

# A428 Black Cat to Caxton Gibbet improvements

TR010044

Volume 9

9.95 Applicant's comments on the Biodiversity Net Gain Technical  
Note [REP6-062]

Planning Act 2008

Rule 8(1)(k)

Infrastructure Planning (Examination Procedure) Rules  
2010

January 2022

Infrastructure Planning

Planning Act 2008

**The Infrastructure Planning  
(Examination Procedure) Rules 2010**

**A428 Black Cat to Caxton Gibbet  
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Development Consent Order 202[ ]

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# 1 Introduction

- 1.1.1 This Biodiversity Net Gain (BNG) Technical Note has been produced by the Applicant in response to the Cambridgeshire Authorities' Biodiversity Net Gain Technical Note **[REP6-062]** submitted at Deadline 6.
- 1.1.2 This Technical Note provides context for the use of biodiversity metrics in the assessment of changes to biodiversity value and justification of the results of the BNG assessment for the A428 Black Cat to Caxton Gibbet Improvements Scheme (referred herein as 'the Scheme').
- 1.1.3 This Technical Note mirrors the structure of the Cambridgeshire Authorities' Biodiversity Net Gain Technical Note **[REP6-062]** in order that a direct comparison can be made to the comments, observations and queries raised in each section for the benefit of the reader and the Examining Authority.

## 2 The use of biodiversity metrics

- 2.1.1 This section of the report provides context for the use of metrics in assessing biodiversity net gain and provides a summary of the differences in the metrics used for the BNG assessment of the Scheme. It also addresses the comments, observations and queries raised by the Cambridgeshire Authorities as presented within Section 2 'Defra's Biodiversity Metrics' of the Biodiversity Net Gain Technical Note **[REP6-062]**.
- 2.1.2 Biodiversity Net Gain is defined as “*development that leaves biodiversity in a better state than before and an approach where developers work with local governments, wildlife groups, landowners and other stakeholders in order to support their priorities for nature conservation*” [REF 1].
- 2.1.3 The *Biodiversity Net Gain Good practice principles for development* [REF 1] includes ten principles which set out good practice for achieving Biodiversity Net Gain that must be applied together, as one approach. Principle 5 “Make a measurable Net Gain contribution” relates to the use of metrics as a way of quantifying the predicted change in biodiversity value resulting from development (see Table 1.1 in [REF 1]). However, the application of metrics to measure biodiversity value is only one element of the wider approach, reflected by the other nine principles that are required to achieve Net Gain involving amongst others; application of the mitigation hierarchy (explained in more detail at paragraph 4.1.6), avoiding impacts to irreplaceable habitats, delivering the best outcomes for biodiversity and creating a Net Gain legacy.
- 2.1.4 The Applicant agrees with the comments made in paragraphs 2.2 and 2.3 of **[REP6-062]** whereby metrics are a tool that can be used to help inform plans and decisions and are aimed at incentivising actions that benefit biodiversity and discourage those that cause harm. However, it should be noted that metrics use habitat attributes<sup>1</sup> as a proxy to measure the value of biodiversity, including habitat areas that are estimated, and therefore provide simplistic outputs that are not scientifically precise or absolute values. The results of the metric calculations should be used in conjunction with a qualitative assessment of ecological impacts to provide a full representation of the biodiversity effects of development.
- 2.1.5 This is explained in paragraphs 2.21 and 2.22 in the *Biodiversity Metric 2.0 User Guide* **[REP6-068]** which states
- 'The metric uses habitat categories as a proxy for biodiversity. Although this is rational, it is an oversimplification of the real world. Furthermore, while the scoring of habitats is informed by ecological reasoning and the available evidence, the outputs of biodiversity unit calculations are not scientifically precise or absolute values. The generated biodiversity unit scores are proxies for the relative biodiversity worth for the state of a place'.*

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<sup>1</sup> The biodiversity value is measured as a unit score based on the type, distinctiveness, area and condition of each habitat

*'The metric and its outputs should therefore be interpreted, alongside ecological expertise and common sense, as an element of the evidence that informs plans and decisions. The metric is not a total solution to biodiversity decisions.'*

## 2.2 National Highways Metric

2.2.1 In 2018 National Highways (at the time of publication known as Highways England), developed a biodiversity metric tool to support its commitment to reduce the net loss of biodiversity across the Strategic Road Network (SRN) (hereafter referred to as the 'Highways England metric').

2.2.2 The Highways England metric, based on methodology outlined in the *Biodiversity Offsetting Pilots, Technical Paper (2012)* [REP6-059] supported by amendments outlined in the *Highways England Chief Highways Engineer (CHE) Memorandum 422/18* [REF 2], was introduced to monitor the effects of projects against its biodiversity baseline, in order to track performance against its target to achieve no net loss at an organisational level by 2025 and net gain beyond.

## 2.3 Biodiversity Metric 2.0

2.3.1 In 2019, Natural England published *The Biodiversity Metric 2.0* [REF 3], hereafter referred to as 'Metric 2.0', which allows losses and gains of biodiversity to be calculated. However, as highlighted in the *Biodiversity Metric 2.0 User Guide* [REP6-068] there are limitations to its use, and a series of principles and rules should be followed when conducting assessments.

2.3.2 The purpose and the limitations of the metric and its outputs are underlined by Principles 3 and 6 of the *Biodiversity Metric 2.0 User Guide* (see paragraph 2.23 of [REP6-068]):

- a. **'Principle 3: The metric's biodiversity units are only a proxy for biodiversity.** *While it is underpinned by ecological evidence the metric is only a proxy for biodiversity and to be of practical use has been kept deliberately simple. The numerical values generated by the metric represent relative, not absolute values'.*
- b. **'Principle 6: The metric is designed to inform decisions.** *Decisions and management interventions need to take account of available expert ecological advice and not just the biodiversity unit outputs of the metric'.*

2.3.3 National Highways adopted the use of Metric 2.0 as the standard tool for monitoring performance against its biodiversity targets in 2020.

## 2.4 Key differences between the Highways England metric and Metric 2.0

2.4.1 The Highways England metric differs from Metric 2.0, the list below provides a summary of differences but is not exhaustive:

- a. Metric 2.0 uses the *UK Habitat (UKHAB) Classification System* [REF 4] rather than the Phase 1 Habitat survey classification used for the Highways England metric.

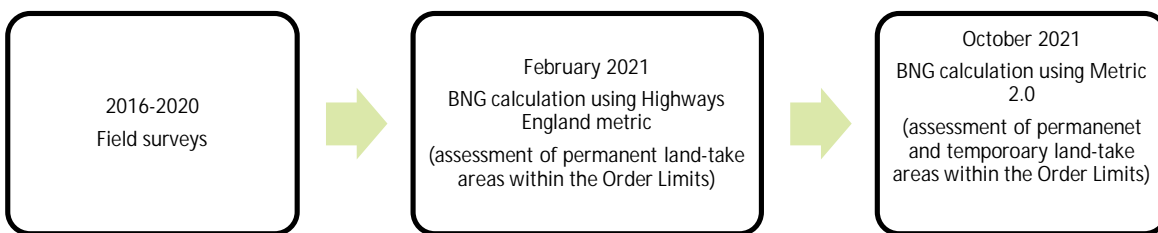
- b. Linear habitats such as hedgerows and watercourses are measured and assessed separately to area-based habitats such as woodland and grassland in Metric 2.0. This produces three separate outputs for habitat, hedgerow and river units which are not comparable and cannot be summed to give a combined overall score. This differs from the Highways England metric which provides a combined biodiversity unit score for area and linear habitats.
- c. Metric 2.0 introduces additional habitat condition ratings, using seven categories compared to three in the Highways England metric, adding values such as 'fairly poor' and 'fairly good' and the habitat condition assessment criteria differ to those used for the Highways England metric.
- d. Metric 2.0 includes a series of standard 'risk multipliers' to account for the inherent risk of creating and restoring habitats, the time taken to establish habitats and the location of the mitigation in relation to the habitats lost on site. The risk multipliers have the effect of reducing the value of the proposed habitats, which means larger areas, habitats of higher distinctiveness, and/or condition are required to achieve net gain. The Highways England metric does not include any risk multipliers.
- e. Metric 2.0 includes two distinct spatial components strategic significance and connectivity to measure the quality of a habitat which are not used in the Highways England metric.
- f. Metric 2.0 includes a habitat 'trading rules' tab which does not form part of the Highways England metric. The trading rules call for like for like replacement of certain habitats and are in place to try to prevent biodiverse habitats being replaced with larger areas of less biodiverse habitat (trading down). The trading rules are discussed in more detail in Section 3.
- g. In addition, as highlighted in the User Guide (see 'Foreword' in **[REP6-068]**), Metric 2.0 was released by Natural England as a beta version, which was under development and testing, in order to receive feedback on its application and in order to fix any issues and make improvements. This was reflective of the fact that BNG is a relatively new and emerging practice which is constantly evolving. Natural England has subsequently released an updated version The Biodiversity Metric 3.0 (JP039) published in 2021 [REF 5].

## 2.5 Timeline of the Scheme BNG assessment

- 2.5.1 The assessment of biodiversity net gain is a sequential iterative process that is applied throughout the development of a scheme. The metric calculation is based on data collected at a certain period in time to predict the change in biodiversity. At the earlier stages of design, when information is sometimes lacking, broad assumptions have to be made to enable the assessment to be completed and allow the indicative results to be used to inform subsequent stages of the design process to improve outcomes for biodiversity.



- 2.5.2 During the life cycle of the BNG assessment process for the Scheme there have been revisions to the metrics and methods used and changes to the areas of land covered by the BNG assessment which have culminated with the assessment [REP3-012]; however, this means a comparison of the outputs between the Highways England metric and Metric 2.0 are difficult to make.
- 2.5.3 The timeline of the BNG assessment (see **Figure 2-1**) provides a summary of; the points at which the data was collected, when the assessments were undertaken and the metrics used for the calculations.



**Figure 2-1: Timeline of BNG assessments**

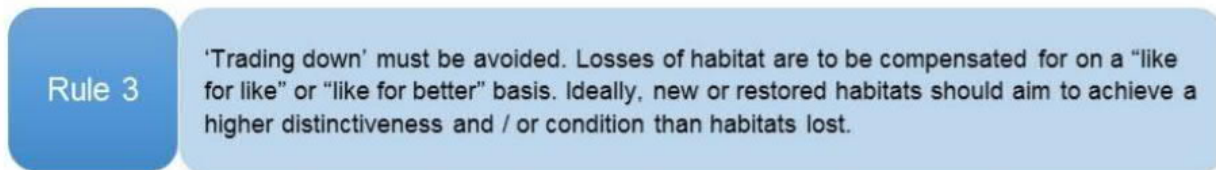
- 2.5.4 Field surveys of the baseline habitats were undertaken by qualified and experienced ecologists in the period 2016 – 2020 (ending in November 2020) using the standard Phase 1 Habitat Survey Methodology [REF 6]. Initially these surveys were undertaken by Jacobs in 2016, prior to the requirement for a BNG assessment, the findings of which were presented in Appendix 8.20, Phase 1 Habitat Survey [APP-207] of the Environmental Statement. This information was supplemented by follow on surveys by AECOM in 2018-2020 in Appendix 8.3, Terrestrial Habitats including Hedgerows [APP-190] of the Environmental Statement.
- 2.5.5 In February 2021, a BNG calculation was completed by the Applicant on a voluntary basis using the Highways England metric to quantify the predicted change in biodiversity units of the Scheme. This calculation was completed using Phase 1 data [APP-207] [APP-190] and assigning habitat condition retrospectively applying condition criteria from *Highways England Chief Highways Engineer (CHE) Memorandum 422/18* [REF 2]. The results were presented in Section 4 of Appendix 8.19, Biodiversity Net Gain [APP-206] of the Environmental Statement. The results predicted approximately 20% net gain in biodiversity units.
- 2.5.6 In response to Question 1.3.2 within the *Applicant's Response to the Examining Authority's First Round of Written Questions* [REP1-022] submitted at Deadline 1 of the Examination, the Applicant made a commitment to calculate and report the BNG assessment score for the Scheme using Natural England's Biodiversity Metric 2.0 [REF 3]. A Biodiversity Net Gain Assessment was undertaken using data from the Phase 1 Habitat Surveys [APP-207] and [APP-190] and assigning habitat condition retrospectively applying condition criteria from the Metric 2.0 User Guide [REP6-068]. The report was submitted into the Examination for consideration at Deadline 3 in October 2021 [REP3-012] and [REP3-013].



- 2.5.7 The scores presented in the Metric 2.0 report (see table 3-10 in **[REP3-012]**) i.e. approximately 16% net gain in habitat units, 32% net loss in hedgerow units and 10% net gain in river units, differ to those presented in the Environmental Statement **[APP-206]**. This is partly due to differences between the Highways England metric and Biodiversity Metric 2.0 [REF 3] outlined in Section 2.4, and because the initial calculation completed in February 2021 using the Highways England metric included only permanent land-take areas within the Scheme's Order Limits whereas, the Metric 2.0 calculation **[REP3-012]** included the temporary land-take areas.
- 2.5.8 The Metric 2.0 calculation **[REP3-012]** completed in October 2021 covered all land with within the Scheme's Order Limits (including both permanent and temporary land-take areas) which represents the most up to date BNG assessment and results for the Scheme, these results are quoted in this report unless stated otherwise.

### 3 Trading down of Habitat Distinctiveness

- 3.1.1 This section of the report addresses the comments, observations and queries raised by the Cambridgeshire Authorities as presented within Section 3 'Trading Down of Habitat Distinctiveness' of the Biodiversity Net Gain Technical Note [REP6-062].
- 3.1.2 As described in paragraph 3.1 of [REP6-062] habitats types are classified into 'distinctiveness' categories which are predetermined in the metric. It should be noted that not all high distinctiveness habitats qualify as Priority habitats afforded protection under S41 of the *NERC Act* [REF 7] as additional criteria have to be met for certain habitats.
- 3.1.3 *Biodiversity Metric 2.0* [REF 3] includes a set of 'rules' stated within the User Guide document (refer to paragraph 2.23 of [REP6-068]) which encourage the correct application of the metric when conducting BNG assessments.
- 3.1.4 It is acknowledged that Rule 3 referred to in paragraph 3.5 of [REP6-062] is intended to prevent higher value habitats being replaced by larger areas of lower distinctiveness habitats and to ensure that any priority habitats are replaced on a like for like basis (see **Figure 3-1**).



**Figure 3-1: Rule 3 – Trading down**

- 3.1.5 Rule 3 states "*Ideally, new or restored habitats should aim to achieve a higher distinctiveness and/or condition than habitats lost*". However, the inclusion of the word 'ideally' demonstrates that in certain instances this may not be possible and there needs to be some flexibility in the metric to reflect what is feasible in practice. Paragraph 4.22 of [REP6-068] explains that the metric provides indicative advice on the types of habitats that could be included within the mitigation/compensation design of a scheme but the 'suggested actions' do not constitute formal advice.
- 3.1.6 Suggested actions to meet the trading rules for each habitat distinctiveness category included in *Biodiversity Metric 2.0* [REF 3] are shown in **Table 3-1**.

**Table 3-1: Suggested actions to meet the trading rules**

Habitat distinctiveness	Suggested action
High	Like for like replacement
Medium	Same broad habitat type or a higher distinctiveness Like for like or better
Low	Same distinctiveness or better habitat required

## 4 A428 Scheme's BNG calculations

- 4.1.1 This section of the report addresses the comments, observations and queries raised by the Cambridgeshire Authorities as presented within Section 4 'A428 Scheme's BNG calculations' of the Biodiversity Net Gain Technical Note [REP6-062].
- 4.1.2 In paragraph 4.1 of [REP6-062], reference is made to the use of the Design Manual for Roads and Bridges (DMRB) *LA 108 Biodiversity – revision 1* [REP6-070] which sets out National Highway's approach for the assessment of biodiversity changes. Page 5 of [REP6-070] states that:
- 'Biodiversity Metric 2.0 JP029..... can be used to supplement the reporting of significance of environmental effects, by providing a way of calculating biodiversity gains and losses' and 'Natural England's Biodiversity Metric 2.0 JP029 may be adopted to provide a summary of the scale and nature of biodiversity changes which are to be reported in environmental assessment reports'.*
- 4.1.3 The use of 'can' and 'may' in [REP6-070] shows that these are optional requirements and that this is not an essential element of an Environmental Statement.
- 4.1.4 The net loss of habitats of high distinctiveness, perceived to be priority habitats, referred to in paragraph 4.4 of [REP6-062] are discussed in detail in paragraphs 4.1.11 to 4.1.21.
- 4.1.5 The update to Metric 2.0 included the trading rules within the calculation [REP3-013]. Paragraph 4.9 of [REP6-062] observes the trading rules in Metric 2.0 have not been satisfied for some area-based medium and high distinctiveness habitats and comments *"the Scheme delivers the reported "net gain" by creating areas of low-quality habitat, rather than protecting and restoring habitats of higher biodiversity quality."*
- 4.1.6 In line with the best practice principles of BNG [REF 1], the preliminary Scheme design has followed the mitigation hierarchy by trying to protect habitats as far as practicably possible, as described in paragraph 8.8.1 in Chapter 8, Biodiversity [APP-077] of the Environmental Statement. The mitigation hierarchy states that impacts to habitats should be avoided where possible, where impacts cannot be avoided, they should be minimised and mitigated for, with offsite mitigation provided as a last resort.
- 4.1.7 The measures presented within Figure 2.4(v3) Environmental Masterplan [REP6-006] have been developed in response to the mitigation requirements of the Scheme, in order to provide habitats that perform a combined function in terms of meeting ecology, landscape and drainage needs.
- 4.1.8 The approach for the ecological mitigation for the Scheme has focused on the creation of habitats to replace habitats lost whilst simultaneously delivering improvements to biodiversity by expanding and connecting habitats, thereby contributing to the restoration of local ecological networks and biodiversity. This approach is reflected in the overall substantial net gains in habitat area and habitat units (approximately 16% net gain of habitat units).

- 4.1.9 The biodiversity and landscaping mitigation has been designed to mitigate for ecological losses and follows the trading rules as far as feasibly possible whilst delivering some habitats far in excess of the areas lost (for example a net increase in woodland planting >60 ha).
- 4.1.10 The trading rules should not override the overall positive biodiversity outcomes of the Scheme that have been developed with the input of ongoing ecological expertise as reported in Chapter 8, Biodiversity [APP-077] of the Environmental Statement and reflected in the positive results of both the Highways England metric and Metric 2.0 (approximately 20% net gain in biodiversity units and approximately 16% net gain in habitat units respectively. Note these measures are not directly comparable due to differences in the methods but both show positive gains). As described in paragraph 3.1.5 the trading rules provide guidance on how habitat losses should be addressed in the Scheme design, but if trading rules are not met for every habitat type this should not be interpreted as uncompensated losses.
- 4.1.11 Paragraphs 4.13 and 4.14 of [REP6-062] list the high and medium habitats which are shown not to be meeting the trading rules in the Metric 2.0 calculation [REP-013]. These habitats are considered below in turn and further justification is provided to explain why the trading rules are not considered to be an issue for each habitat and to demonstrate how those habitats will be adequately mitigated within the Scheme design. In most cases the apparent failure to meet the trading rules has been triggered as a result of the BNG assessment taking a precautionary approach in the classification of habitat types, with some habitats classified as high distinctiveness although these are not priority habitats.

#### **Reedbeds (high distinctiveness)**

- 4.1.12 The area of reedbed which has been assessed as potentially lost (1.49 ha) forms part of the Breedon Quarry restoration plan for the quarry site and does not currently exist. However, the Breedon Quarry restoration plan that has been agreed with the local authority (see Figure 2 in Annex A of Appendix 8.19, Biodiversity Net Gain [APP-206] of the Environmental Statement) forms the existing baseline used for the BNG assessment, assuming that the reedbed is 2 years old in terms of its establishment and development. Although the BNG assessment has taken a precautionary approach by accounting for the loss of this habitat, it has been assumed the reedbed would be relocated within the restoration plan to avoid any significant impacts on this priority habitat. On this basis of avoidance (the first tier of the mitigation hierarchy) the trading rules would not apply.

#### **Lowland mixed deciduous woodland (high distinctiveness).**

- 4.1.13 The loss of "broadleaved woodland – semi-natural" shown on the Phase 1 Plan (see Figure 1 in [APP-207]), amounts to 2.69 ha. This comprises 15 small copses and short strips of riparian trees ranging from 0.38 to 0.01 ha, 66% of which are less than 0.10 ha. The BNG assessment has taken a precautionary approach to the classification of this woodland habitat, in the absence of detailed information within the Phase 1 survey results [APP-207] and assigned as

'lowland mixed deciduous woodland' which is a high distinctiveness habitat in the metric calculations.

- 4.1.14 Using the Ordnance Survey Popular Edition maps (1919-1920), at least half of these woodlands are new to the landscape since that time. Others are too small to have been mapped. On the basis that some of the woodlands are relatively new and that all are very small, it is highly likely that none of these woodlands are priority lowland mixed deciduous woodland. It is anticipated pre-construction additional survey work will be carried out at a higher resolution of mapping in order to update the baseline and these areas of woodland are likely to be re-categorised to a medium distinctiveness habitat. This would improve the overall BNG results for habitat units and mean the trading rules for lowland mixed deciduous woodland would not apply.
- 4.1.15 In addition, the BNG assessment has taken a precautionary approach to the classification of the woodland being delivered by the Scheme. This broadleaved woodland planted on agricultural land has been categorised as a medium distinctiveness habitat, so as not to over-estimate the value of the units being delivered. However, in the long-term the large areas of broadleaved woodland habitats (net gain of >60 ha) would become established into semi-natural habitats and provide significant improvement, compared to the baseline, by expanding and connecting woodland habitats along the route to areas of existing woodland within the wider landscape, delivering landscape scale enhancement. It is therefore considered in this case the scale of the medium distinctiveness habitats is sufficient to outweigh the small loss of the potentially higher distinctiveness habitats being replaced.

#### **Wood-pasture and parkland (high distinctiveness)**

- 4.1.16 Small areas of "broadleaved parkland/scattered trees" recorded on the Phase 1 Plan (see Figure 1 in [APP-207]) have been classified as high distinctiveness habitats in both metric calculations on a precautionary approach [APP-206] [REP3-012]. This can be an issue when converting Phase 1 habitats to UKHAB used for Metric 2.0 calculations. These small areas of scattered trees, amounting to a total area of 0.31 ha, are located within the current highway infrastructure (one small area within a roundabout and the other adjacent to a highways junction) distanced well away from the areas of wood-pasture and parkland at Croxton Park. Due to their location next to the road with limited space for a root system to develop they are considered to be of low distinctiveness and not priority habitat, therefore the Applicant is confident the Scheme will not result in any impact to 'wood-pasture and parkland' habitats. It is likely these habitats would be re-classified to a lower distinctiveness habitat (such as 'urban street tree' in UK HAB [REF 4] used for Metric 2.0 calculations) during the pre-construction survey at detailed design and the trading rules associated with their loss would be met through the Scheme mitigation design. As a result, the trading down rules will not apply in this case.



### **Cropland (medium distinctiveness)**

- 4.1.17 Arable field margins tussocky grassland were recorded in the Phase 1 Plan (see Figure 1 in [APP-207]); however, it is likely these are either lowland grassland or standard cropland, In the absence of further detail on the habitat composition, these arable margins have been categorised as a medium distinctiveness habitat in the metric calculation on a precautionary basis. However most arable habitats are of low distinctiveness and therefore it is likely these habitats would be re-classified during the pre-construction survey at detailed design and the trading rules would be met through the Scheme mitigation design.
- 4.1.18 The Scheme design has prioritised the incorporation of grassland and woodland that would have been present within the landscape prior to the arable land, rather than replacing arable margins, which is considered to result in an overall improvement for biodiversity, regarded as maximising “opportunities” as promoted by the *National Policy Statement for National Networks* [REF 8].

### **Heathland and Scrub (medium distinctiveness)**

- 4.1.19 The Scheme results in a net loss of approximately 7.63 ha of mixed scrub. Figure 2.4(v3) Environmental Masterplan [REP6-006] makes provision for the creation of 10.42 ha of mixed scrub, and the retention of 0.12 ha along with significant areas of woodland planting. Based on the Scheme design it is envisaged the detailed Landscape Plan prepared at the detailed design stage will include additional areas of scrub to create natural woodland edges and there will be a natural succession and further colonisation of scrub within the Scheme over time; however, this is not assessed in the BNG assessment due to the current level of detail in Figure 2.4(v3) Environmental Masterplan [REP6-006] . Given the overall size of the site and ease to replace this habitat there is a high degree of confidence the trading rules will be satisfied for scrub.

### **Lakes- Ditches (medium distinctiveness)**

- 4.1.20 Overall, there is a net loss in the area of ditch habitat (1.6 ha) post construction compared to the baseline. However, the ditches provided within the Scheme design will provide a better-quality habitat through provision of enhanced riparian zones and improved aquatic habitats compared to the current ditches within the arable land which are managed and modified for agricultural purposes. It is therefore considered the enhancement of ditches within the Scheme design will be sufficient to mitigate for the loss of the poor condition ditches in the baseline.

### **Hedgerows**

- 4.1.21 Overall the Scheme delivers a net increase in hedgerow length (3.4 km). However, the Metric 2.0 calculation [REP3-012] was based on a highly precautionary approach which assumed all of the hedgerows in the baseline would be lost. Therefore 3.4 km represents the minimum gain in hedgerow length. Despite the overall net gain in length this resulted in a net loss of approximately 32% of hedgerow units due to the effect of the risk multipliers reducing the units yielded by the created hedgerows compared to the units lost from the baseline. However it is expected that it will be possible to retain some of the hedges within the temporary and permanent land take. It will not be possible

to determine the hedgerows which will be retained within Order Limits until detailed design. At detailed design with more certainty of options to retain habitats it is expected the impacts to hedgerows would be considerably reduced resulting in an improved BNG score for hedgerow units.

### **Summary**

- 4.1.22 In response to paragraph 4.15 in **[REP6-062]**, based on the explanation provided above the Applicant considers the loss of high and medium distinctiveness habitats shown in the metric calculations are over-precautionary and no further compensation is required. The results of the Metric 2.0 calculations demonstrate net gain in habitat and river units, and the net loss of hedgerow units is explained in Paragraph 4.1.21.
- 4.1.23 Paragraphs 8.8.26 to 8.8.28 in Chapter 8, Biodiversity **[APP-077]** of the Environmental Statement demonstrate how the Scheme has mitigated impacts and incorporated enhancement measures into the design.



## 5 Use of the Defra metrics in assessing BNG for other NSIPs

- 5.1.1 This section of the report addresses the comments, observations and queries raised by the Cambridgeshire Authorities as presented within Section 5 'Use of the DEFRA metrics in assessing BNG has been included in other NSIPs' of the Biodiversity Net Gain Technical Note **[REP6-062]**.
- 5.1.2 The *National Policy Statement for National Networks* [REF 8] does not specify the requirement for biodiversity net gain or the need to use a metric for Nationally Significant Infrastructure Projects (NSIP). However, industry and best practice has been driving the use of metrics on many NSIP projects which can help to guide the scheme design and mitigation requirements. As these are not a formal requirement, they have often been used to support the assessment but not formally submitted as part of the Development Consent Order application, or when done so, have been submitted for information only and at the request of the Examining Authority (such is the case for the Scheme).
- 5.1.3 The Applicant is aware that for the M54 to M6 Link Road, iterative BNG assessments were undertaken throughout the lifecycle of the project using both the Highways England metric and subsequently Metric 2.0 similar to the Scheme and was submitted as part of the DCO submission.

## 6 Position and supporting policy basis regarding the need to use BNG metrics

- 6.1.1 This section of the report addresses the comments, observations and queries raised by the Cambridgeshire Authorities as presented within Section 6 'Position and supporting policy basis regarding the need to use BNG metrics' of the Biodiversity Net Gain Technical Note **[REP6-062]**.
- 6.1.2 In response to paragraph 6.2 in **[REP6-062]**, Table 8-9 in Chapter 8, Biodiversity **[APP-077]** of the Environmental Statement accurately summarises the habitat losses and gains within the Order Limits. As discussed in paragraphs 4.1.12 and 4.1.16, the Applicant is confident the Scheme will not result in any impact to wood-pasture and parkland habitat or reedbed habitats.
- 6.1.3 Chapter 8, Biodiversity **[APP-077]** of the Environmental Statement includes a broader assessment of the potential positive and negative effects on biodiversity to provide an overall conclusion of significant effects. Table 8-10 in **[APP-077]** provides a qualitative overview of the magnitude of impact and significance of effect during operation.
- 6.1.4 Paragraph 6.4 in **[REP6-062]** refers to the effects on woodland habitat. The conclusion of slight beneficial effect to woodlands of low value (Table 8-10 in **[APP-077]**) takes into account the overall substantial net gain in area of woodland habitat (>60 ha) and improved habitat connectivity which is considered to provide significant improvement, compared to the baseline, and sufficiently outweigh the small loss (1.57 ha) of potential lowland mixed deciduous woodland. As explained in Paragraph 4.1.16 the Applicant is confident there will be no impact to wood-pasture and parkland.
- 6.1.5 In response to paragraph 6.5 in **[REP6-062]**, Table 8-10 in **[APP-077]** concludes a slight beneficial effect for ponds and other wetland habitat, including ditches, based on the overall increase in pond and wetland areas. It has been assumed that impacts to the reedbed to be delivered through the Breedon Quarry Restoration Plan will be avoided.
- 6.1.6 In respect of comments at paragraphs 6.7 to 6.13 in **[REP6-062]**, these no longer apply for the reasons explained in paragraphs 4.1.12 to 4.1.21 which demonstrates that the provision of habitats within the Scheme sufficiently mitigate for the loss of the high and medium distinctiveness habitats and provides enhancement reflected by the positive results of the BNG metric calculations for area-based and river habitats.
- 6.1.7 The conclusions of Chapter 8, Biodiversity **[APP-077]** of the Environmental Statement remain unaffected by the BNG assessment, which is a separate exercise, providing a valuable but parallel perspective of the biodiversity of the Scheme. For habitat and rivers, the BNG assessment outcomes confirm the findings of Chapter 8, Biodiversity **[APP-077]** of the Environmental Statement and the biodiversity net gain as calculated using the Highways England metric.

- 6.1.8 With regards to paragraph 6.7 in **[REP6-062]** for hedgerows, Table 8-10 in **[APP-077]** shows overall a slight beneficial effect for hedgerows which is based on the overall net increase in hedgerow length of 3.4km. The Metric 2.0 calculation **[REP3-012]** assumed that all hedgerows within the baseline were lost resulted in a 32% net loss of hedgerow biodiversity units which represents a worst case scenario. However, at detailed design with more certainty of options to retain habitats it is expected the impacts to hedgerows would be considerably reduced resulting in an improved BNG score for hedgerow units, refer to paragraph 4.1.21.
- 6.1.9 A habitat survey will be required pre-construction to establish the baseline and the BNG assessment will be undertaken based on the detailed design of the Scheme. It is likely further details of the habitats to be retained within the Scheme, including hedgerows, would be available at this stage and therefore it is anticipated the BNG results would improve. On the basis of the Metric 2.0 calculation **[REP3-012]**, based on the preliminary design of the Scheme and the improvements expected to be made as part of detailed design it is anticipated the Scheme will achieve net gain across all habitat types within the Order Limits. Given that the Scheme achieves biodiversity enhancement, off-site compensation is not required irrespective of the outcome of the BNG calculations.

## 7 References

- REF 1 Chartered Industry Research and Information Association, Chartered Institute of Ecology and Environmental Management and Institute for Environmental Management and Assessment (2016). Biodiversity Net Gain: Good practice principles for development.
- REF 2 Highways England (2018). Chief Highway Engineer Memorandum 422/18: Supporting Transparency around our Biodiversity Performance
- REF 3 Natural England (2019). The Biodiversity Metric 2.0.
- REF 4 UK Habitat Classification (2020). UK Habitat Classification.
- REF 5 Natural England (2021). The Biodiversity Metric 3.0.
- REF 6 Joint Nature Conservation Committee (2010). Handbook for Phase 1 habitat survey – a technique for environmental audit.
- REF 7 UK Legislation, UK Public General Acts (2006) c.16. Natural Environment and Rural Communities Act 2006.
- REF 8 Department for Transport (2014). National Policy Statement for National Networks, Presented to Parliament pursuant to Section 9(8) and Section 5(4) of the Planning Act 2008.