



Gatwick Airport Northern Runway Project

Note on Project-Wide Habitat Loss and Replacement

Book 10

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1 Purpose of this Document

- 1.1.1 This document has been produced to help Stakeholders understand the Habitat Area Balance calculation i.e. Project's impact on habitat and vegetation by area. A number of responses to submissions have requested further clarification on the location and extent of various habitat loss/gain (woodland in particular) (e.g. response E2 in the Local Impact Report from the Joint Surrey Councils [[REP1-097](#)] and the Statement of Common Ground with West Sussex County Council at section 2.8.3.1, REP5-055). This is a separate calculation to the biodiversity net gain calculation which is set out in the **Biodiversity Net Gain Statement** (Doc Ref. 5.3 Appendix 9.9.2)
- 1.1.2 This technical note has been produced to enable a single point of reference with respect to vegetation change that it is anticipated could take place across the Project. The works are described in the Project Description [[APP-030](#)] and have been assessed through the ES. The most relevant ES chapters to this technical note are **ES Chapter 9 Ecology and Nature Conservation** [[APP-034](#)] and **ES Chapter 8: Landscape, Townscape and Visual Resources** [[APP-033](#)].
- 1.1.3 Indicative figures have been produced to support this technical note which show the expected location of habitat loss/gain and location of retained habitat for each habitat type for reference (Figures 1-18). They show a worst-case, following the assumptions with respect to vegetation clearance adopted in the ES, as set out in Table 9.7.1 Maximum Design Scenarios in **ES Chapter 9 Ecology and Nature Conservation** [[APP-034](#)] and **ES Chapter 8: Landscape, Townscape and Visual Resources** [[APP-033](#)].
- 1.1.4 The figures therefore demonstrate on a worst-case basis where each habitat type is being lost to enable the construction of the Project. They also show where there would be gains when habitats are either planted as enhancement/mitigation or restored post construction and where habitats are being retained.
- 1.1.5 They are provided for the purpose of being reference points for stakeholders prior to the detailed plans of vegetation loss/retention to be approved by the relevant local authority before construction, as set out in a detailed Arboricultural and Vegetation Method Statement (AVMS) in line with Requirement 28 of the **Draft DCO** (Doc Ref. 3.1).
- 1.1.6 In addition to the habitat loss/gain/retain plans (Figures 1-18), this document also summarises and signposts to the other submission documents that address vegetation loss/gain, in particular with respect to woodland:

- ES Appendix 9.9.2: Biodiversity Net Gain Statement [Doc Ref. 5.3];
- ES Appendix 8.10.1: Tree Survey Report and Arboricultural Impact Assessment [Doc Ref. 5.3];
- ES Appendix 5.3.2: Code of Construction Practice Annex 6 – Outline Arboricultural and Vegetation Method Statement [Doc Ref. 3.1];
- ES Appendix 5.3.2: Code of Construction Practice [[REP4-007](#)]; and
- ES Appendix 8.8.1: Outline Landscape and Ecology Management Plan [Doc Ref. 5.3]

Deadline 6 update to indicative planting layout

- 1.1.7 Ecology, landscape and BNG considerations have influenced the outline designs from the outset and there have been regular design review meetings with the ecology and landscape team to integrate principles of those disciplines into the outline designs submitted with this Application.
- 1.1.8 There are two sets of restrictions which have led to the ecology and landscape assessments taking a conservative approach at this stage of the design:
- There are strict safeguarding requirements about what can be planted within the vicinity of the airport to prevent an increase in bird collision risks.
 - The Surface Access Improvement Corridor currently has a significant amount of low quality vegetation which has developed over time. Under Design Manual for Roads and Bridges (DMRB), the vegetation may not be planted within 9m of a road of this specification unless approved by the relevant highway authority. At this stage of design, National Highways would be unable to confirm an exception to this requirement; any approval would be at the detailed design stage. GAL has therefore taken a conservative approach and has assumed that no exception is given and that the DMRB must be adhered to and this vegetation removed and not replanted following the works to the surface access corridor.
- 1.1.9 The Ecology and landscape Environmental Assessments and the BNG Statement [APP-136] submitted with the Application were based on the outline designs submitted in ES Appendix 8.8.1 outline Landscape and Ecology Management Plan, oLEMP [[APP-113](#), [APP-114](#), [APP-115](#), [APP-116](#)], and took a conservative approach to vegetation and tree loss considering the restrictions.
- 1.1.10 Following requests from the Joint Legal Authorities for further detail about the existing vegetation and trees within the site, specifically an Arboricultural Impact Assessment (AIA), GAL carried out more detailed surveys in the pre-examination period.
- 1.1.11 At Deadline 3, GAL submitted an AIA [[REP3-037](#), [REP3-039](#), [REP3-041](#)] and took the opportunity to consider the Crawley Borough Council (CBC) local policy

on trees. This showed that the assumptions that had informed the calculations on trees would lead to a net loss of trees in CBC.

- 1.1.12 In light of this and feedback from stakeholders, GAL has brought forward the work to develop the designs of the Museum Field Environmental Mitigation Area and to delve into the detail of the how the safeguarding requirements interact with specific planting in this area. The design for this part of the site is also not subject to the DRMB restrictions, providing greater scope for planting.
- 1.1.13 At D6, GAL is submitting an updated oLEMP and oAVMS which commits to specific tree planting and management in the Museum Field Environmental Mitigation Area. As with all detailed LEMPs, the detailed design of the Museum Field Environmental Area will be approved under Requirement 8 through a specific LEMP and consulted upon under Requirement 4 as part of the detailed design submission. Having brought forward the work on planting however, GAL is including specific tree planting requirements in the oLEMP, which the LEMP must be compliant with, shown on Figure 1.2.1 of the oLEMP submitted at Deadline 6 (Doc Ref. 5.3).
- 1.1.14 This level of detail has allowed GAL to provide an updated AIA at D6, on the basis of the commitment to this additional detail, which shows a net gain in trees (Doc Ref. 5.3). Specifically, it shows a net increase in trees in CBC's jurisdiction thereby securing compliance with their local policy (Policy CH6). CBC Policy CH6 is contained at the end of this note for reference.
- 1.1.15 It should be noted that the AIA submitted at Deadline 6 demonstrates compliance with CBC Policy CH6 against the worst-case assessment undertaken in the AIA. The Project-wide Design Principles ensure that the detailed design process seeks to retain existing vegetation where possible (Design Principles L1 and L4), i.e. it is likely that the final level of planting will be greater than presented in the AIA.
- 1.1.16 It does not constitute a formal DCO change, but instead relates to design evolution of the landscaping proposals in response to IPs comments, on the basis that:
- The fundamental principle of Museum Field as an environmental mitigation area with new flood compensation area, landscaping provisions and recreational provisions (albeit not part of the formal replacement open space) is unchanged.
 - It would not conflict with the existing description of Work No. 38 of the dDCO, or the existing application drawings (Works Plans, Parameter Plans or Order Limits).

- The Museum Field Environmental Mitigation Area forms part of the oLEMP Zone 3 (River Mole Corridor). Increasing the level of tree provision in the area would not conflict with the existing landscape objectives for this zone (in Section 3.4 of the oLEMP) which refers to the creation of native woodland and hedgerow; nor would it conflict with the existing landscaping proposals for Museum Field (in para 4.4.3 of the oLEMP) which describes the creation of new habitats comprising of woodland, wet woodland, scrub and tree planting and species-rich grassland. (It would result in a change to the 'sketch landscape' concept but this is an illustrative sketch so not fundamental).

1.1.17 The final detailed design of soft landscaping will be approved via the LEMPs under DCO Requirement 8 in accordance with the oLEMP; and through consultation on the detailed design under DCO Requirement 4.

1.1.18 This additional detail has resulted in the following updates being made:

- The AIA presents the assessment on this basis of the additional detail.
- Appendix J to the AIA now shows that the Cawley Borough Council Local Policy CH6 has been satisfied.
- The oAVMS reflects the updated tree numbers.
- The Preliminary Tree Removal and Protection Plans and Preliminary Vegetation Removal and Protection Plans reflect the reduced removal of trees and vegetation.
- The oLEMP commits GAL to the proposed tree planting in the Museum Field Environmental Mitigation Area.
- The BNG Statement reflects the increase in tree planting.

1.2 Additional Visualisations

1.2.1 With respect to how the woodland loss in particular would look at different years of maturity, following Project completion, the Applicant committed in their response to Deadline 4 submissions [[REP5-072](#)] to produce illustrative material to demonstrate this. This correspondence was followed by a meeting with Reigate and Banstead Borough Council on 14th May 2024 to confirm the nature and scope of the requested illustrative material. A subsequent request made by Mole Valley District Council for additional viewpoints west of Longbridge Roundabout have also been taken into consideration. As such, images showing vegetation removal, the new landscape scheme at implementation and the maturing planting have been prepared to the specifications set out by RBBC and are included at Annex 1.

2 Habitat Area Balance

- 2.1.1 A number of consultees have requested further clarity on the Project's impacts on habitats (loss and gain) and their locations. Figures showing information with respect to habitat loss/gain for all habitat types are provided in **ES Appendix 9.9.2 Biodiversity Net Gain Statement**, as updated at Deadline 6 [Doc Ref. 5.3]. Preliminary Vegetation Removal and Protection Plans [Doc Ref. 5.3] and Preliminary Tree Removal and Protection Plans [Doc Ref. 5.3] have also been provided for Deadline 6. These show where vegetation and trees will be removed and how the retained habitats will be protected, based on the worst-case removal described in section 1.1.5 above. To illustrate vegetation change by habitat type, Figures 1-18 have been produced; Figures 1-6 are vegetation gains by habitat type, Figures 7-12 show vegetation to be retained by habitat type and Figures 13-18 show vegetation loss by habitat type.
- 2.1.2 Habitats shown on these figures include:
- Modified grassland;
 - Other neutral grassland;
 - Woodland;
 - Scrub;
 - Reedbed; and
 - Watercourse.
- 2.1.3 The location of habitats to be removed, based on the worst-case scenario described in section 1.1.5 above, is based on the survey work reported in ES Appendix 9.6.2 Ecology Survey Report [[APP-125](#), [APP-124](#), [APP-126](#), [APP-127](#), [APP-128](#), [APP-129](#), [APP-130](#)].
- 2.1.4 The habitat gain calculations are based on the outline habitat designs set out in the oLEMP, including the updated indicative planting plans for the Museum Field Environmental Mitigation Area as shown on the revised Figure 1.2.1 of the oLEMP submitted at Deadline 6 [Doc Ref. 5.3]. These are based on a strict interpretation of the Design Manual for Roads and Bridges (DMRB) with respect to how much woodland can be replanted along the A23 corridor for road safety reasons. The habitats to be replanted have been designed to be of a higher quality than those lost.
- 2.1.5 More broadly, habitat creation has been designed to implement the Ecology Strategy for the Project, as set out in section 7 of the oLEMP. This has been

designed to ensure that the Project delivers landscape-scale benefits that have a coherent ecological narrative.

- 2.1.6 The airport is framed by two main water course corridors – the River Mole to the West and the Gatwick Stream to the east with the airport sitting to the south of the confluence of these two watercourses. These landscape-scale features provide the key wildlife corridors around the site, linking it to the wider landscape. The Ecology Strategy therefore incorporates these and provides for the creation of wildlife nodes along these corridors. These nodes, such as the land at Car Park B and Longbridge Roundabout, ensure that additional areas for foraging, roosting, nesting etc. are provided within the Strategy.
- 2.1.7 The need to ensure that the habitat design incorporated the watercourse corridors led to the inclusion of the land at Brook Farm into the Museum Field Environmental Mitigation Area masterplan. As land outside of the current airport boundary, Brook Farm was specifically included by GAL for the purposes of expanding the existing North West Zone biodiversity area, along the River Mole. Brook Farm was formally intensive grazed pasture. It will be enhanced to provide over 3ha of new scrub planting, 2ha of woodland and 6ha of species rich grassland. In addition, the River Mole diversion provides an additional 300m of new river habitat, extending the length of that element of the wildlife corridor – this is a significant gain at a landscape level with respect to ecology.

2.2 Habitat Area Loss

- 2.2.1 The habitat loss figures are based on a worst-case maximum-design scenario with respect to the extent of clearance during construction (as set out Table 9.7.1 of ES Chapter 9 [[APP-034](#)]). This provided a worst-case basis for the completion of all assessments with respect to ecology. The majority of habitats to be removed are of lower ecological value, comprising modified grasslands and semi-mature highways woodland planting. There is a design principal (L4 in Appendix 1 of the DAS [[REP5-031](#)]) that sets out that every effort will be made to retain habitats during detailed design. As such, it is anticipated that the actual extent of habitat loss will be less than that used in the assessment.
- 2.2.2 The majority of the vegetation loss is associated with the highway works, along the A23/M23, including for grassland, scrub and woodland habitats.
- 2.2.3 There are areas of modified grasslands being lost across the Project site, with the largest areas lost including Pentagon Field, airfield grasslands, Museum Field and around the South Terminal Roundabout.

- 2.2.4 Other neutral grassland loss is focused around the grasslands to the south-east of the Crawley Sewage Treatment Works where the new reed beds associated with water treatment works are proposed. Areas of this grassland type will also be temporarily lost during the realignment of the River Mole south of Brockley Wood.
- 2.2.5 A small area of reed bed will be lost to the north of the M23 to enable construction access in this area.
- 2.2.6 Pond A and part of Pond F will also be lost. The two ponds in question are not priority habitats – they are water bodies that are used for surface water management at the site. They are maintained as not beneficial for wildlife due to airport safeguarding. Their loss through the ES was considered minor adverse, but not significant requiring mitigation. The wider Ecology Strategy for the site (as set out in Section 7 of the oLEMP) provides wider wetland habitats – reed beds at the South Terminal roundabout area and water treatment works in addition to the extension to the River Mole. The Project has therefore mitigated the ecological functionality of the ponds with other measures.
- 2.2.7 Overall, the loss of habitats primarily comprises:
- woodland (mainly semi-mature highways planting) -3.12ha
 - grassland (mainly airfield) -9.84ha
 - ponds (water attenuation features – not priority habitats) -1.06ha
- 2.2.8 The overall woodland loss associated with the Project needs to be placed in context - much of the woodland to be lost is highways planting that does not comply with current DMRB standards which relate to the proximity of trees and woodland to carriageways; broadly, DMRB does not allow for woodland planting within circa 9m of the carriageway edge. There is circa 5.2ha of woodland along the A23/M23 Spur corridor within 9m of the carriageway edge.
- 2.2.9 Ecologically, the woodland along the A23 provides a green corridor through the landscape in between Horley and Crawley. The net loss of woodland in this area was recognised in ES Chapter 9 as being a significant effect for the duration of the construction phase until the woodland planting had matured sufficiently to function as a wildlife corridor.
- 2.2.10 In addition, although there is a net loss of woodland, the habitats to be planted in this corridor that do comply with DMRB requirements, including areas of wildflower grassland and scrub in addition to as much woodland as possible (acknowledging the DMRB safety requirements). This planting means that the

habitats along the corridor will be more diverse than the baseline, once established, providing a stronger ecological functionality.

2.3 Habitat Area Gain

- 2.3.1 With respect to habitat gains, the majority of woodland gain will also be along the highway works, replacing that lost in this area (albeit planted to current highway standards meaning it is less extensive than that lost which contravenes those standards).
- 2.3.2 Large areas of modified grassland will also be created within the airfield along with restoration of this grassland on land to the north of the South Terminal Roundabout and Longbridge Roundabout.
- 2.3.3 Large areas of other neutral grassland will be created along the highway works and at Brook Farm/Museum Field, providing a significant uplift in the value of grassland habitats. In addition, that lost around the River Mole diversion will be restored. Pentagon Field will be enhanced to other neutral grassland post development.
- 2.3.4 New areas of mixed scrub will be created throughout the Project, with the majority along the highway works but also new planting along Crawler's Brook in the south of the airfield and throughout Brook Farm/Museum Field. New reed beds will be created south-east of the Crawley Sewage Treatment Works along a new reed bed area adjacent to the South Terminal Roundabout.
- 2.3.5 When the combination of habitat creation associated with the Project is taken into account, there is overall a net gain for biodiversity (see section 3.2 below). In particular, the matrix of habitats to be created across the Brook Farm land that was previously outwith the airport boundary, provide a significant extension to the existing land managed for biodiversity benefit within the Gatwick estate.

2.4 Overall Habitat Balance calculation

- 2.4.1 The overall balance of habitats across the Project site as a whole, including total existing baseline, change in area and those retained and not impacted by the development, is set out Annex 3 of Appendix 9.9.2.
- 2.4.2 This shows that the largest habitats on site by area are the urban ones associated with the operational airport, ie the buildings and hardstanding (437.70ha) followed by grasslands (227.11ha), mainly associated with the airfield.

- 2.4.3 Post development, this pattern is similar with an overall gain in urban habitats (up 8.53ha) and net decrease in grasslands (-9.84ha).

3 Interaction of the Habitat Balance calculation and the BNG calculation

- 3.1.1 Other documents within the submission address vegetation change, in particular with respect to woodland:

- ES Appendix 9.9.2 Biodiversity Net Gain Statement [Doc Ref. 5.3];
- ES Appendix 8.10.1: Tree Survey Report and Arboricultural Impact Assessment [Doc Ref. 5.3]; and
- ES Appendix 5.3.2: Code of Construction Practice Annex 6 – Outline Arboricultural and Vegetation Method Statement [Doc Ref. 5.3].

- 3.1.2 It is considered important to provide a combined summary and sign posting for these documents since they describe vegetation change in separate ways meaning that there are three different metrics by which vegetation change could be measured. The first of these metrics is habitat area (in hectares) which is addressed in section 2 above. The other two are:

- Biodiversity units; and
- Tree numbers.

- 3.1.3 It is important to not conflate these different metrics; it is possible to have an overall reduction in habitat area but have a significant gain in biodiversity units, for example, where the habitat that is replacing that lost is of a higher quality and/or where a higher planting density is needed to achieve the desired habitat function.

3.2 Biodiversity Net Gain

- 3.2.1 ES Appendix 9.9.2 Biodiversity Net Gain (BNG) Statement describes vegetation change via 'biodiversity units'. This unit is generated from the BNG metric that the Government's Department for Environment, Farming and Rural Affairs (Defra) have created to enable comparisons to be made with respect to the ecological value of a project before and after development.

- 3.2.2 It is important to set out that there are no statutory requirements for BNG with respect to NSIPs; the BNG requirement is proposed to be imposed on NSIP projects from November 2025. The current Government position is that projects which have been accepted for examination prior to the November 2025 date would not be required to deliver that minimum BNG target, but could choose to

do so voluntarily. In this context, whilst there is no legal requirement for the Project to deliver BNG, the design of the Project has been developed such that the extent of net gain possible has been maximised within the parameters of the Project and the safeguarding requirements associated with an operational airport

- 3.2.3 The assessment has been undertaken on with respect to the area of the Project site that is affected by construction activities. The rationale for this approach to BNG is set out in section 2.1.7 of ES Appendix 9.9.2: Biodiversity Net Gain Statement [Doc Ref. 5.3]. The approach was discussed and agreed with Natural England during pre-application consultation, as set out in section 5.10 of Natural England's Relevant Representation [RR-3223]:

We acknowledge that the biodiversity baseline provided is based upon all land within the development's order limit (735ha), however the net gain shown within the metric is based only upon land impacted during the project (230.09ha). This was agreed with GAL at the pre-application stage due to the constraints associated with providing a 10% gain on the full site, particularly when comparing it to the size of the site actually lost. This is in line with Luton Rising's BNG proposal for the London Luton Airport Expansion project.

- 3.2.4 The approach of considering the net gain only within the area of land impacted by the development (circa 230ha) reflects the fact that the DCO order limits are drawn around the airport as a whole (735ha), rather than around the individual works areas as would be the case for most developments consented under the Town and Country Planning Act 1990 for which BNG was originally designed. This is because the operation of the airport as a whole in its expanded form requires the powers the DCO would grant to be applicable across the entire airport operation rather than because there are physical impacts to all of the land within that boundary. If the baseline of the airport as a whole were considered (i.e. the entire 735ha), the degree of a 10% uplift would be very substantial and not reflective of the magnitude of any impact which is relatively small in the context of the airport as a whole. This position with respect to approach to BNG baseline was accepted by Natural England in the Statement of Common Ground (point 2.8.4.2) [[REP5-061](#)].
- 3.2.5 The version of the BNG Statement submitted at Deadline 6 [Doc Ref. 5.3] has been updated to include strategic significance and timing of planting.
- 3.2.6 The BNG statement shows that the Project is delivering 20.04% gain in habitat units, 10.94% in hedgerow units and 16.31% in watercourse units.

- 3.2.7 It should be noted that the BNG calculation does not pass the habitat trading rules. These are set to prevent a net gain being delivered through the incorporation of large areas of low value habitat at the expense of higher value habitats. In the case of the Project, this is driven by the loss of woodland that is not being replaced.
- 3.2.8 During consultation with GAL's Safeguarding Team, it became clear that planting extensive areas of new woodland within the Project would not be possible because of the nature of an operational airport and the requirements with respect to aircraft safeguarding. As such, every effort has been made to ensure that as much woodland planting is incorporated into the Project where it is safe to do so (principally along the highways improvements but also the land at Longbridge roundabout and Brook Farm). However, like for like replacement has not been possible.
- 3.2.9 The small loss of (non-priority) pond area cannot be replaced within the Project site area for similar safeguarding reasons. Although no new ponds are proposed, the Project will provide substantial new areas of aquatic habitat in the form of new reed beds, the extension to the River Mole and the enhancement of the river corridor.
- 3.2.10 This approach to habitat trading was accepted by Natural England at point 2.8.4.3 of the Statement of Common Ground between the Applicant and Natural England [[REP5-061](#)].

4 Interaction of the Habitat Area Balance calculation and the AIA

4.1 Tree number balance

- 4.1.1 The topic of tree loss and replacement, including both the quantitative and qualitative requirements for the assessment of trees, has been considered through ecological, arboricultural, landscape character and visual amenity assessments and fully addressed any likely significant effects within the ES submission.
- 4.1.2 The updated ES Appendix 8.10.1 Tree Survey Report and Arboricultural Impact Assessment (AIA) submitted at Deadline 6 [Doc Ref. 5.3] set out the updated position with respect to the total tree loss/gain associated with the Project on a tree number basis (ie how many trees are being lost and how many planted).
- 4.1.3 The AIA data have been updated following the more detailed planting plans for the Museum Field Environmental Mitigation Area (as set out in section 1.1.7 *et seq* above). This shows, for the DCO Order Limits, the change in tree numbers is +5,631, ie an increase in tree numbers.
- 4.1.4 Tree numbers (as set out above) and habitat area (as set out in section 2 above) are two separate metrics with respect to how to describe habitat change. It is possible to have 1ha of woodland with different tree numbers within it, depending upon how densely those trees have been planted. Planting 1ha of woodland at average tree spacings of 1.5m would provide circa 4,444 trees while planting at average tree spacings of 3.6m centres this would result in 772 trees; both are 1ha of woodland, however.

4.2 Approach to Tree Loss and Replacement

- 4.2.1 An arboricultural survey of trees and woodlands was initially focused within the surface access improvement corridor, where the greatest tree loss was anticipated. A general walkover survey was also undertaken of proposed development areas to identify any veteran trees, of which none were identified. This provided an appropriate level of detail to inform design development and assessment work and identified any potential for significant effects on relevant receptors.
- 4.2.2 The design of the surface access improvements has progressed from the outset with the intent to reduce environmental impacts, notably removal of vegetation within the highways corridor and impacts on land within Riverside Garden Park.

This has required at several stages, the agreement with National Highways (NH) to departures from the Design Manual for Roads and Bridges (DMRB) design standards where environmental impacts of fully compliant designs were a key factor. The preliminary scheme is extremely space efficient and manages to stay largely within the existing road corridor. The scheme does require additional signage and also has to meet standards in respect of visibility splays and other safety considerations for vehicular and pedestrian users.

- 4.2.3 The ES considers the function and value of the landscape proposals within ES Chapter 9 Ecology and Nature Conservation [APP-034] and ES Chapter 8 Landscape, Townscape and Visual Resources [APP-033]. ES Appendix 8.8.1: Outline Landscape and Ecology Management Plan [Doc Ref. 5.3] sets the overarching landscape vision for the Project. GAL has committed to design principles in Appendix 1 of the DAS [REP3-056], which are also reflected in the oLEMP to minimise tree and vegetation loss as part of the detailed highways design.
- 4.2.4 Reinstatement of scrub and tree planting has been designed in accordance with guidelines by National Highways (DMRB LD117 Landscape Design, the Manual of Contract Documents for Highways Works, Major Projects and Highways England, DMRB Asset Data Management Manual Volume 13) which would limit the extent of woodland that could be replanted adjacent to the highway, compared to the existing situation, due to safety requirements with respect to visibility. Approximately 5.2 ha of woodland planting is currently located within a 9m buffer, defined in DMRB LD117, either side of the highway within the surface access improvements area of the M23 Spur/A23. Approximately 3.6 ha of this woodland lies within National Highways land defined in DMRB LD117, either side of the highway within the surface access improvements area. The DMRB LD117 prevents planting of larger/climax trees/woodland within the 9 metre buffer and any planting within this area is subject to agreement with NH.
- 4.2.5 Given the overall loss in woodland area is broadly 3.12ha, if it were possible to plant woodland along the A23 corridor at the same proximity to the road as is currently the case, there would be an overall balance with respect to woodland lost to that replanted.
- 4.2.6 Some of the additional losses in habitat have been required to meet stakeholder requirements for improved active travel routes. GAL has committed to Design principles and in the oLEMP to minimise tree and vegetation loss as part of the detailed highways design. Due to the outline nature of the scheme appropriate but conservative allowances have been made to ensure it can be constructed

and a reasonable works case assessed. The scheme therefore includes for a limit of deviation within which all construction impacts (which include access to the site and any necessary diversion of utilities) have to be accommodated.

- 4.2.7 The existing mature highway woodland and scrub planting provides a substantial green corridor for the A23 between the Gatwick Airport access roundabout and the Longbridge roundabout. The planting also provides a green buffer between the road and the urban green space of Riverside Garden Park and the buildings and infrastructure of Gatwick, filtering views of traffic, although it is not usable, amenity green space. Trees and vegetation to be removed will be replaced within the proposed road corridor with native tree and scrub species, where feasible and with wide grass verges where such planting is not possible.
- 4.2.8 Two new areas of urban green space will be created at Car Park B on the eastern end of Riverside Garden Park, and north of Longbridge roundabout, adjacent to Church Meadows. These spaces will include extensive native woodland, scrub and grassland communities which offer usable amenity space for the public, diverse ecological habitats and linkages between urban and rural spaces. Impacts have been mitigated and compensated for within the Project through the provision of a well-designed highway planting scheme incorporating public footpaths and extensive areas of connected and nearby replacement open space. The mitigation measures would, on balance, provide an improvement in the value and attractiveness of the area, a greater sense of place and accessibility, an increase in biodiversity and opportunities to improve the health and wellbeing of the local community.
- 4.2.9 Due to the complexity of the surface access improvements works and the constrained footprint of this development adjacent to Riverside Garden Park and Gatwick Airport, the implementation of advance planting is not viable in this context. However, the landscape proposals within the Brook Farm element of the Museum Field Environmental Mitigation Area is defined within Annex 4 of the oLEMP as a location for advance planting. Tree and woodland planting could be implemented in this area before the removal of woodland within the A23/M23 Spur corridor to accommodate construction activities for the Surface Access Improvements.

4.3 Consultation and Engagement

- 4.3.1 The NRP team has engaged extensively with NH on design topics through the development of the preliminary highway design proposals set out in the DCO. The NRP team has engaged extensively with SCC regarding the design at Longbridge Roundabout and WSCC regarding the design of the A23 London

Road on design matters through technical design engagement and highways and active travel topic working groups. We envisage that engagement on design matters will continue throughout the examination phase and actions identified to be addressed at the detailed design stage. NH state in their PADD5 D5 response [[REP5-104](#)] that *'the oLEMP includes landscape proposals on drawings, with new woodland and/or land returned to scrub/woodland, which would provide visual screening once established. In combination with the method statements and obligations in the oLEMP this is considered a fair approach to the future detail design of the scheme'*.

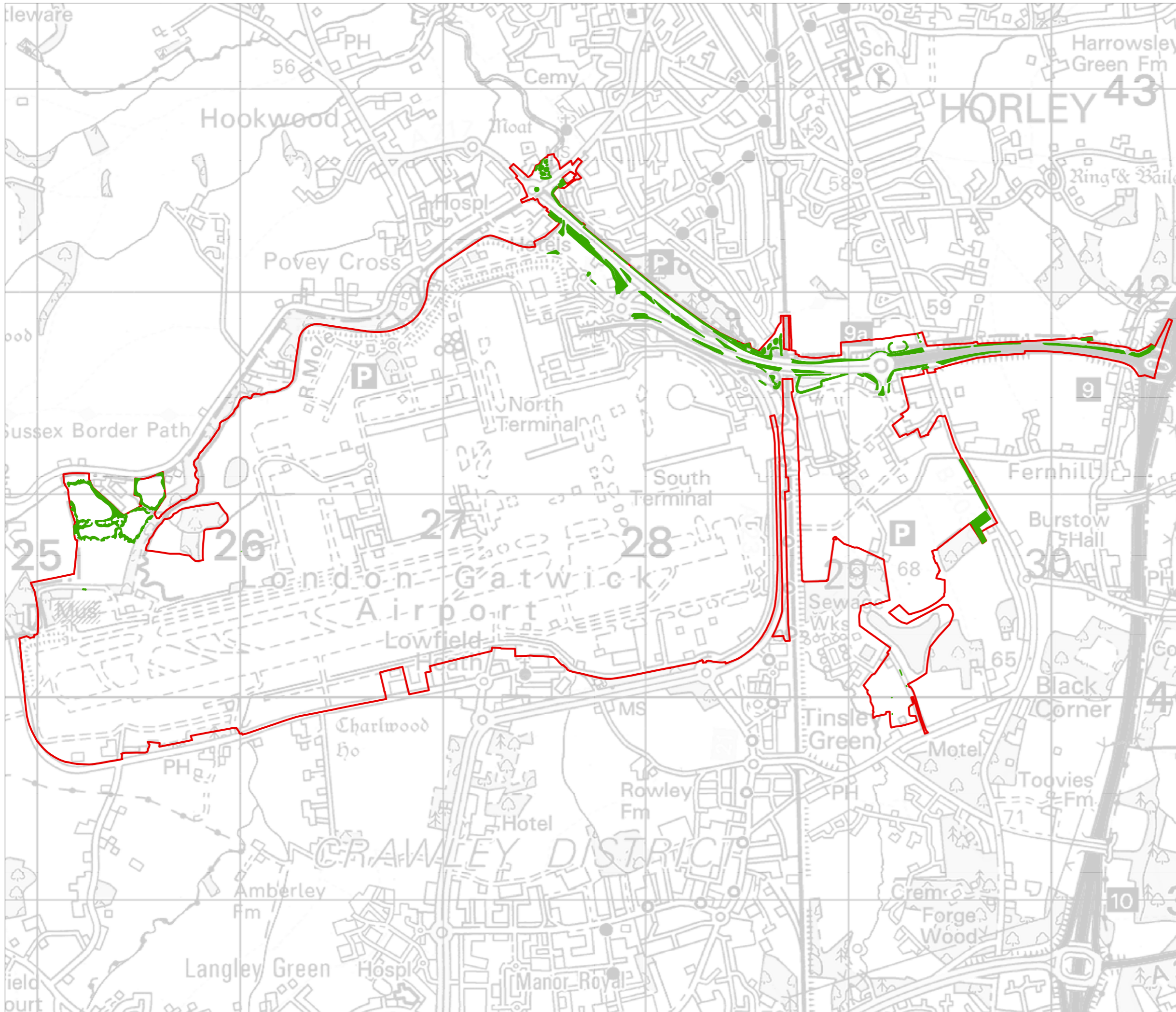
- 4.3.2 The design of the surface access improvements has progressed from the outset with the intent to reduce environmental impacts, notably removal of vegetation within the highways corridor and impacts on land within Riverside Garden Park. This has required at several stages, the agreement with National Highways (NH) to departures from the Design Manual for Roads and Bridges (DMRB) design standards where environmental impacts of fully compliant designs were a key factor. The preliminary scheme is extremely space efficient and manages to stay largely within the existing road corridor (e.g. The junction configuration at North Terminal Roundabout and the interface with A23 London Road was optimised during the option selection phase. The preferred option taken forward is predominantly within the existing highway boundary and works outside the boundary have been minimised compared to other potential junction layouts considered (e.g. the provision of a dumbbell roundabout arrangement with a new roundabout provided within Riverside Garden Park) as set out in ES Appendix 3.5.2 North Terminal Roundabout Options Development [[APP-074](#)]. The scheme does require additional signage and also has to meet standards in respect of visibility splays and other safety considerations for vehicular and pedestrian users.
- 4.3.3 The ES considers the function and value of the landscape proposals within ES Chapter 9 Ecology and Nature Conservation [[APP-034](#)] and ES Chapter 8 Landscape, Townscape and Visual Resources [[APP-033](#)]. ES Appendix 8.8.1: Outline Landscape and Ecology Management Plan [Doc Ref. 3] sets the overarching landscape vision for the Project. GAL has committed to design principles in the oLEMP to minimise tree and vegetation loss as part of the detailed highways design.
- 4.3.4 Reinstatement of scrub and tree planting has been designed in accordance with guidelines by National Highways (DMRB LD117 Landscape Design, the Manual of Contract Documents for Highways Works, Major Projects and Highways England, DMRB Asset Data Management Manual Volume 13) which would limit

the extent of woodland that could be replanted adjacent to the highway, compared to the existing situation, due to safety requirements with respect to visibility. Approximately 5.2 ha of woodland planting is currently located within a 9m buffer, defined in DMRB LD117, either side of the highway within the surface access improvements area of the M23 Spur/A23. Approximately 3.6 ha of this woodland lies within National Highways land. The DMRB LD117 prevents planting of larger/climax trees/woodland within the 9 metre buffer and any planting within this area is subject to agreement with NH.

- 4.3.5 Given the overall loss in woodland area is broadly 3.6ha, if it were possible to plant woodland along the A23 corridor at the same proximity to the road as is currently the case, there would be an overall balance with respect to woodland lost to that replanted.
- 4.3.6 Some of the additional losses in habitat have been required to meet stakeholder requirements for improved active travel routes. GAL has committed to Design principles and in the oLEMP to minimise tree and vegetation loss as part of the detailed highways design. Due to the outline nature of the scheme appropriate but conservative allowances have been made to ensure it can be constructed. The scheme therefore includes for a limit of deviation within which all construction impacts (which include access to the site and any necessary diversion of utilities) have to be accommodated.
- 4.3.7 The existing mature highway woodland and scrub planting provides a substantial green corridor for the A23 between the Gatwick Airport access roundabout and the Longbridge roundabout. The planting also provides a green buffer between the road and the urban green space of Riverside Garden Park and the buildings and infrastructure of Gatwick, filtering views of traffic, although it is not usable, amenity green space. Trees and vegetation to be removed will be replaced within the proposed road corridor with native tree and scrub species, where feasible and with wide grass verges where such planting is not possible.
- 4.3.8 Two new areas of urban green space will be created at Car Park B on the eastern end of Riverside Garden Park, and north of Longbridge roundabout, adjacent to Church Meadows. These spaces will include extensive native woodland, scrub and grassland communities which offer usable amenity space for the public, diverse ecological habitats and linkages between urban and rural spaces. Impacts have been mitigated and compensated for within the Project through the provision of a well-designed highway planting scheme incorporating public footpaths and extensive areas of connected and nearby replacement open space. The mitigation measures would, on balance, provide an improvement in

the value and attractiveness of the area, a greater sense of place and accessibility, an increase in biodiversity and opportunities to improve the health and wellbeing of the local community.

- 4.3.9 Due to the complexity of the surface access improvements works and the constrained footprint of this development adjacent to Riverside Garden Park and Gatwick Airport, the implementation of advance planting is not viable in this context.



Legend

- ▭ Project Site Boundary
- ▭ Location of habitat

DOCUMENT
Response to Deadline 4 Documents

DRAWING TITLE
Figure 1
Gain of Other broadleaved woodland

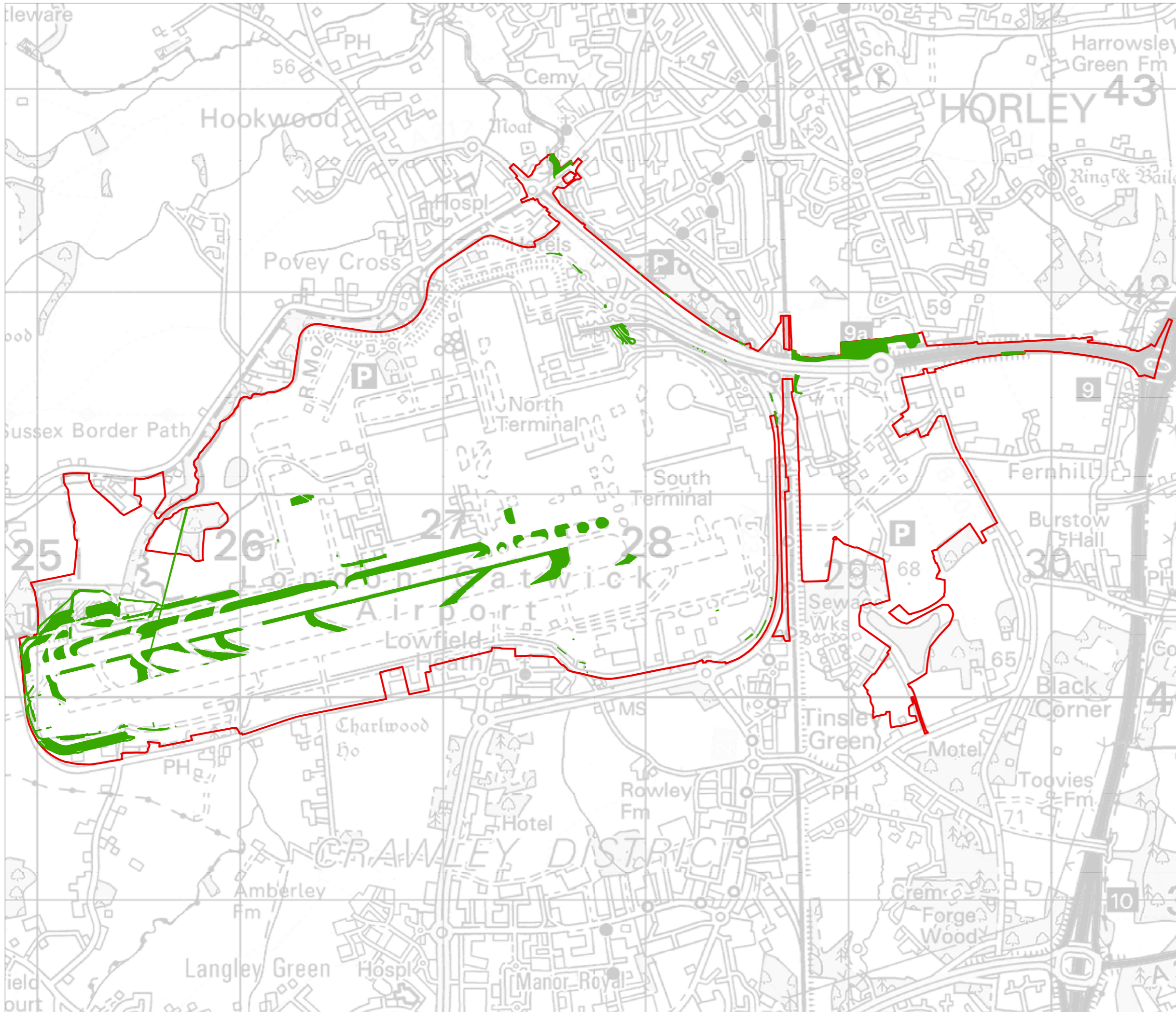
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- ▭ Project Site Boundary
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DOCUMENT

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DRAWING TITLE

Figure 2
Gain of Grassland - Modified grassland

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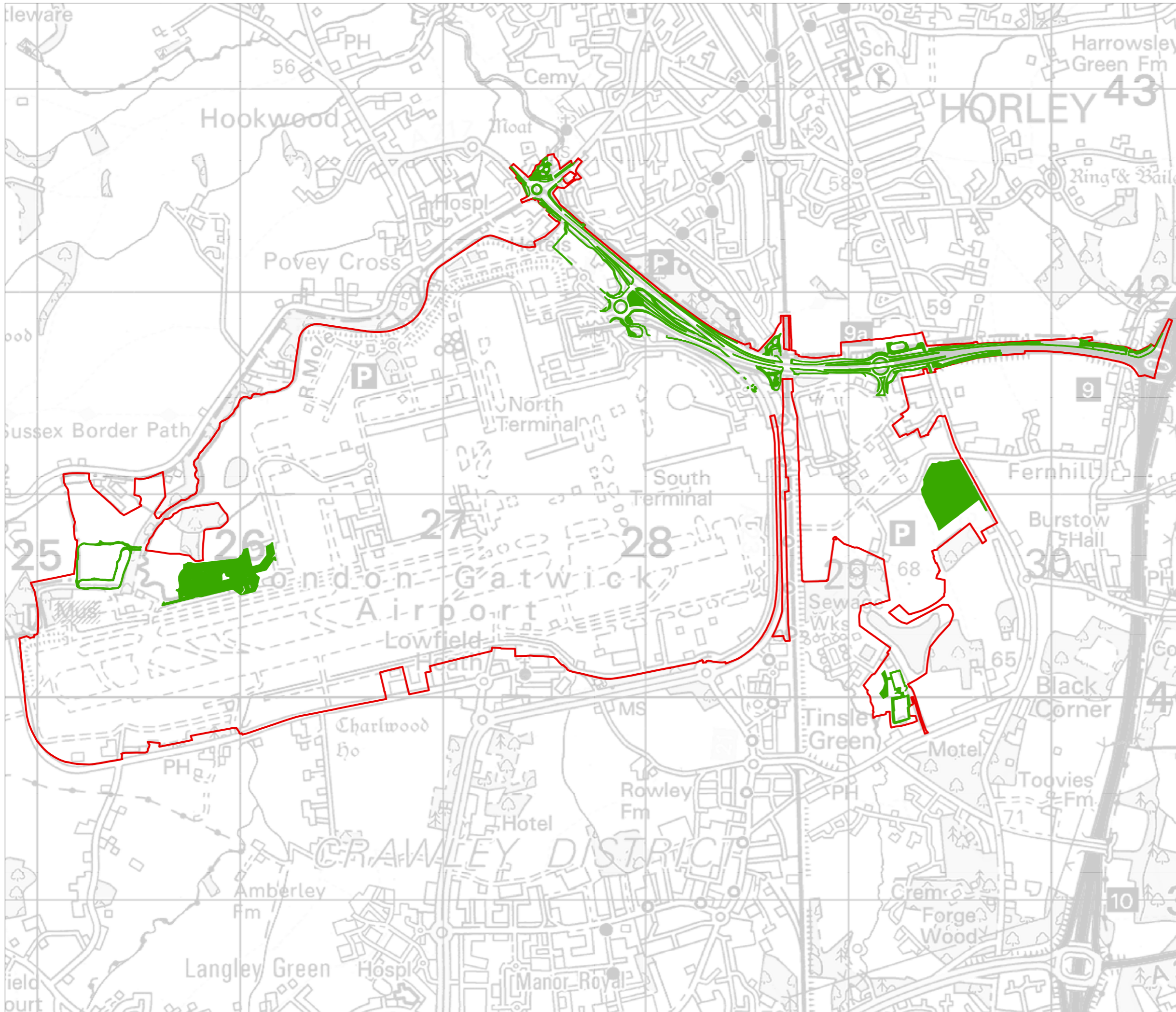
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Legend

- ▭ Project Site Boundary
- ▭ Location of habitat

DOCUMENT
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DRAWING TITLE
Figure 3
Gain of Grassland - Other neutral grassland

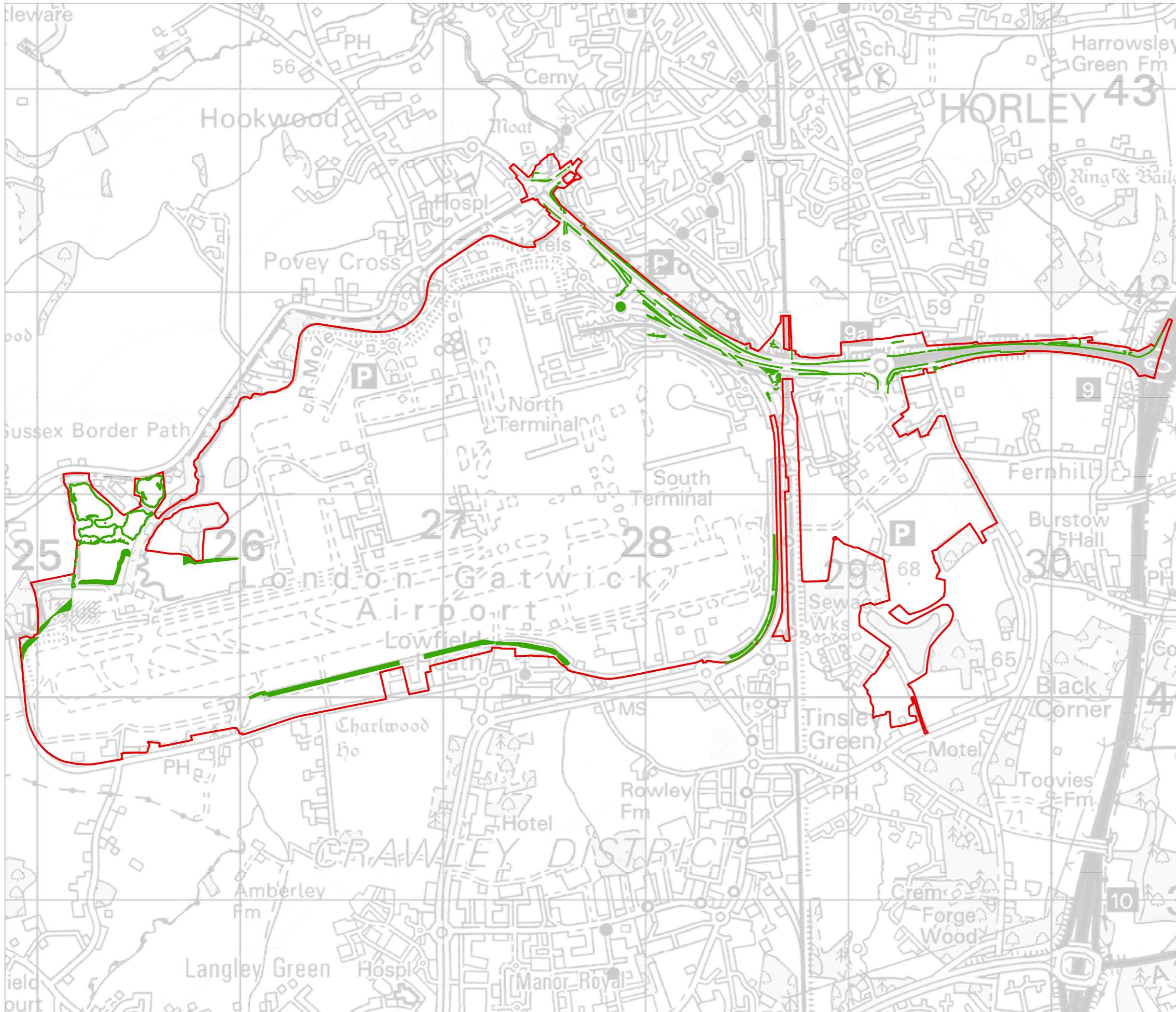
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Legend

- ▭ Project Site Boundary
- ▭ Location of habitat

DOCUMENT
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DRAWING TITLE
Figure 4
Gain of Heathland and shrub - Mixed scrub

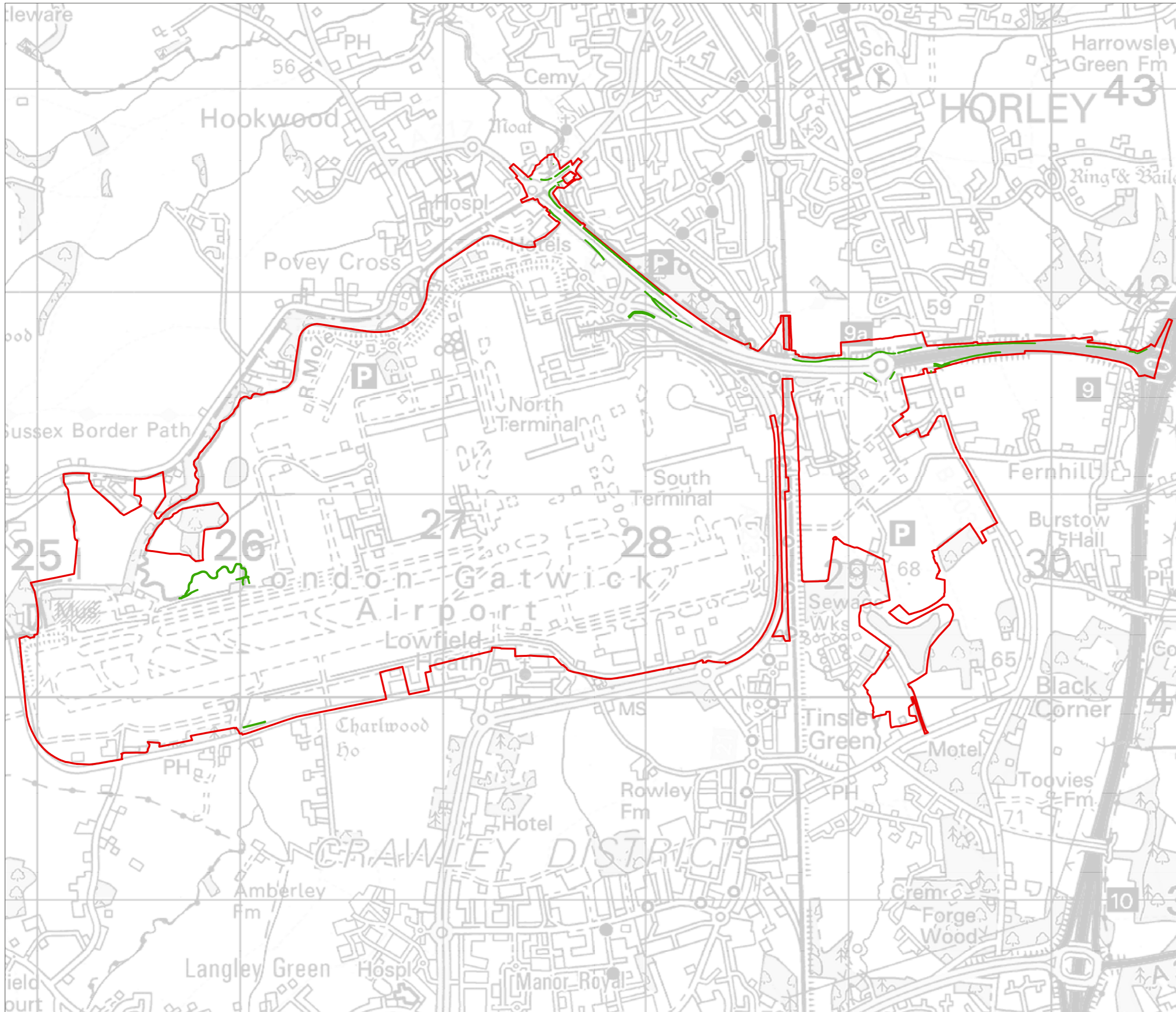
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- Legend**
- ▭ Project Site Boundary
 - ▭ Location of habitat

DOCUMENT
Response to Deadline 4 Documents

DRAWING TITLE
Figure 5
Gain of Watercourse

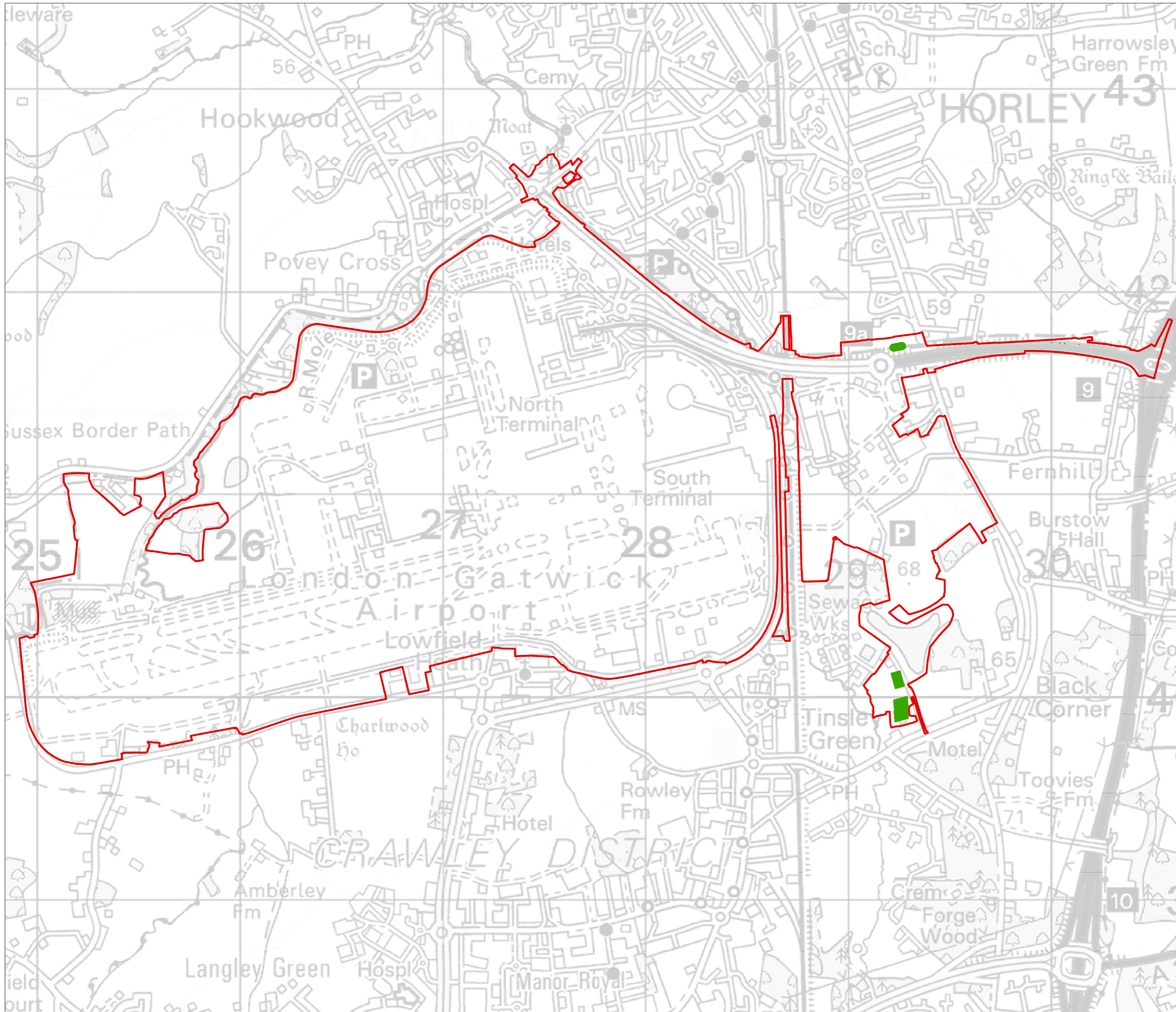
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- Legend**
- ▭ Project Site Boundary
 - ▭ Location of habitat

DOCUMENT
Response to Deadline 4 Documents

DRAWING TITLE
Figure 6
Gain of Wetland - Reedbeds

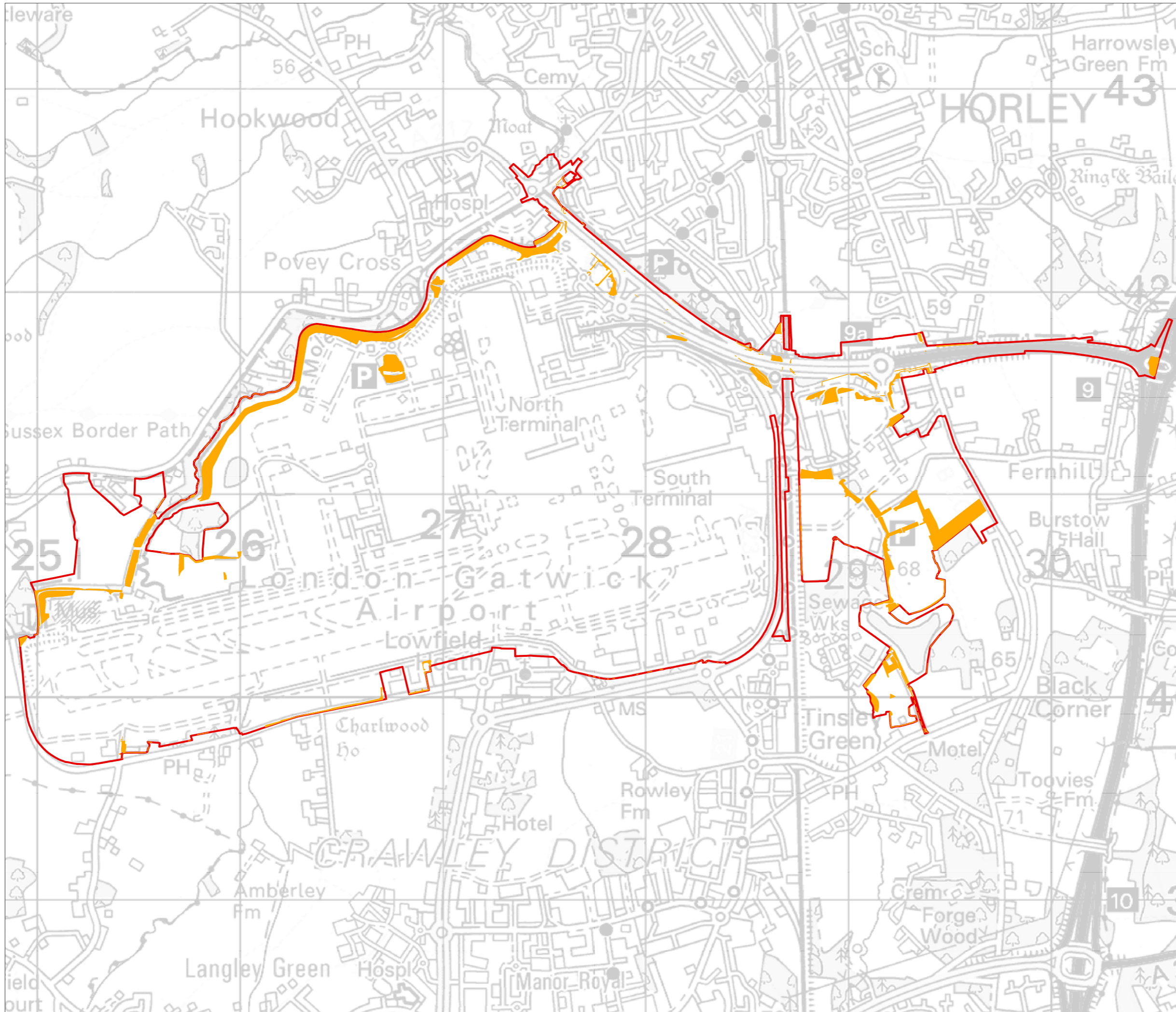
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Legend

- Project Site Boundary
- Location of habitat

DOCUMENT

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DRAWING TITLE

Figure 7
Retain of Other broadleaved woodland

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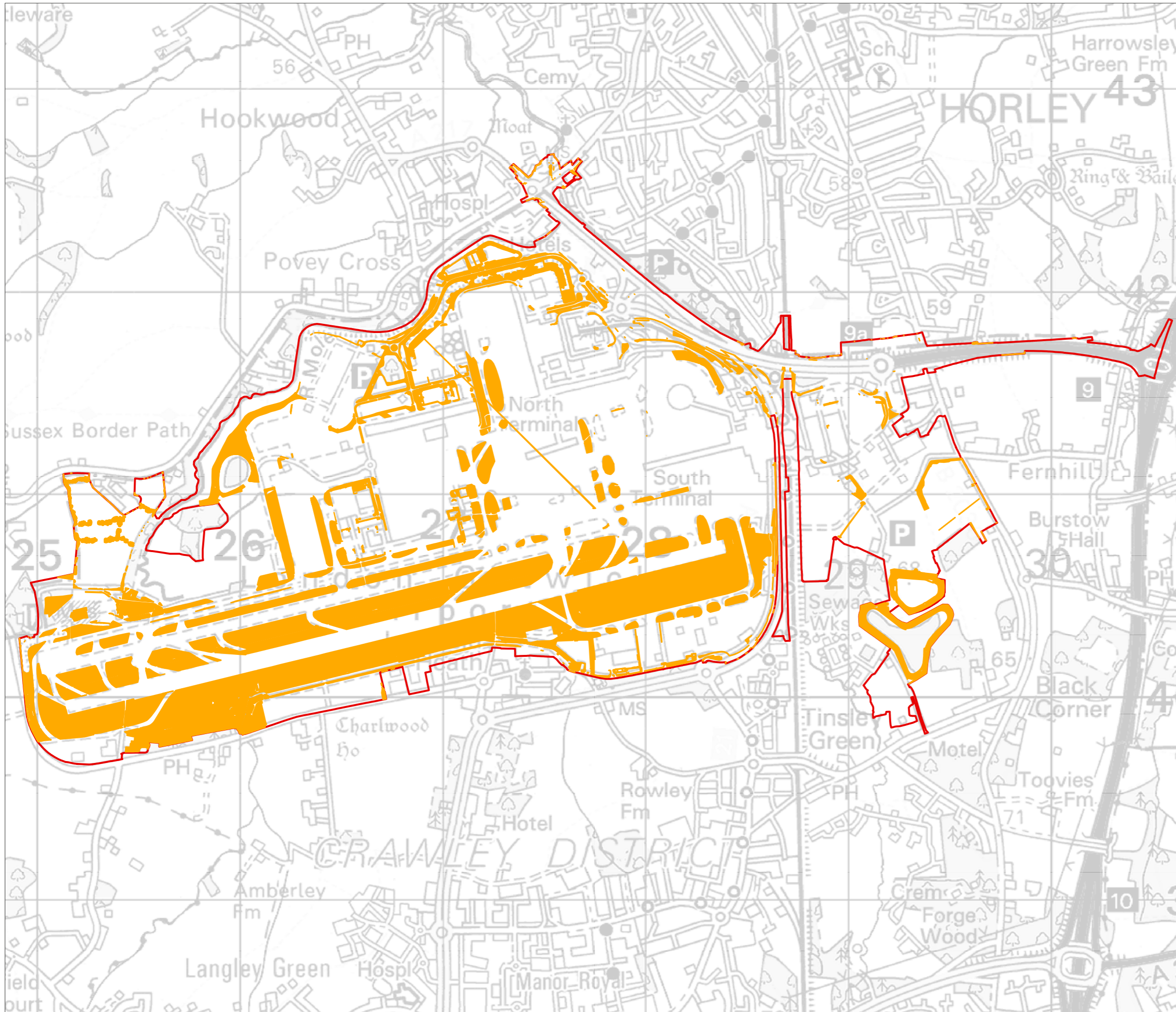
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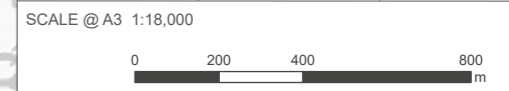
- Legend**
- ▭ Project Site Boundary
 - ▭ Location of habitat

DOCUMENT
 Response to Deadline 4 Documents

DRAWING TITLE
 Figure 8
 Retain of Grassland - Modified grassland

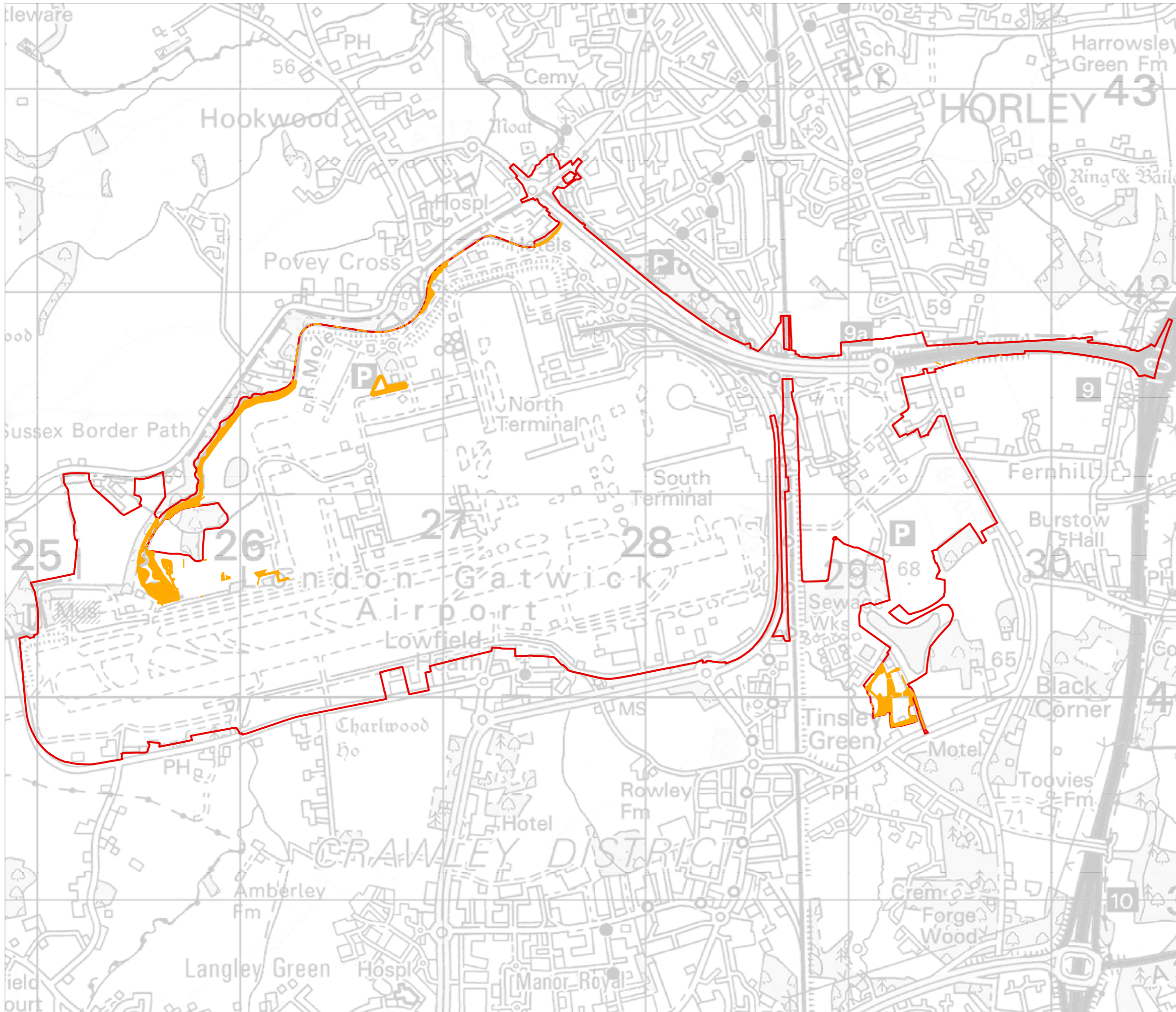
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- Legend**
- ▭ Project Site Boundary
 - ▭ Location of habitat

DOCUMENT
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DRAWING TITLE
Figure 9
Retain of Grassland - Other neutral grassland

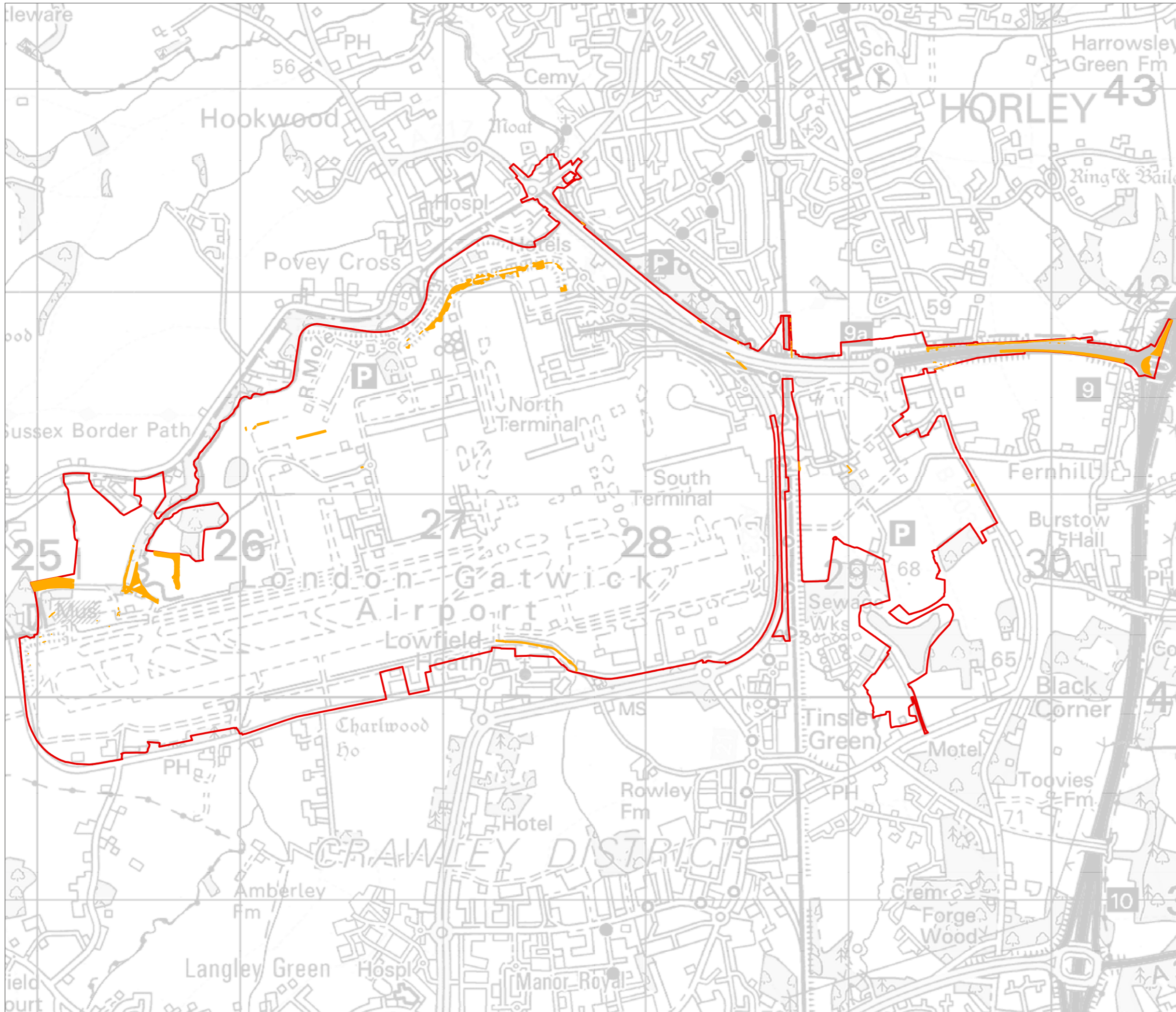
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- Legend**
- ▭ Project Site Boundary
 - ▭ Location of habitat

DOCUMENT
Response to Deadline 4 Documents

DRAWING TITLE
Figure 10
Retain of Heathland and shrub - Mixed scrub

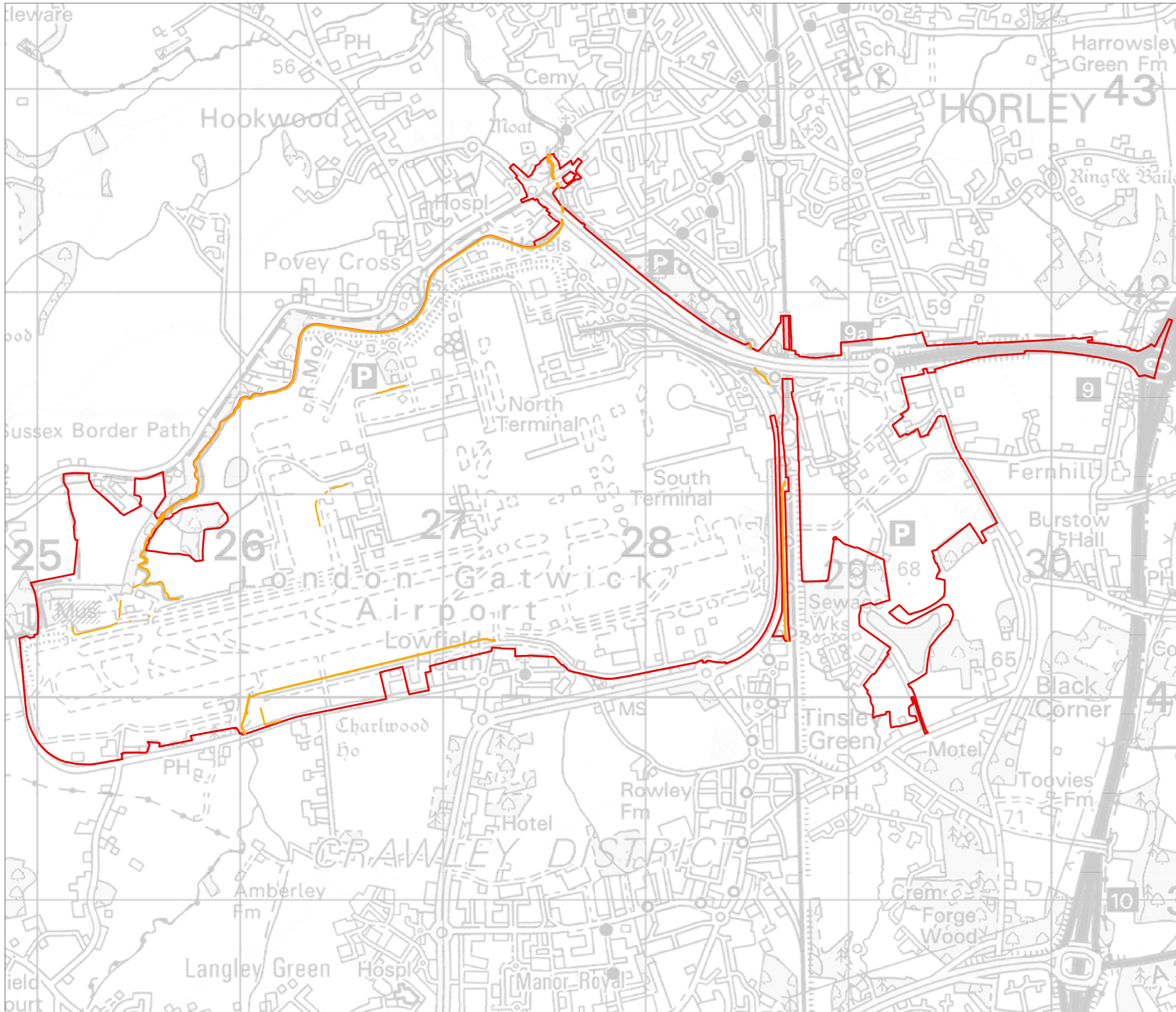
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Legend

- ▭ Project Site Boundary
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DOCUMENT
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DRAWING TITLE
Figure 11
Retain of Watercourse

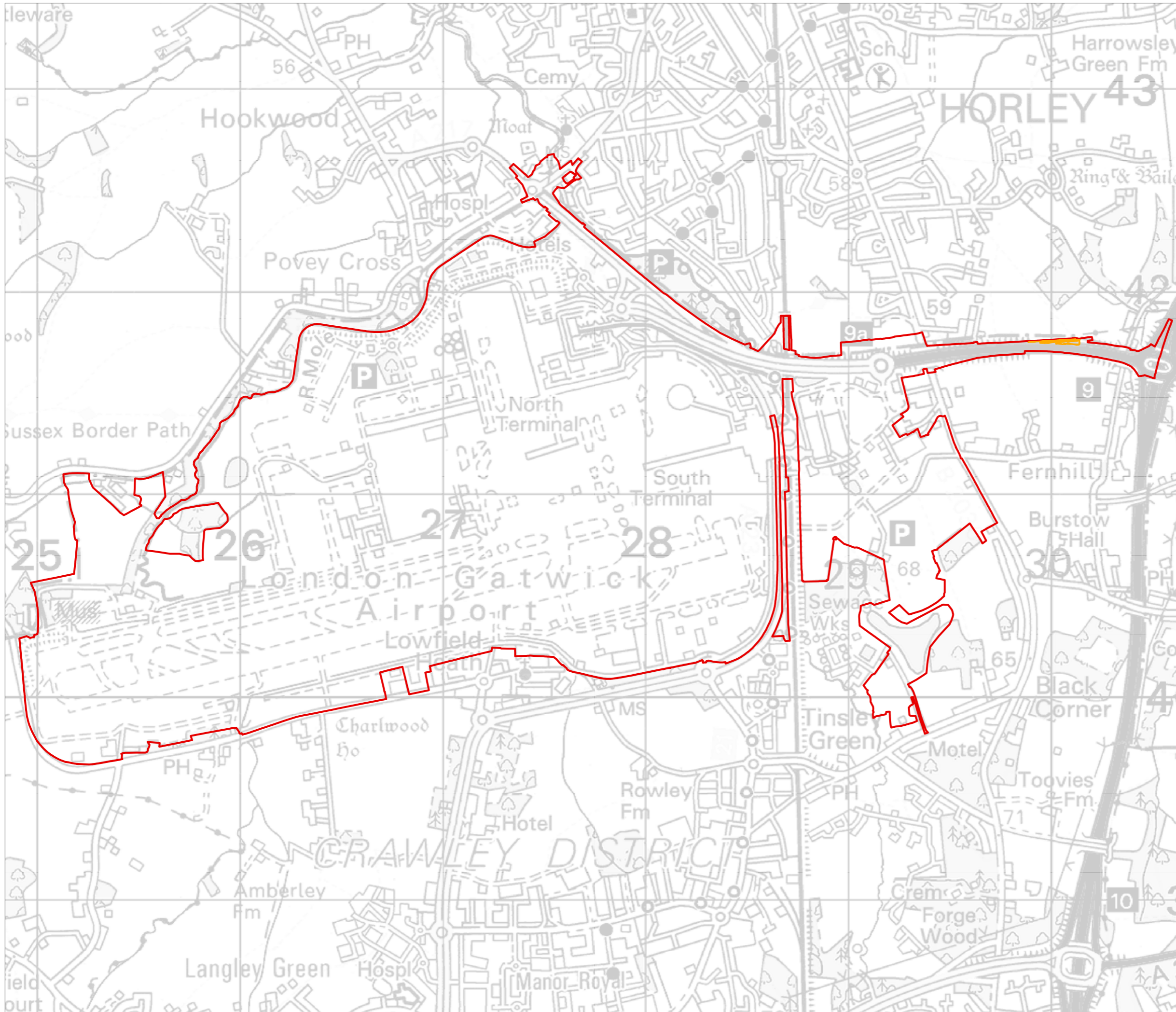
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- ▭ Project Site Boundary
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DOCUMENT
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DRAWING TITLE
Figure 12
Gain of Wetland - Reedbeds

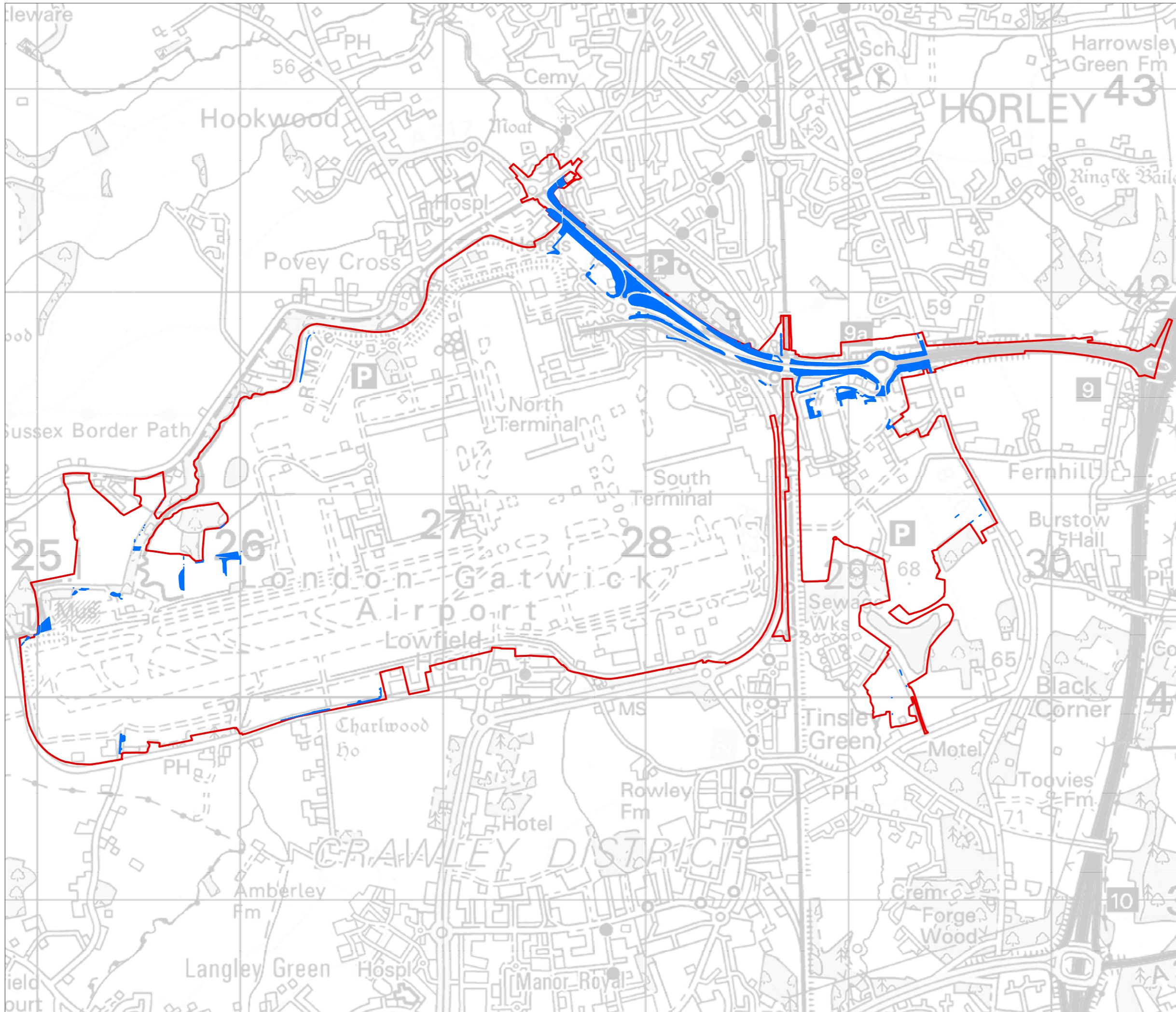
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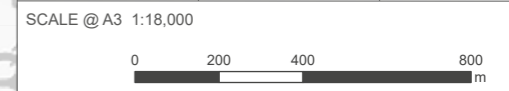
- Legend**
- ▭ Project Site Boundary
 - ▭ Location of habitat

DOCUMENT
Response to Deadline 4 Documents

DRAWING TITLE
Figure 13
Loss of Other broadleaved woodland

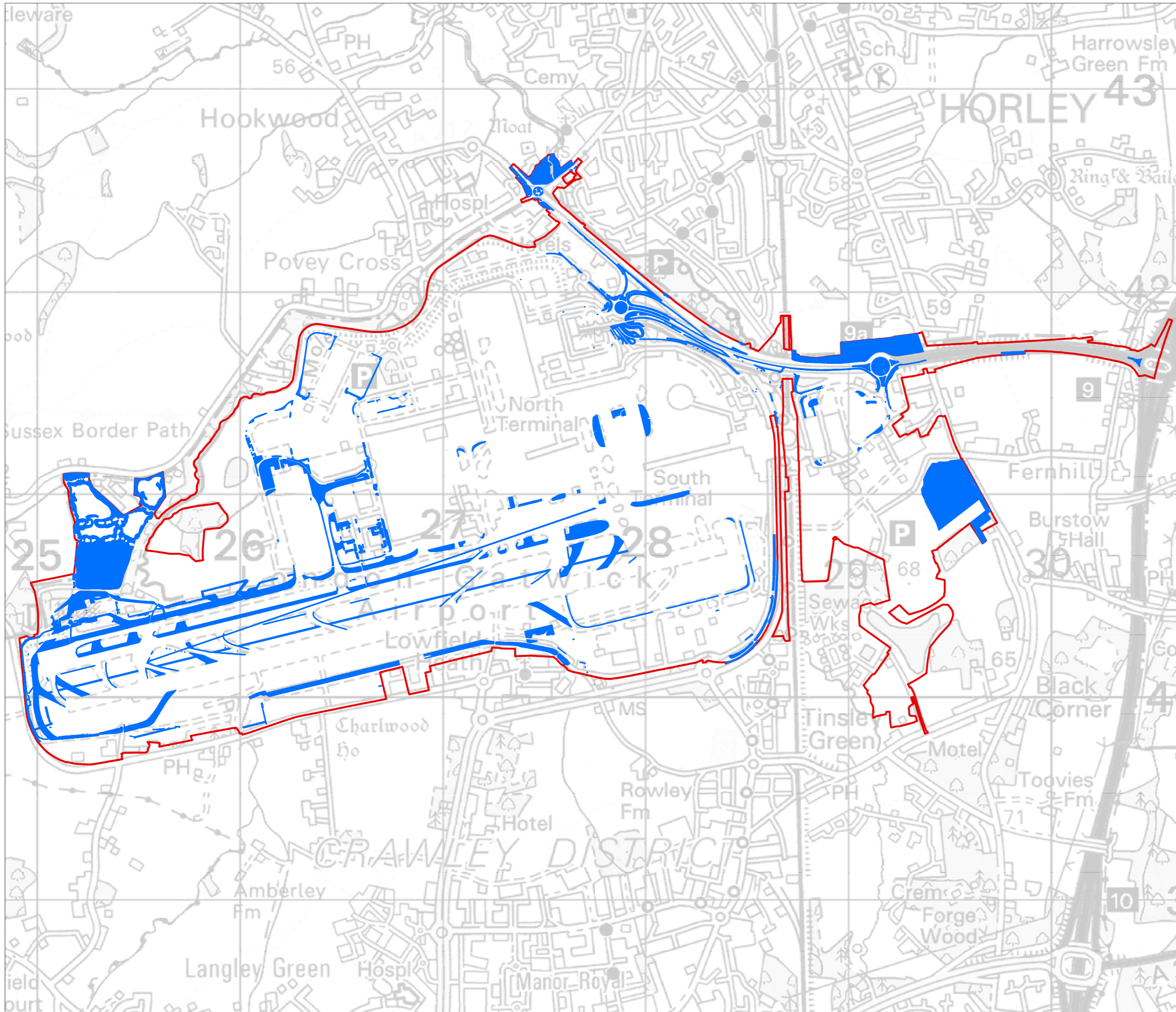
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- Legend**
- ▭ Project Site Boundary
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DOCUMENT
Response to Deadline 4 Documents

DRAWING TITLE
Figure 14
Loss of Grassland - Modified grassland

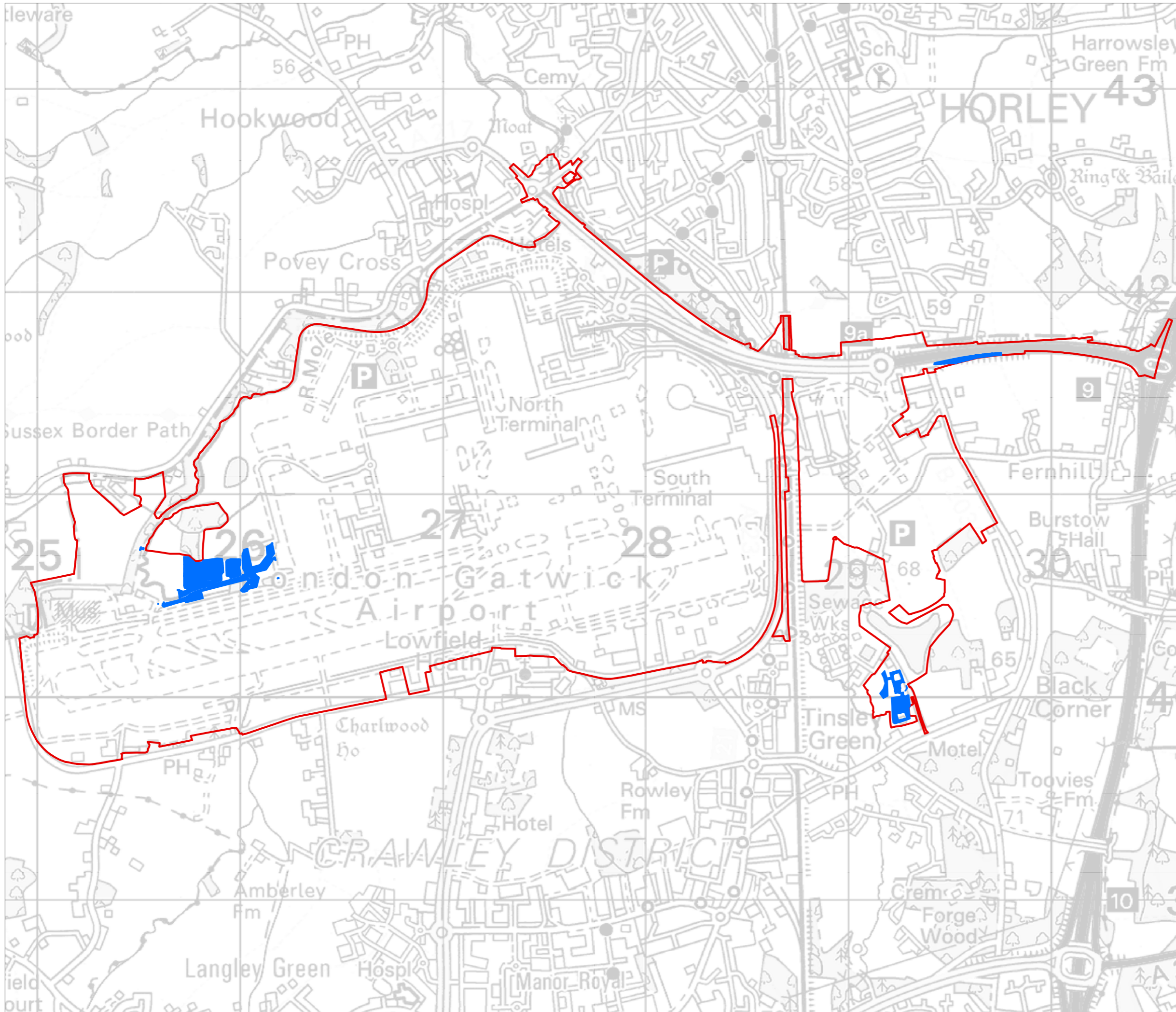
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- ▭ Project Site Boundary
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DOCUMENT
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DRAWING TITLE
Figure 15
Loss of Grassland - Other neutral grassland

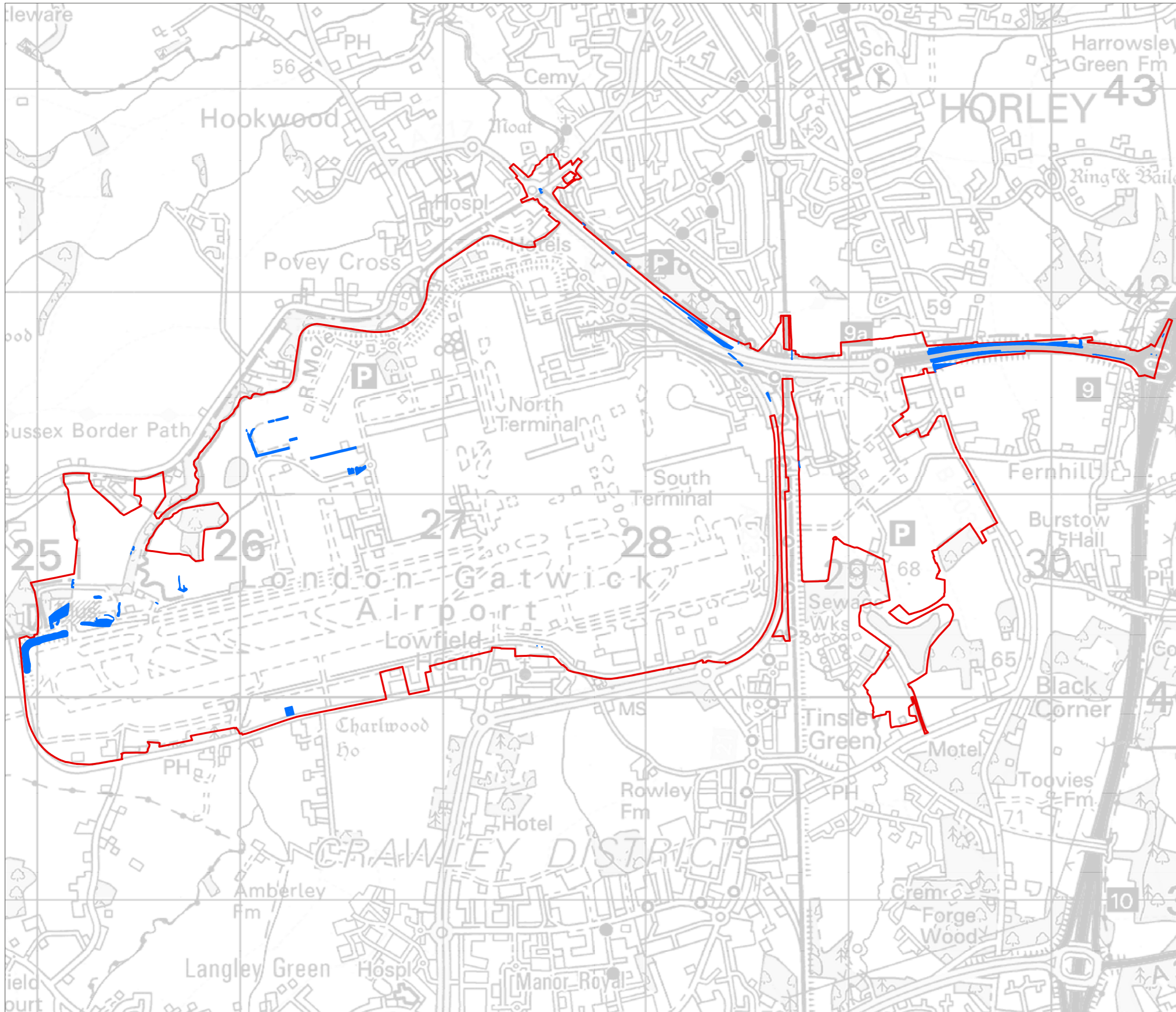
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- Legend**
- ▭ Project Site Boundary
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DOCUMENT
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DRAWING TITLE
Figure 16
Loss of Heathland and shrub - Mixed scrub

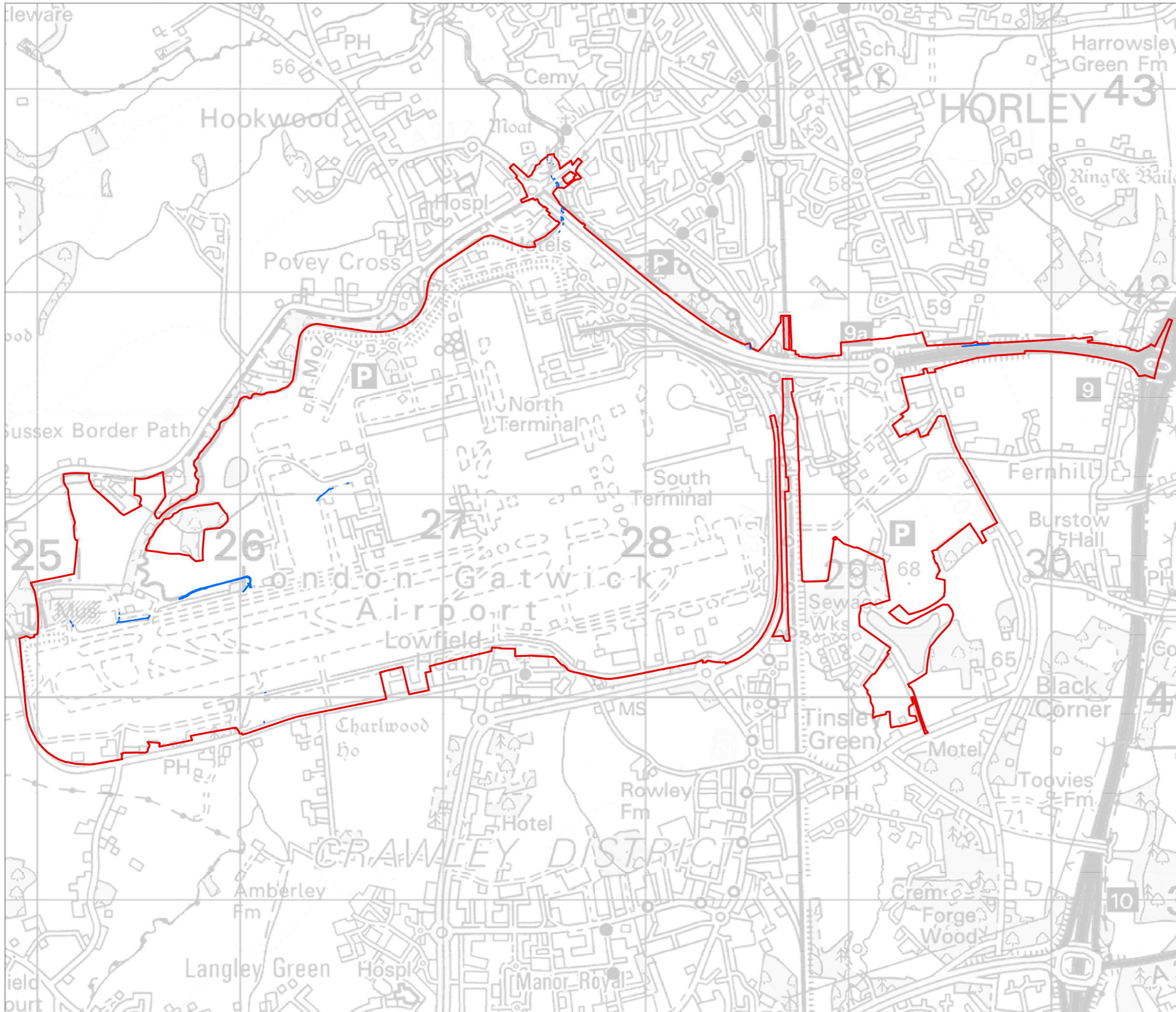
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- Legend**
- ▭ Project Site Boundary
 - ▭ Location of habitat

DOCUMENT
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DRAWING TITLE
Figure 17
Loss of Watercourse

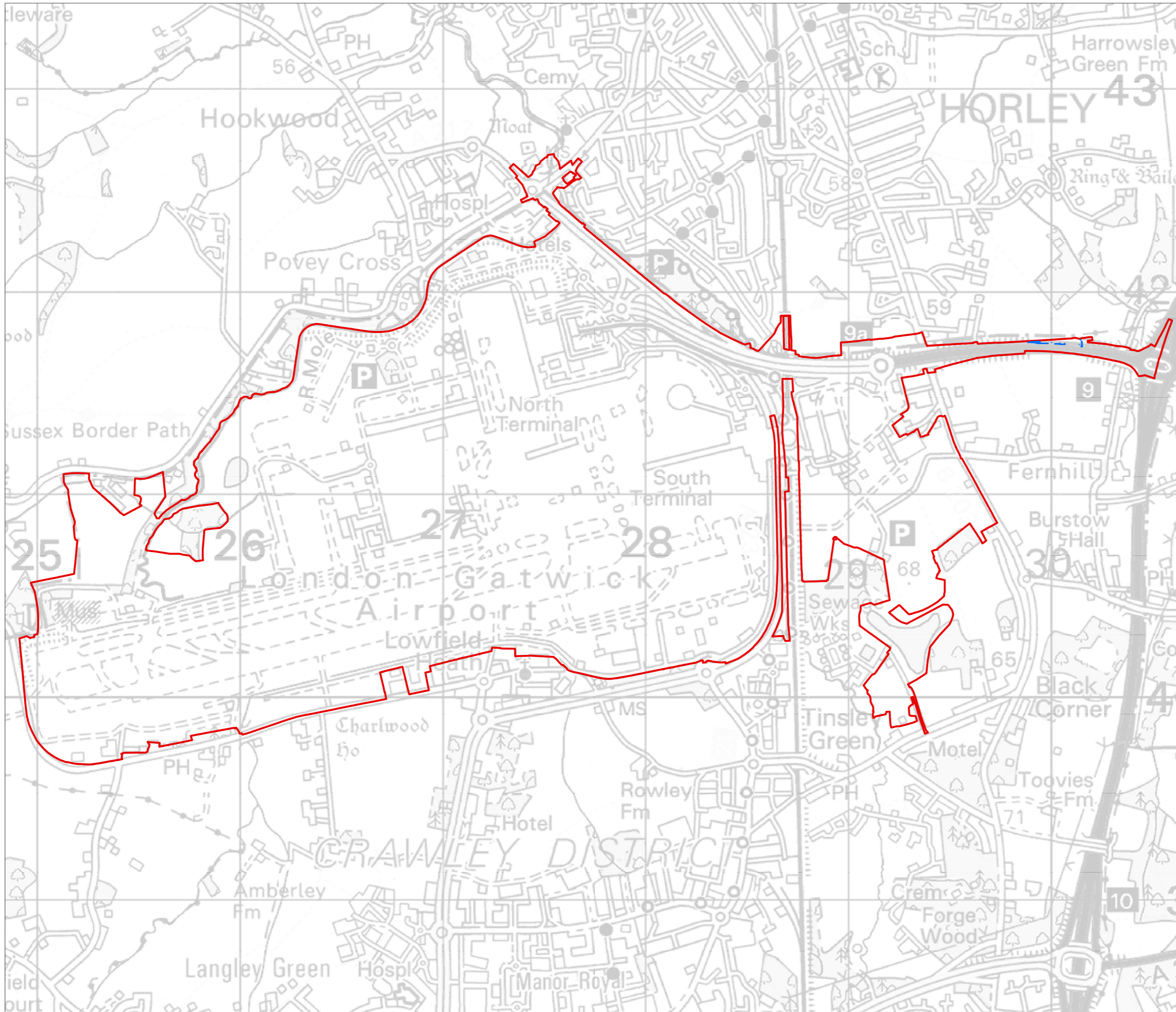
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DRAWING TITLE

Figure 18
Loss of Wetland - Reedbeds

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YEAR 10

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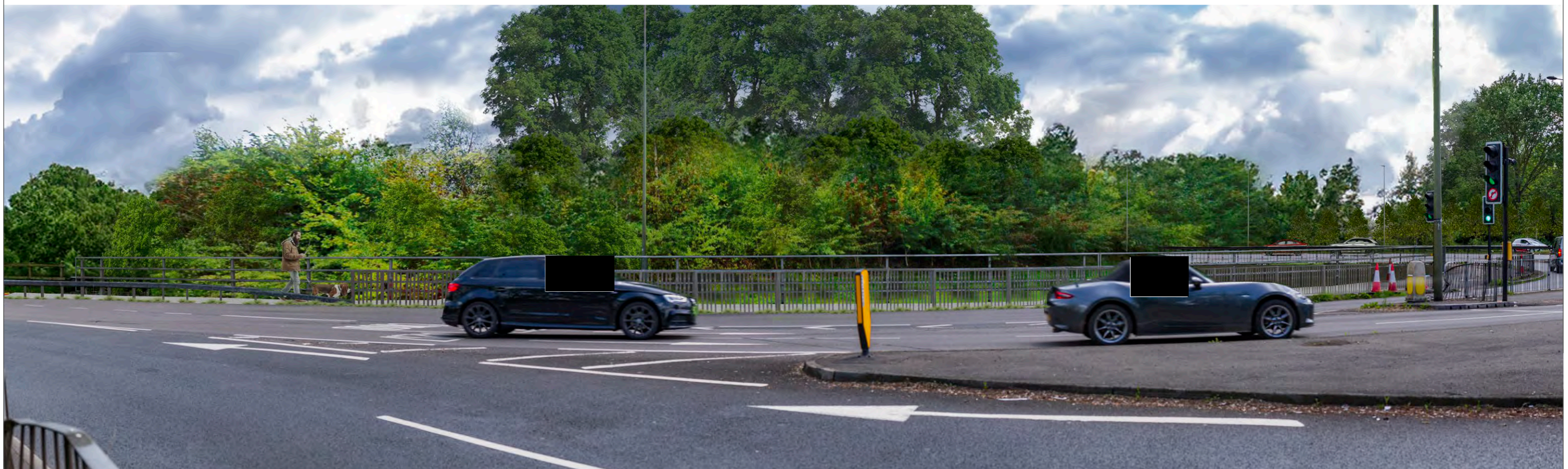
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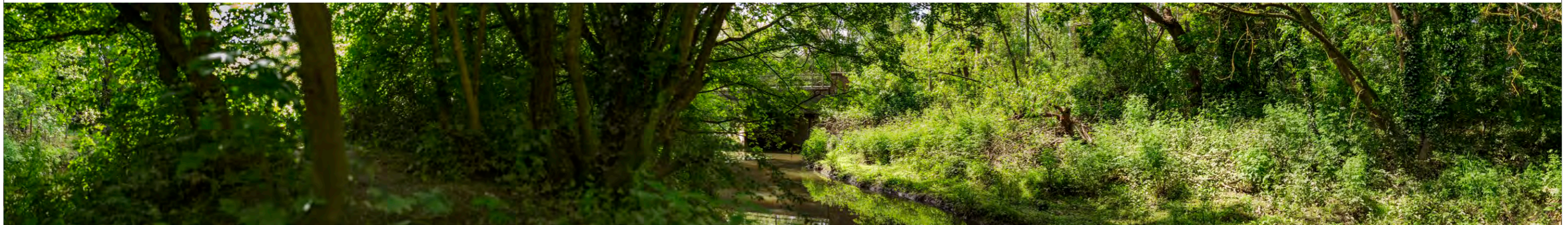


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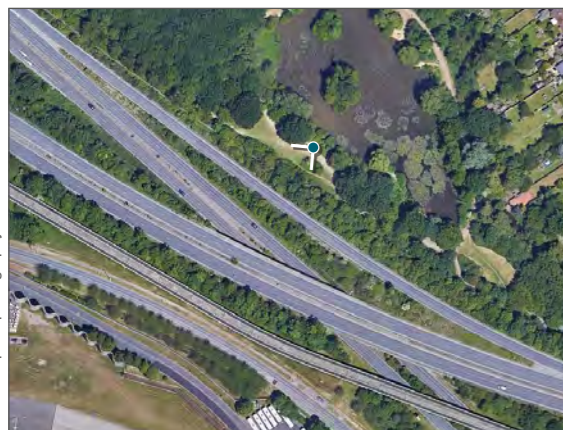
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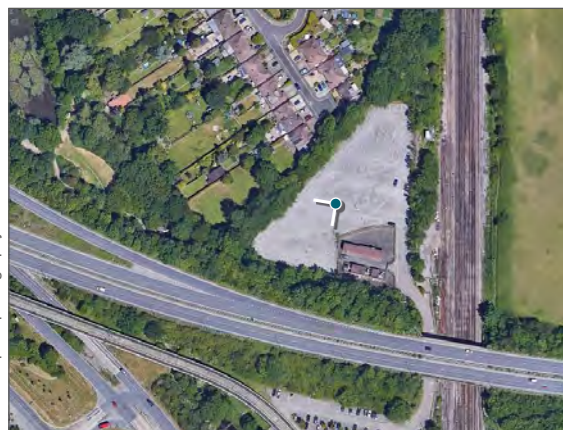
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