance	Strategic position multiplier			Area retained	Area enhanced	Area succession	Baseline units retained	Baseline units enhanced	Baseline units succession		Area lost	Units lost	Assessor comments	Reviewer comments
1	Cropland	Cropland - Cereal crops	78.73	Low	2	N/A - Agricultural	1	N/A	Assessment not appropriate	1	Within area formally identified in local strategy	High strategic significance	1.15	Same distinctiveness or better habitat required	181.08	0.01			0.023	0.00	0.00	78.72	181.06		Harty-OM	
2	Urban	Urban - Developed land; sealed surface	1.34	V.Low	0	N/A - Other	0	N/A	Assessment not appropriate	1	Within area formally identified in local strategy	High strategic significance	1.15	Compensation Not Required	0.00							1.34	0.00		Harty	
3	Grassland	Grassland - Floodplain Wetland Mosaic (CFGM)	58.02	High	6	Moderate	2	Medium	Moderately connected habitat	1.1	Within area formally identified in local strategy	High strategic significance	1.15	Same habitat required	880.74		58.02		0	880.74	0.00	0.00	0.00		Harty	
4	Grassland	Grassland - Modified grassland	8.93	Low	2	Poor	1	Medium	Moderately connected habitat	1.1	Within area formally identified in local strategy	High strategic significance	1.15	Same distinctiveness or better habitat required	22.59	5.6	1.35		14.168	3.42	0.00	1.98	5.01		Harty-CFGM	
5	Grassland	Grassland - Modified grassland	0.98	Low	2	Moderate	2	Medium	Moderately connected habitat	1.1	Within area formally identified in local strategy	High strategic significance	1.15	Same distinctiveness or better habitat required	4.96		0.98		0	4.96	0.00	0.00	0.00		Harty-OM	
6	Grassland	Grassland - Floodplain Wetland Mosaic (CFGM)	14.62	High	6	Moderate	2	Medium	Moderately connected habitat	1.1	Within area formally identified in local strategy	High strategic significance	1.15	Same habitat required	221.93	7.36	7.38		111.7248	108.99	0.00	0.08	1.21		Harty	
7	Coastal saltmarsh	Coastal Saltmarsh -saltmarshes and saline reedbeds	24.92	High	6	Fairly Good	2.5	Medium	Moderately connected habitat	1.1	Within area formally identified in local strategy	High strategic significance	1.15	Same habitat required	472.86	24.92			472.857	0.00	0.00	0.00	0.00		Harty	
8	Heathland and shrub	Heathland and shrub - Mixed scrub	6.09	Medium	4	Moderate	2	Low	Unconnected habitat	1	Within area formally identified in local strategy	High strategic significance	1.15	Same broad habitat or a higher distinctiveness habitat required	56.03	6.09			56.028	0.00	0.00	0.00	0.00		Harty	
9	Grassland	Grassland - Other neutral grassland	4.28	Medium	4	Moderate	2	Medium	Moderately connected habitat	1.1	Within area formally identified in local strategy	High strategic significance	1.15	Same broad habitat or a higher distinctiveness habitat required	43.31		4.28		0	43.31	0.00	0.00	0.00		Harty-CFGM	
10	Lakes	Lakes - Ditches	3.75	Medium	4	Moderate	2	Medium	Moderately connected habitat	1.1	Within area formally identified in local strategy	High strategic significance	1.15	Same broad habitat or a higher distinctiveness habitat required	37.95	1.63	2.12		16.4956	21.45	0.00	0.00	0.00		Harty-CFGM	
11	Intertidal sediment	Intertidal sediment - Littoral mud	0.17	High	6	Fairly Good	2.5	Medium	Moderately connected habitat	1.1	Within area formally identified in local strategy	High strategic significance	1.15	Same habitat required	3.23		0.17		0	3.23	0.00	0.00	0.00		Harty-CFGM	
12	Cropland	Cropland - Cereal crops		Low	2	N/A - Agricultural	1	N/A	Assessment not appropriate	1	Within area formally identified in local strategy	High strategic significance	1.15	Same distinctiveness or better habitat required	0.00				0	0.00	0.00	0.00		Harty		
13	Grassland	Grassland - Modified grassland		Low	2	Poor	1	Medium	Moderately connected habitat	1.1	Within area formally identified in local strategy	High strategic significance	1.15	Same distinctiveness or better habitat required	0.00				0	0.00	0.00	0.00		Harty-OM		
14																										
15	Lakes	Lakes - Ditches	3.33	Medium	4	Good	3	Medium	Moderately connected habitat	1.1	Within area formally identified in local strategy	High strategic significance	1.15	Same broad habitat or a higher distinctiveness habitat required	50.55	3.33			50.5494	0.00	0.00	0.00	0.00		Leysdown	
17	Sparsely vegetated land	Sparsely vegetated land - Ruderal/Ephemeral	0.14	Low	2	Poor	1	Medium	Moderately connected habitat	1.1	Within area formally identified in local strategy	High strategic significance	1.15	Same distinctiveness or better habitat required	0.35	0.14			0.3542	0.00	0.00	0.00	0.00		Leysdown	
18	Cropland	Cropland - Cereal crops	136.52	Low	2	N/A - Agricultural	1	N/A	Assessment not appropriate	1	Within area formally identified in local strategy	High strategic significance	1.15	Same distinctiveness or better habitat required	314.00	0.13			0.299	0.00	0.00	136.39	313.70		Leysdown-CFGM	
19	Urban	Urban - Vacant/derelect land/ bareground	0.91	Low	2	Poor	1	N/A	Assessment not appropriate	1	Within area formally identified in local strategy	High strategic significance	1.15	Same distinctiveness or better habitat required	2.09	0.91			2.093	0.00	0.00	0.00	0.00		Leysdown	
20	Grassland	Grassland - Floodplain Wetland Mosaic (CFGM)	11.07	High	6	Moderate	2	Medium	Moderately connected habitat	1.1	Within area formally identified in local strategy	High strategic significance	1.15	Same habitat required	168.04	11.04			167.5872	0.00	0.00	0.03	0.46		Leysdown	
21	Heathland and shrub	Heathland and shrub - Mixed scrub	0.43	Medium	4	Moderate	2	Low	Unconnected habitat	1	Within area formally identified in local strategy	High strategic significance	1.15	Same broad habitat or a higher distinctiveness habitat required	3.96	0.43			3.956	0.00	0.00	0.00	0.00		Leysdown	
22	Coastal saltmarsh	Coastal Saltmarsh -saltmarshes and saline reedbeds	0.01	High	6	Moderate	2	Medium	Moderately connected habitat	1.1	Within area formally identified in local strategy	High strategic significance	1.15	Same habitat required	0.15	0.01			0.1518	0.00	0.00	0.00	0.00			
23																										
24																										
25																										
26																										
27																										
		Total site area ha	354.24											Total Site baseline	2463.82	61.60	74.10	0.00	896.29	1046.10	0.00	218.54	501.43			

D-2 Off Site Habitat Creation

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Proposed habitat	Area ha	Distinctiveness	Score	Condition	Score	Post development/ post intervention habitats										Habitat units delivered	Comments			
						Ecological connectivity			Strategic significance		Temporal multiplier		Difficulty multipliers		Spatial risk multiplier		Assessor comments	Reviewer comments		
						Ecological connectivity	Connectivity multiplier	Connectivity multiplier	Strategic significance	Strategic significance	Strategic position multiplier	Time to target condition/years	Time to target multiplier	Difficulty of creation category	Difficulty of creation multiplier				Spatial risk category	Spatial risk multiplier
Grassland - Other neutral grassland	0.44	Medium	4	Good	3	High	Highly connected habitat	1.15	Within area formally identified in local strategy	High strategic significance	1.15	15	0.586	Low	1	Compensation inside LPA or NCA or deemed to be sufficiently local to site of biodiversity loss	1	4.09	Harty	
Urban - Open Mosaic Habitats on Previously Developed Land	42.06	High	6	Good	3	High	Highly connected habitat	1.15	Within area formally identified in local strategy	High strategic significance	1.15	10	0.700	Medium	0.67	Compensation inside LPA or NCA or deemed to be sufficiently local to site of biodiversity loss	1	469.77	Harty	
Grassland - Floodplain Wetland Mosaic (CFGM)	2.34	High	6	Good	3	High	Highly connected habitat	1.15	Within area formally identified in local strategy	High strategic significance	1.15	30	0.343	High	0.33	Compensation inside LPA or NCA or deemed to be sufficiently local to site of biodiversity loss	1	6.31	Harty	
Grassland - Other neutral grassland	4.42	Medium	4	Good	3	High	Highly connected habitat	1.15	Within area formally identified in local strategy	High strategic significance	1.15	15	0.586	Low	1	Compensation inside LPA or NCA or deemed to be sufficiently local to site of biodiversity loss	1	41.11	Harty Dry	
Grassland - Other neutral grassland	32.87	Medium	4	Good	3	High	Highly connected habitat	1.15	Within area formally identified in local strategy	High strategic significance	1.15	15	0.586	Low	1	Compensation inside LPA or NCA or deemed to be sufficiently local to site of biodiversity loss	1	305.69	Harty Wet	
Grassland - Floodplain Wetland Mosaic (CFGM)	20.29	High	6	Good	3	High	Highly connected habitat	1.15	Within area formally identified in local strategy	High strategic significance	1.15	30	0.343	High	0.33	Compensation inside LPA or NCA or deemed to be sufficiently local to site of biodiversity loss	1	54.74	Laysdown	
Grassland - Other neutral grassland	11.01	Medium	4	Good	3	High	Highly connected habitat	1.15	Within area formally identified in local strategy	High strategic significance	1.15	15	0.586	Low	1	Compensation inside LPA or NCA or deemed to be sufficiently local to site of biodiversity loss	1	102.39	Laysdown Dry	
Grassland - Other neutral grassland	86.9	Medium	4	Good	3	High	Highly connected habitat	1.15	Within area formally identified in local strategy	High strategic significance	1.15	15	0.586	Low	1	Compensation inside LPA or NCA or deemed to be sufficiently local to site of biodiversity loss	1	808.18	Laysdown Wet	
Grassland - Other neutral grassland	18.21	Medium	4	Good	3	High	Highly connected habitat	1.15	Within area formally identified in local strategy	High strategic significance	1.15	15	0.586	Low	1	Compensation inside LPA or NCA or deemed to be sufficiently local to site of biodiversity loss	1	169.35	Laysdown- White Clover	
Totals	218.54																Total Units	1961.64		

