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PROTECTED SPECIES SURVEYORS

BIODIVERSITY NET GAIN ASSESSMENT
OF
NEW ARTIFICIAL PITCH
SUTTON LAWN
SUTTON IN ASHFIELD

A report to:

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Report to:	Surfacing Standards Limited
Report Title:	Biodiversity Net Gain Assessment of Sutton Lawn, Sutton in Ashfield
Survey Site/Job:	Sutton Lawn, Sutton-in-Ashfield NG17 5FU
OS Grid Reference:	SK 50064 59098
Survey & Mapping Date:	31st May 2022 and 17th June 2024
Surveyed & Mapped by:	N Clayton BSc (Hons) ACIEEM
Architect/Agent:	Surfacing Standards Limited
Planning Reference:	

Versioning and Quality Assurance

Report Status	Date	Author(s)	Reviewed by
Final version 6	26/07/2024	N Clayton BSc (Hons) ACIEEM	B J Collins MSc MCIEEM

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This document has been prepared by B J Collins Protected Species Surveyors Limited. We accept no responsibility or liability for any use that is made of this document other than by the client for the purposes for which it was originally commissioned and prepared.

The evidence which we have prepared and provided is true and has been prepared and provided in accordance with the guidance of The Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct.

RELIANCE - The report describes the conditions and ecological features on the site (and possibly its environs) at the time of survey and that this may (is likely to) change over time. Reliance upon the findings of this report should be determined in accordance with the Chartered Institute of Ecology and Environmental Management guidance on the longevity of ecological surveys, see Advice Note (April 2019) On the Lifespan of Ecological Reports and Surveys CIEEM.

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SUMMARY

This report has been prepared by BJ Collins – Protected Species Surveyors Ltd on behalf of Surfacing Standards Ltd.

The report provides the results of a Biodiversity Net Gain Assessment of: Sutton Lawn, Sutton-in-Ashfield NG17 5FU. The site is centred upon the Ordnance Survey grid reference SK 50064 59098.

The proposal is to construct new artificial sports pitches with floodlights, and renovate the pathway.

The attached and supporting Biodiversity Net Gain Metric identifies that the creation of the artificial pitch will result in net loss of biodiversity in the absence of mitigation and compensation.

The habitat that will be lost comprises of amenity grassland, that loss will result in a total of 2.05 habitat units within the metric without any compensation actions.

The total % loss of habitat within the metric once the landscaping scheme proposed must achieve the 10% statutory requirement.

The losses delivered within this Biodiversity Net Gain assessment are:

Habitat Units: a 2.05 unit loss (negative; equivalent to a loss of 100%).

In order to achieve the biodiversity net gain target of 10% (2.25 HBU overall) from the project a total of 2.25 habitat units is required.

Compensation and delivery of Net gain

In order to deliver the minimum 10% net gain an area of the site has been identified where biodiversity enhancement will also lead to enhancement of the overall landscape.

This scheme is to plant a native wildlife mixed shrub strip to the north-east north and north-west sides of the main playing field area. In total this will acquaint to 4930 m² of planting. Shrubs will be chosen for their dense growth to permit breeding bird opportunities and refuge for small mammals such as hedgehog, that flower at various times of the year providing a nectar and pollen source for invertebrates.

By delivering 0.493ha of mixed shrub over the area of intensively mown modified grassland the project results in a net gain.

The summary of the calculations are as follows:

Gains delivered by this Biodiversity Net Gain Metric

The loss of 2.05 habitat units is compensated by 2.31 habitat units from the mixed shrubberies.

This results in a gain of 13.07%

The trading rules within the Statutory calculation tool have been satisfied with the proposed development plan.

All of the proposals will require a detailed management plan and adaptive monitoring for a minimum of 30 years from the implementation of those habitats as per guidelines.

1 INTRODUCTION

This report has been prepared by BJ Collins – Protected Species Surveyors Ltd on behalf of Surfacing Standards Ltd. The report provides the results of a Biodiversity Net Gain Assessment in accordance with Statutory guidance for achieving net gain for biodiversity. The site is located at Sutton Lawn, Sutton-in-Ashfield NG17 5FU. The area to be impacted extends to approximately 1.52 ha and the site is centred upon the Ordnance Survey grid reference SK 50064 59098.

The evidence is presented in the form of Statutory Biodiversity Metric calculations for the site based on a condition assessments of the habitats on-site.

The proposal is to construct a new artificial sports pitch with floodlights, and renovate the pathway.

The survey area comprises one main habitat type: Modified Grassland (amenity grassland) which the majority is regularly mown to a very low sward. The location of the survey site is provided in figure 1 below.

Figure 1: The location of the site highlighted in red.

2 METHODOLOGY

2.1 Habitat Condition Survey to inform BNG Calculations

To inform the Biodiversity Net Gain (BNG) Calculations, the habitat types and condition of the habitats within the site were assessed on the 31st of May 2024. The habitats on the site were assessed and categorised in order to provide baseline information and subsequent interpretation of the ecological value of the site.

2.2 BNG Calculations

The latest version of the Statutory Metric (DEFRA, 2024) has been used to calculate the baseline value of the site (before development) and the post-development value in order to calculate the Total Net Unit Change. The broad habitat type 'Individual trees' has been used where a tree (or a group of trees) over 7cm in diameter at breast height (DBH) does not meet or contribute towards the definition of another broad habitat type. The tree sizes and areas have been assessed using the guidelines as shown below in table 1.

Size class	Diameter at breast height (cm)	Metric area equivalent (ha)
Small	greater than 7cm and less than or equal to 30cm	0.0041
Medium	greater than 30cm and less than or equal to 60cm	0.0163
Large	greater than 60cm and less than or equal to 90cm	0.0366
Very large	greater than 90cm	0.0764

Table 1: Tree size classes and area equivalents taken from Statutory Metric guidelines.

2.3 Minimum Mapping Units

The minimum mappable area used is equal to or above 25 m^2, the minimum mappable length of a linear feature is equal to or above 5 m.

2.4 Personnel

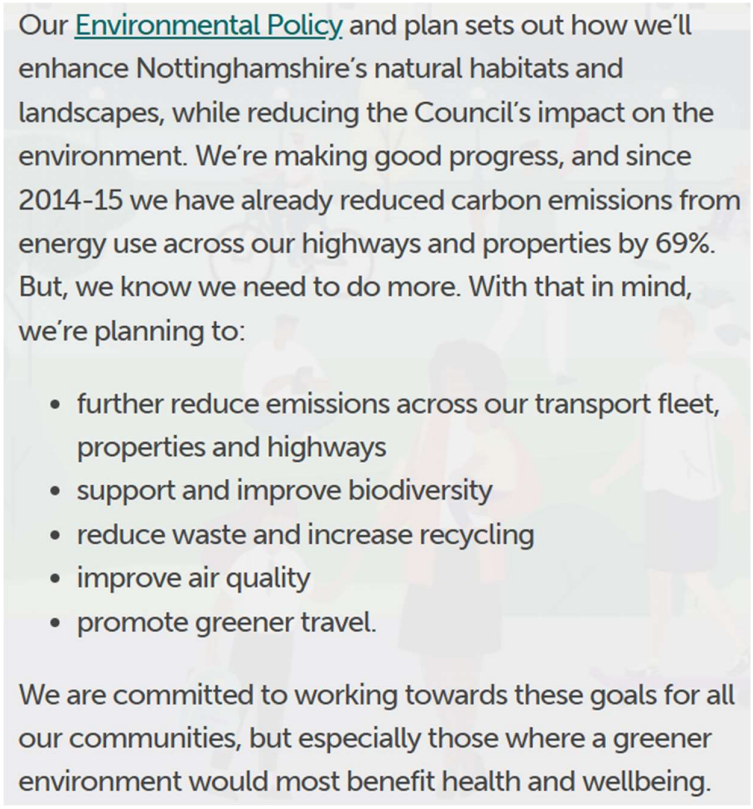
The Habitat Condition Survey and the BNG Calculations were undertaken by Nick Clayton BSc (Hons) ACIEEM.

2.5 Limitations

The survey was undertaken inside of the optimum season for habitat surveys (April to September/October). There were no access restrictions.

2.6 Local Policy

Ashfield County Council is the local authority however the Local Nature Recovery strategy is led by Nottinghamshire County Council (NCC). NCC website was searched to identify strategic plans for biodiversity within the locality, the Nottinghamshire and Nottingham Local Nature Recovery Strategy is currently under consultation therefore: The Nottinghamshire Plan 2021-2030 was used to understand biodiversity targets in the area. Ambition 9 Protecting the environment and reducing our carbon footprint screenshot below. Additional targets within this ambition include tree planting, habitat restoration/enhancement and supporting watercourse owners to develop flooding resilience.



Screenshot 1: A screenshot of Ambition 9 Protecting the environment and reducing our carbon footprint.

3 BASELINE CONDITIONS

Figure 2. Site Boundary and Habitat Map using UKHAB

3.1 On-site Habitats and Habitat Condition Assessment Results

3.1.1 Artificial unvegetated, unsealed surface – u1c- (Map indicator 2)

The largest area impacted by the proposal is a large 3G artificial pitch.

Assigned score: N/A other

Photograph 2- showing the artificial pitch and area of amenity grassland to be lost, looking north east.

3.1.2 Grassland: Modified grassland- g4 - (Map indicator 3 and 4)

Modified grassland (Metric ref 1) at the site contains: The grassland is dominated by Perennial ryegrass (*Lolium perenne*) and White clover (*Trifolium repens*), other species identified within both sections (3 and 4) were Annual meadow grass (*Poa annua*) F, Broad leaved plantain (*Plantago major*) O, Daisy (*Bellis perennis*) O, Cock's foot (*Dactylis glomerata*) O, Ribwort plantain (*Plantago lanceolata*) R, Yorkshire fog (*Holcus lanatus*) O, Dandelion (*Taraxacum sp*.), Creeping buttercup (*Ranunculus repens*), Hairy Bitter-cress (*Cardamine hirsuta*) R.

The modified grassland (map indicator 4) had a higher hydrological value, and was of a higher sward. Additional species in this section included Rough meadow grass (*Poa trivialis*) F, Crested dogs-tail (Cynosurus cristatus) R, Meadow foxtail (*Alopecurus pratensis*) R, Marsh foxtail (*Alopecurus geniculatus*) O, and Cuckooflower (*Cardamine pratensis*) R.

		Map indicator 3	Map indicator 4
Condition Assessment Criteria		Condition Achieved (Y/N)	
A	There are 6-8 vascular plant species per m^2 present, including at least 2 forbs (this may include those listed in Footnote 1). Note - this criterion is essential for achieving Moderate or Good condition.	N	Y
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for vertebrates and invertebrates to live and breed.	Y	Y
C	Any scrub present accounts for less than 20% of the total grassland area. (Some scattered scrub such as bramble Rubus fruticosus agg. may be present). Note - patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	Y	N
D	Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.	N	Y
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens).	Y	Y
F	Cover of bracken Pteridium aquilinum is less than 20%.	Y	Y
G	There is an absence of invasive non-native plant species3 (as listed on Schedule 9 of WCA4).	Y	Y
	Essential criterion 1 achieved	N	Y
	Number of criteria passed	5	6
	Condition Assessment Result	**Poor**	**Good**

Table 2. Grassland (low) Condition Assessment Sheet taken from Statuatory Metric.

Photograph 3 - showing the slightly longer sward at the eastern section identified as map indictor 4 in Figure 2.

3.2 Baseline Total Habitat Units

Map ref	Baseline Habitat On-site	Condition assessment	Area (ha)	Habitat Units (HBU)
On-site				
2.	Artificial unvegetated, unsealed surface	N/A other	0.7372	0.00
3.	Modified grassland	Poor	0.3401	0.68
4.	Modified grassland	Good	0.2278	1.37
		Total On-site	**1.31**	**2.05**

Table 3: A table showing the baseline values of habitats to be affected by the proposals.

4 PROPOSED DESIGN - ON-SITE

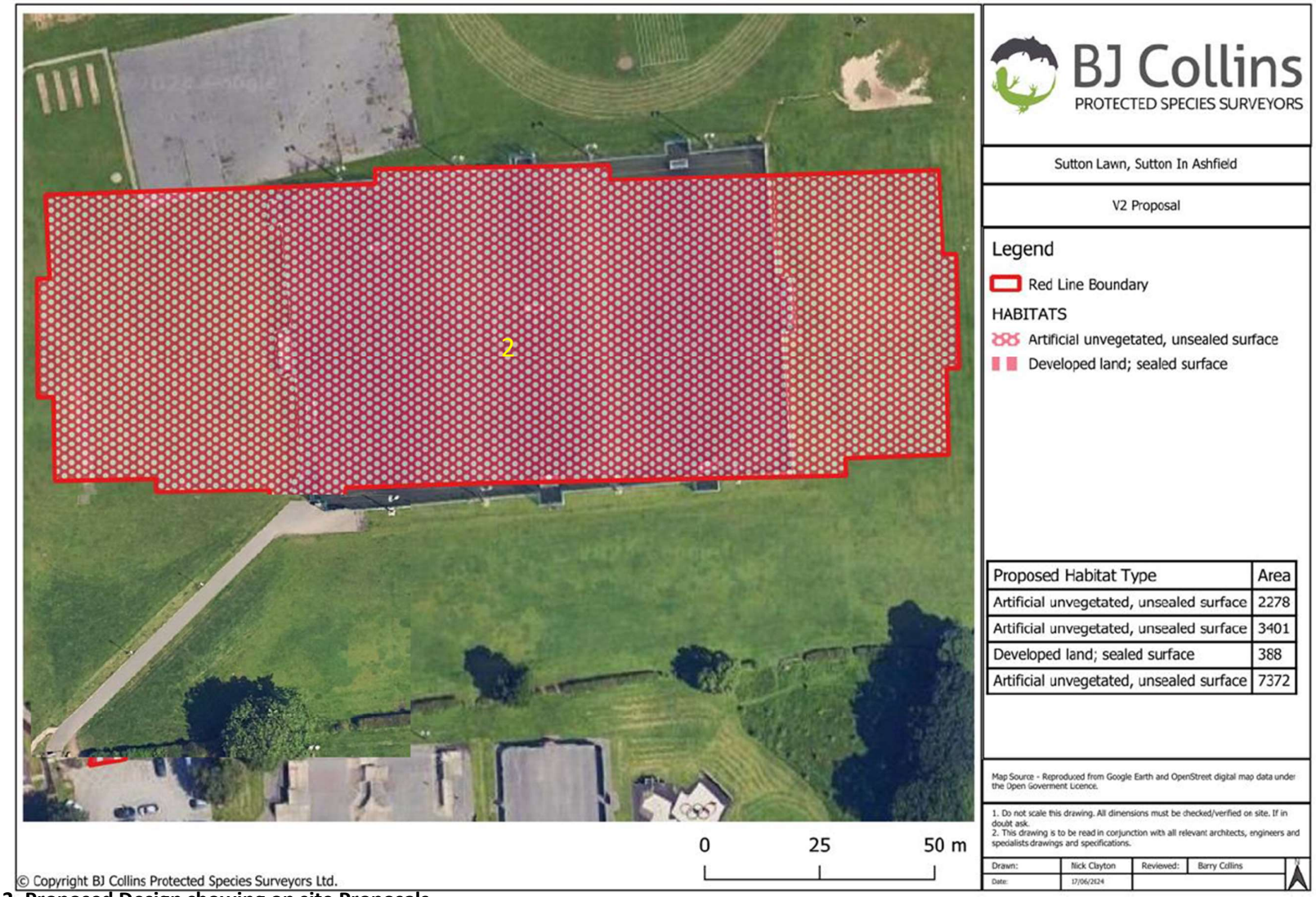


Figure 3. Proposed Design showing on site Proposals.

4.1 On-site Habitat Creation

4.1.1 Artificial unvegetated, unsealed surface – u1c (Map indicator 2)

This habitat type refers to the newly created artificial pitch, which is permeable.

Minimum Targeted Condition: N/A other

4.1.2 Proposed Total Habitat Units – On-site

Map ref	Proposed Habitat On-site	Area retention category	Proposed Condition assessment	Area (ha)	Habitat Units (HBU)
On-site					
1.	Artificial unvegetated, unsealed surface	Created	N/A	1.3051	0.00
			Total	**1.3051**	**0.00**

Table 4: A table showing the proposed values of the habitats.

4.2 Off-site Habitat creation

In order to deliver the required biodiversity net gain areas of native shrubs will be planted. This particular habitat has been chosen as it is easily managed in the long run and by choosing flowering species provides for a range of invertebrates as well as breeding bird habitat on the site.

This habitat will be placed on an area of disused tarmac/concrete and create a buffer between the playing fields and the adjacent housing development.

In total there will be 4930 m² of shrub planting. The species proposed to achieve this all native and typical of the type of habitat found in this region of the UK, to include Hazel (*Corylus avellana*), Holly *(Ilex aquifolium*), Guelder rose (*Ribes rubrum*), blackcurrant (*Ribes nigrum*), Snowberry (*Symphoricarpos albus*), Honeysuckle (*Lonicera periclymenum*), Dogwood (*Cornus sanguineous*), Sweet briar (*Rosa rubiginosa*), red Currant (*Ribes rubrum*), blackcurrant (*Ribes nigrum*), Elder (*Sambucus nigra*), Privet (*Ligustrum vulgare*), Wild cherry (*Prunus avium),* and Crab apple (*Malus sylvestris*). These have been chosen to provide flowering across the season as well as shrubs that are spineless, and therefore do not damage footballs when sports activity is ongoing

The trees should be planted in accordance with British Standards BS8545 : 2014, BS 3936 Nursery Stock (Parts 1-10), BS 4428 : 1989, BS 4043 : 1989 and BS 5837 : 2012.

Plant material and operations shall conform to BS8545 : 2014, BS 3936 Nursery Stock (Parts 1-10), BS 4428 : 1989, BS 4043 : 1989 and BS 5837 : 2012.

The planting season shall be from the 1st of October to the 31st of March. Container grown stock may be planted outside this season if accompanied by daily watering, or as necessary to ensure healthy establishment. Planting shall not be carried out during periods of frost, drought, cold drying winds or when the soil is waterlogged or frozen.

All planting that is within the root protection area of existing trees/shrubs to be retained, shall be undertaken by hand and positions altered should tree roots be encountered, in order to avoid damage to the root system.

DEFRA Minimum Targeted Condition: Moderate

Figure 4. Proposed Design showing off-site proposals.

4.2.1 Proposed Total Habitat Units – off-site

Map ref	Proposed Habitat On-site	Area retention category	Proposed Condition assessment	Area (ha)	Habitat Units (HBU)
On-site					
2.	Mixed shrubs	Created	N/A	0.493	3.30
			Total	**0.493**	**3.30**

Table 4: A table showing the proposed values of the habitats.

5 BNG RESULTS

5.1 Habitats

Habitat Units: Total Net Unit Change of -2.05 (negative; equivalent to a loss of 100%).

5.2 Habitat units required to meet target

In order to achieve the biodiversity net gain target of 10% (2.25 HBU overall) from the project a total of **2.25** habitat units is required.

5.3 Compensation provided in the metric

A mitigation strategy has been provided which delivers 4930 m² of mixed shrub planting to an area of the site devoid of wildlife features.

This delivers 2.31 habitat units, once the existing habitat value is removed from the equation.

This equates to a biodiversity net gain of 13.07%, and an uplift of 0.27 Habitat units.

5.4 Trading Rules

The trading rules within the DEFRA calculation tool have **been satisfied** with the proposed development plan.

Please see the excel document for full calculation details labelled:

Sutton Lawn -Statutory BNG Metric Calculation 26.07.24 V6

On-site baseline	*Habitat units*	2.05	
	Hedgerow units	0.00	
	Watercourse units	0.00	
On-site post-intervention (Including habitat retention, creation & enhancement)	*Habitat units*	0.00	
	Hedgerow units	0.00	
	Watercourse units	0.00	
On-site net change (units & percentage)	*Habitat units*	-2.05	-100.00%
	Hedgerow units	0.00	0.00%
	Watercourse units	0.00	0.00%
Off-site baseline	*Habitat units*	0.99	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Off-site post-intervention (Including habitat retention, creation & enhancement)	*Habitat units*	3.30	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Off-site net change (units & percentage)	*Habitat units*	2.31	234.73%
	Hedgerow units	0.00	0.00%
	Watercourse units	0.00	0.00%
Combined net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	0.27	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Spatial risk multiplier (SRM) deductions	*Habitat units*	0.00	
	Hedgerow units	0.00	
	Watercourse units	0.00	

FINAL RESULTS

Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	0.27
	Hedgerow units	0.00
	Watercourse units	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	13.07%
	Hedgerow units	0.00%
	Watercourse units	0.00%
Trading rules satisfied?	Yes ✓	

Unit Type	Target	Baseline Units	Units Required	Unit Deficit	
Habitat units	10.00%	2.05	2.25	0.00	No additional area habitat units required to meet target ✓
Hedgerow units	10.00%	0.00	0.00	0.00	No additional hedgerow units required to meet target ✓
Watercourse units	10.00%	0.00	0.00	0.00	No additional watercourse units required to meet target ✓

Figure 5. A screenshot of the metric results

References

Butcher, B., Carey, P., Edmonds, R., Norton, L. and Treweek, J. (2020). The UK Habitat Classification User Manual Version 1.1 at http://www.ukhab.org/

DEFRA (2024) The Statutory Biodiversity Metric User Guide - Date: February 2024

Nottinghamshire County Council (2024) Ambition 9 Protecting the environment and reducing our carbon footprint at https://plan.nottinghamshire.gov.uk/vision-and-ambitions/protecting-the-environment-and-reducing-our-carbon-footprint/