

Biodiversity Net Gain Assessment

Barnard Park Copenhagen Street Islington N1 0ER

June 2021

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NON-TECHNICAL SUMMARY

This report assesses the overall biodiversity impact of the proposed redevelopment of Barnard Park, Islington. This report assesses the proposed redevelopment using the Biodiversity Metric 2.0 Biodiversity Calculation Tool Beta Version (Natural England, December 2019), as well as summarising measures that are included within the proposals that are not accounted for in the metric.

Biodiversity Calculator Results:

A summary of results from the Biodiversity Calculation Tool is included in section 6.1. Full data and results are available in the Biodiversity Calculation Tool, accompanying this report.

The development is estimated to result in an **overall increase** in biodiversity value of **+3.55 habitat units (+51.96%)**. There is also an increase in hedgerows of **0.43 hedgerow units** (112 metres).

This assessment is based on the current version of the landscape proposals for the site. These figures are calculated based on a number of assumptions outlined within this report. The figures may be revised as such assumptions are further investigated.

1 INTRODUCTION

Background

- 1.1 This report has been instructed by London Borough of Islington Parks Department.
- 1.2 The proposed works involve the redevelopment of the park to improve its usability for sports and its biodiversity value.
- 1.3 The site is currently dominated by amenity grassland, trees, bare ground and hardstanding. The site itself is a Site of Importance for Nature Conservation (SINC) on account of its size and function in the landscape and ecology of the local area.

Purpose of the report

1.4 Using the information available at this stage, this report estimates the Biodiversity Net Gain anticipated to be generated by the proposed plans, as measured using the Defra Biodiversity Metric.

Limitations

- 1.5 Biodiversity Net Gain assessments and calculations can only provide a proxy measure for the real long-term biodiversity changes that occur on any given site.
- 1.6 This assessment has been produced using the information available at this stage. As such, the assessment is based on a number of important assumptions. This report aims to make any such assumptions explicit so that they can be reviewed or updated as appropriate.

Information supplied

- 1.7 This report has been prepared with reference to the following supplied plan, showing the extent of the site boundary and the indicative landscaping:
 - Barnard Park Improvements Proposals Masterplan, Ireland Albrecht Landscape Architects, January 2016 as revised (IA-365-LMP-P01)

Protected Species

1.8 In addition to aiming to achieve Biodiversity Net Gain within developments, developers must implement mitigation measures required to prevent harm to legally protected species (such as nesting birds and and roosting bats). Achieving overall

Biodiversity Net Gain does not override the legal protection of these species and their habitats. Further information about mitigation measures required are included in the Preliminary Ecological Appraisal for this site (TMA, 2021).

2 QUALITATIVE BIODIVERSITY IMPACT

Introduction

Assessment of the Biodiversity Impact of a development proposal comprises two aspects. The Defra/Natural England Biodiversity Metric Calculation Tool is used to give a quantitative analysis of the habitats present before and after the development and related activities (including off-site measures) are undertaken. This gives numerical figures for the losses and gains of the habitat types present, expressed in Biodiversity Units. As well as this, consideration should be given to qualitative aspects which are not incorporated into the calculator. Such elements may play an important role in the 'functional' ecological value of the site, for instance in supporting the conservation of notable species known to be present locally, or in supplementing off-site habitats in ways not expressed in the Biodiversity Metric.

Ecological Enhancements

- 2.2 Maximising the ecological value of the park has been a priority throughout the design process. Full details of ecological enhancements proposed for the site are included in the Ecological Enhancement Scheme (TMA, 2021). These include the following:
 - An area of new orchard planting with bulb planting and grassland managed for biodiversity.
 - A biodiverse green roof.
 - A new pond designed for wildlife, located in the existing play area.
 - New areas of grassland seeded with biodiverse seed mix, as well as relaxed mowing of existing grass areas to promote biodiversity.
 - Areas of wildflower meadow turf.
 - New hedgerows.
 - A number of bird and bat boxes appropriate for species found locally.
 - Log piles.
- 2.3 Whilst some of these habitat types do get included into the Biodiversity Net Gain calculations, the resulting score does not fully account for functional values. For instance, a new pond in the urban landscape provides a very important feature for

many species including amphibians, dragonflies and birds, and provides a key stepping-stone between other waterbodies in the landscape.

3 THE MITIGATION HIERARCHY

Planning Policy

3.1 The London Plan (2021) Policy G6 includes a requirement to apply the mitigation hierarchy of avoidance, mitigation/minimisation, remediation and compensation. This principle is also integral to *Biodiversity Net Gain – Good Practice Principles for Development* (CIEEM, 2019).

Avoid

- 3.2 Impacts on key ecological features within the site have been avoided as follows:
- 3.3 Wherever possible, existing trees are due to be retained and protected.

Minimise

- 3.4 The impact on retained trees will be minimised following the recommendations of a suitably qualified arboriculturalist.
- 3.5 Wherever possible, existing grassland will be retained and managed to improve its biodiversity value.

Remediate

3.6 Where existing grassland is to be removed, it will be replaced with high quality grassland, which in many areas will include biodiverse seed mixes or wildflower meadow turf.

Compensate

3.7 Where tree removals are required, the planting plan includes a high number of compensatory trees of species which are of known value to local biodiversity.

4 BIODIVERSITY NET GAIN ASSESSMENT METHODOLOGY

Sources of Habitat Information

- 4.1 Baseline site habitat types and areas have been taken from the Preliminary Ecological Appraisal undertaken by TMA in 2021. The habitat survey was undertaken on 19th of April 2021 by Hattie Taylor of Tim Moya Associates, an experienced Consultant Ecologist and Qualifying Member of the Chartered Institute for Ecology and Environmental Management (CIEEM). The vegetation and habitat types within the site were noted during the survey in accordance with the categories specified for a Phase 1 Vegetation and Habitat Survey (JNCC, 2010). Dominant plant species were recorded for each habitat present.
- 4.2 Post-development habitat types and areas have been taken from the landscaping layouts available. Assumptions have been made regarding the classification of habitats due to be implemented, and about the eventual condition of those habitats, as outlined in Section 5 below.

Biodiversity Net Gain

- 4.3 Baseline and Post-development habitat sizes have been measured using TMA's MyTrees mapping software. The habitats areas measured are shown in Appendix 1.
- 4.4 The value of the on-site habitats is calculated using The Biodiversity Metric 2.0 Biodiversity Calculation Tool Beta Version (Natural England, December 2019). Once the value of the baseline and proposed habitats is assessed this tool is then used to measure the overall biodiversity net gain or loss of the proposed development.
- 4.5 The value for biodiversity of a habitat on site is measured using 'biodiversity units'. These 'biodiversity units' are calculated based on the type of habitat (based on the UK Habitat Classification ("UKHab") and the size, quality and connectivity of the habitat. This metric also considers whether the habitat is sited in an area identified locally, typically in a relevant Local Plan, as being of significance for nature.
- 4.6 Habitats within the existing site are considered to be of a higher value if they are well connected to similar habitat in the wider area, are a distinctive or rare type of habitat, if they are of a high quality for supporting nature and if the area is well-known for its ability to support nature. Examples of high scoring habitats include ancient woodlands

- or peat bogs, whereas low scoring habitats would include habitats such as intensely managed agricultural land.
- 4.7 Habitats which are to be created, restored or enhanced during the development are calculated with additional consideration given for 'risk'. The risk components include the difficulty of creating or restoring the habitat and the risk associated with the length of time it takes for a habitat to establish.

5 BIODIVERSITY NET GAIN PARAMETERS AND ASSUMPTIONS

Habitat Classification

- 5.1 The habitat types present within the site are shown in Appendix 1. The Biodiversity Calculation Tool, accompanying this report, gives the size of each habitat parcel. The habitat classifications have been selected based on the closest fit to the habitats identified within the Preliminary Ecological Appraisal, whilst also selecting classifications with a 'habitat distinctiveness' score appropriate for the habitat type in the context of the site and its surroundings.
- 5.2 Trees within the site have been classified as 'Urban Street Tree'. Trees with stems outside of the site boundary are not included in the habitat area calculations.
- 5.3 As an arboricultural assessment has been done, existing tree coverage has been calculated using the sum of the Root Protection Areas (RPA) for each tree. Proposed tree planting coverage has been calculated using the Biodiversity Calculation Tool 'Street Tree Helper', which gives a standard RPA depending on the size class of the tree.
- 5.4 Habitats occurring beneath the crown of trees are plotted separately. Street Tree areas are included into the calculations, but their size does not add to the overall site size.
- 5.5 Areas of grassland which will be newly seeded with biodiverse seed mix, or those where the existing grass will be enhanced by relaxed mowing, have been classed as Other Neutral Grassland. Of the available options, this habitat type is the closest fit.

Habitat Condition

- In accordance with the Biodiversity Metric 2.0 Technical Supplement, Street Trees are always given a condition classification of Moderate, and Introduced Shrubs are always given a condition classification of Poor. In line with the guidance, Amenity Grassland has been assessed as fitting the criteria for Poor condition. The proposed Green Roof is assumed to reach a habitat condition of Moderate.
- 5.7 Other habitats have broadly been given a condition classification of Moderate, where this is considered reasonable to achieve with the expected management.

5.8 To verify whether the expected habitat conditions have been achieved, exceeded or not achieved, monitoring will be undertaken, including assessment against the Habitat Condition criteria.

Ecological Connectivity

5.9 In accordance with The Biodiversity Metric User Guide (Beta Version) low and medium distinctiveness habitats are afforded a connectivity score of 'low' and high and very high distinctiveness habitats afforded a connectivity score of 'medium'.

Strategic Significance

- 5.10 In accordance with The Biodiversity Metric User Guide (Beta Version) allocation of Strategic Significance scores requires an analysis of published local plans and objectives to identify local priorities for targeting biodiversity and nature improvement, such as Nature Recovery Areas, local biodiversity plans, National Character Area objectives and green infrastructure strategies. Such information is often not complete or up to date for any given area.
- Islington Biodiversity Action Plan 2020 includes an action plan item 1.1 to 'Enhance where possible those parks and estates which are SINCs (Sites of Importance for Nature Conservation) and where specific recommendations were made in the ecological survey of the borough in 2010.' As such, those habitats within Barnard Park that are considered to be valuable wildlife habitats should have been allocated a category of 'Within area formally identified in local strategy'. Those habitats are as follows: introduced shrubs, trees, orchard habitat, mixed scrub, lowland meadow grassland, other neutral grassland (biodiverse seed mix), extensive green roof, community planting areas, sustainable urban drainage features (swales), pond and hedgerow. All other habitats not considered to be valuable wildlife habitats have been classed as 'Area/compensation not in local strategy'.

6 BIODIVERSITY METRIC RESULTS AND ASSESSMENT Headline Results

6.1 The following Headline Results are taken from the Biodiversity Calculation Tool:

	Habitat units	6.84		
On-site baseline	Hedgerow units	0.00		
	River units	0.00		
On-site post-intervention	Habitat units	10.32		
(Including habitat retention, creation, enhancement &	Hedgerow units	0.43		
(including habitat retention, deation, emilancement & Rive		0.00		
	Habitat units	0.10		
Off-site baseline	Hedgerow units	0.00		
on site baseine	River units	0.00		
Off cita pact intervention	Habitat units	0.17		
Off-site post-intervention	Hedgerow units	0.00		
(Including habitat retention, creation, enhancement &	River units	0.00		
Total net unit change	Habitat units	3.55		
	Hedgerow units	0.43		
(including all on-site & off-site habitat retention/creation)	River units	0.00		
Total net % change	Habitat units	51.96%		
	Hedgerow units	Check Data		
(including all on-site & off-site habitat creation + retained habitats)	River units	0.00%		

- 6.2 Full data and results are available in the Biodiversity Calculation Tool, accompanying this report.
- 6.3 The note 'check data' appears against the increase in hedgerow units, due to the fact that the existing site contains no hedgerow. Therefore the calculator cannot calculate a percentage increase in hedgerow units.

Biodiversity Net Gain

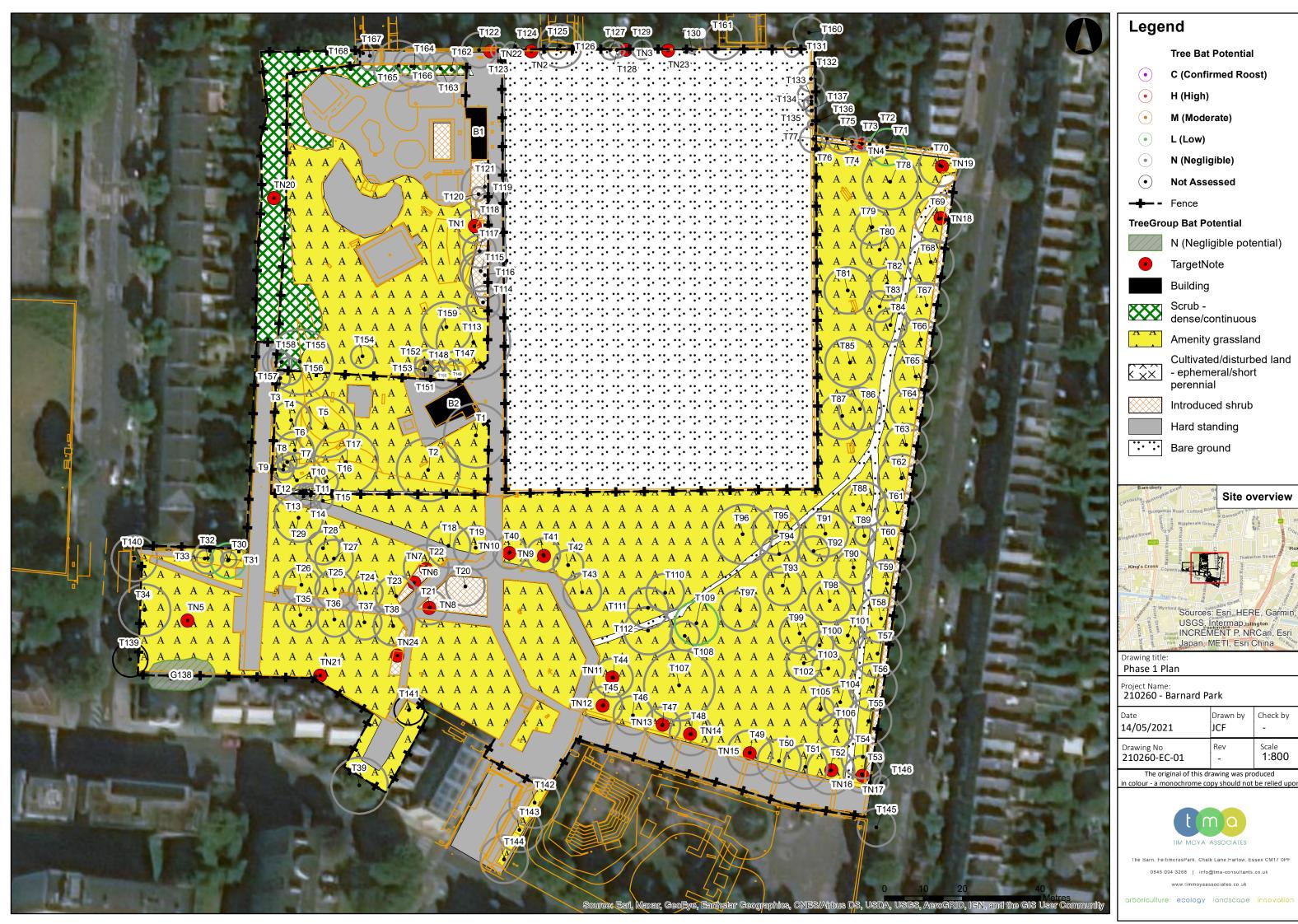
6.4 Based on the results of this calculation the proposed redevelopment of the park is expected to result in a significant overall **gain** in biodiversity value. The development also achieves an increase in hedgerow habitat across the site.

7 REFERENCES

- British Standards Institution (2013). BS42020 Biodiversity Code of practice for planning and development.
- Baker, J., Hoskin, R. & Butterworth, T. (2019). Biodiversity net gain. Good practice principles for development. CIRIA
- Department for Environment Food and Rural Affairs (2019). Net gain. Summary of responses and government responses.
- Joint Nature Conservation Committee (2010). Handbook for Phase 1 habitat survey.
 A technique for environmental audit.
- Ministry of Housing, Communities and Local Government (2019). National Planning Policy Framework.
- Natural England (2019). The Biodiversity Metric 2.0 User Guide, Beta Version.
 Natural England Joint Publication JP029.
- Natural England (2019). The Biodiversity Metric 2.0 Technical Supplement, Beta Version. Natural England Joint Publication JP029.

8 APPENDICES

Appendix 1 – Existing and Proposed Site Habitats



Check by

1:800

Barnard Park Improvement Proposals - Masterplan





1 New 9-a-side 3G football pitch:

73x46m main pitch size, 84 x 56 Site footprint with run off and goal recess, Space for 3no. 5 a-side pitches. Fence to fence size 79x52m. Low level pitch lighting on timers.8no. Lighting columns outside of 3m run-off, inside fence. 4.5m high fence, including rebound fence to 1200 high. Shockpad. Pitch is shown with 9v9 line markings and 3 smaller than FA standard 5v5 pitch markings. 7v7 marking can be accommodated.

- (1a) Recessed areas for goals using moveable weighted goals.
- Informal spectator areas: grassy bank sloping towards South of pitch. Additional and relocated benches to North and South of pitch.
- (2) Circular footpath route which can be used as an informal exercise track. 260m distance. New avenue of trees. Thicket Boundary planting.
- (3) Path down a slope from Barnsbury Rd entrance.
- (4) Existing park building removed. Replaced with green space.
- (5) Outdoor gym equipment over permeable rubber mulch safety surface
- (6) New retaining walls to corner of ball court.
- (7) Main entrance with clearer links to main paths. Distinctive entrance meeting place. Raised D shaped seating wall with inlaid decorative text and inviting seating spaces. Retains semi-circle of existing trees. Resin bound gravel surface to
- secondary path route. Single new Community Hub building:

Building to accommodate: Park manager/office, Multi-use space with kitchen and toilets (to be used by One 0' Clock Club), Kiosk cafe, Sports changing room and accessible toilets for park users. See Sports Clubhouses drawings for layouts and elevations. Generous cafe seating areas to north and south.

- **Central level green area.** Shape, size and footpath layout amended. Fence removed. Creating a flexible open space that can be managed & booked for formal & informal sport as well as general recreation and park events. New avenue of trees. Swales to take surface water run off from slope path. Includes space for single mini soccer / 5v5 pitch (for U7s and U8s) Space allows for a FA size: 37x27m + run-off (43x33m total). No pitch
- Cafe Seating/ Sport viewing area. Picnic tables. Table tennis tables. Permeable hard surface or reinforced grass. New avenue of Cherry trees.
- Tertiary new permeable surfaced paths: 1.2m wide with passing places every 20-30m. To replace existing muddy tracks. Surface eg, resin bound rubber mulch. Accessible gradients.
- (12) Existing N-S footpath realigned: Adjusted path line leading to new Hub building and new Sheen Grove entrance. Existing lighting relocated
- (13) Signage & information boards: Showing running routes and distances, health & fitness features, links to other green routes and trails. History of Alma Grove.
- (14) One O' Clock Club Enclosed Area: fence relocated to remove sloping grass from garden area and to align with proposed building. Sandpit, sensory planting in new deck area.
- (15) Grove of Silver Birch trees
- (16) Community planting areas: Existing bed reduced. Retained planting to be adjusted and maintained by FofBP.
- (17) Existing fence boundary to One O' Clock club removed. Attractive sloped area becomes public open space.
- (18) Thicket planting. Native shrub and tree species. Increased biodiversity
- (18d)(18b) See grasses in key
- (18c) Low native shrubs.
- (19) Improved Entrance to Hemingford Road. Entrance realigned to provide central entrance and axial extension to existing path and avenue of trees with new seating, picnic tables, tree & shrub planting to encourage this area to be better used for passive recreation.
- [20] Improved Primary Entrance to Charlotte Terrace. Existing footpath layout rationalised to relate to new N-S footpath route and altered entrances. Existing brick banding extended to unify steps and entrance area. Existing muddy grass at entrance paved to create generous events space, respecting service access requirements to TW borehole. Avenue tree planting extended into site, relating to proposed boulevard planting to Charlotte Terrace South.
- (21) Improved Entrances to Barnesbury Road. Adding bespoke bold entrance signage
- **Boxworth Grove**. Park entrance closed to public, New 2m high fence and maintenance gate. New railing to top of ramp in line with play area railing. Ramp tarmac surface removed, replaced with low fertility soil and wildlife beneficial planting.
- (23) New Park Entrance from Sheen Grove. New gates and levels graded to allow for step free access.
- (24) Copenhagen Street. Park entrance closed to public, new 2m high railing behind existing tree. Planted as a wildlife area, accessible from within the park only.
- (25) Alma Grove. Lower end of cobbled street removed to unite adjacent green spaces and encourage more use of the area. Traditional orchard trees planted

London SE10 9NE Rev A: 09.03.16 - Red line adjusted to omit steps. Crushed stone path Harrogate: 59 West End Avenue Rev B: 16.03.16 - Tree notes amended, mown grass path added Harrogate; Yorkshire HG2 9BX Rev C: 08.03.17 - Goal recesses's added to pitch, Estate railings & gates T/F 01423 550 207 added to Central Green Area.

Rev D: 08.11.17 - Replaced 7v7 with 9v9 sports pitch. Reduced size of www.ireland-albrecht.co.uk Central level Green, Eastern path moved. New Community Hub building,

old toilet block removed. Changes highlighted red in text above. **Rev E:** 13.11.17 - Community Hub, entrance, red phasing line, signage Rev F: 14.11.17 - Community Hub cafe paving increased. Small tree added Reg Phase line updated.

Rev G: 15.01.18 - Pitch sizes updated in line with S.E. letter 14.12.17.

Rev H: 19.04.18 - Pitch position amended to prevent the loss of trees T64 & 65 and increase the distance of pitch from boundary. Rev J: 30.07.20 - Amends to pitch position, oval, paths and entrances

Rev K: 05.08.20 - Amends to pitch position to avoid RPAs of existing trees.

Rev L: 17.12.20- Amends to masterplan layout following comments from 3rd pre-app meeting on 10th Dec 2020. Rev N: 02 01 21- Heminaford Road entrance realigned. Biodiversity planting added and amended. Habitat enhancements including new wildlife pond lpdated canopies and RPAs from new tree survey. Proposed trees added



Barnard Park Improvement Works

Landscape Masterplan

For Commen 1:500 @ A1 29.01.16

IA-365-LMP-P01 All dimensions to be checked on site. Do not Scale. This drawing is copyright.



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