

# A47 Wansford to Sutton Dualling

**Scheme Number: TR010039**

## **Volume 9** **9.8 Biodiversity Metric**

The Infrastructure Planning (Examination Procedure) Rules 2010  
Rule 3(2)(b)

Planning Act 2008

May 2022

Deadline 6

Infrastructure Planning

Planning Act 2008

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

A47 Wansford to Sutton  
Development Consent Order 202[x]

---

**9.8 Biodiversity Metric**

---

<b>Rule Number</b>	Rule 3(2)(b)
<b>Planning Inspectorate Scheme Reference</b>	TR010039
<b>Application Document Reference</b>	TR010039/EXAM/9.8 Rev 1
<b>BIM Document Reference</b>	PCF Stage 4
<b>Author</b>	A47 Wansford to Sutton Project Team, National Highways

<b>Version</b>	<b>Date</b>	<b>Status of Version</b>
Rev 0	February 2022	Deadline 2 – Response to ExQ1
Rev 1	May 2022	Deadline 6 – Updated with further hedgerow information

# The Biodiversity Metric 2.0 - Calculation Tool

## Start page

### Project details

Planning authority:	Highways England
Project name:	A47 Wansford
Applicant:	Galliford Try
Application type:	N/A
Planning application reference:	N/A
Assessor:	KR (Sweco)
Reviewer:	
Revision:	1
Assessment date:	13.04.21
Planning authority reviewer:	

### Cell style conventions

	Enter data
	Automatic lookup
	Result

Instructions

Main menu

Results

View all

Reset view

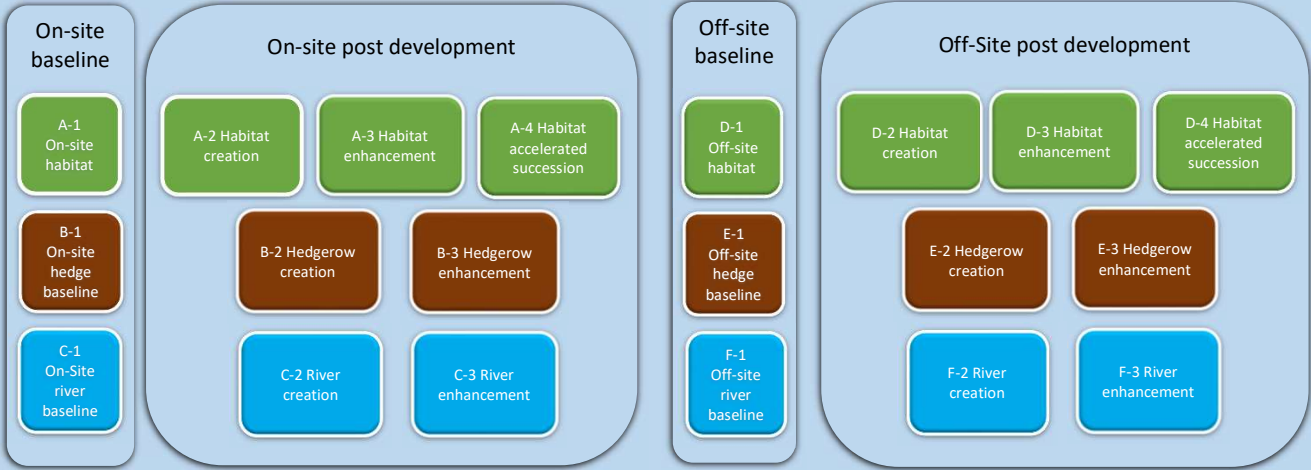
# The Biodiversity Metric 2.0 - Calculation Tool

## Main menu

Street tree helper		
Tree size	Tree number	Area
Small		0.0000
Medium		0.0000
Large		0.0000
<b>Total</b>	<b>0.00</b>	<b>0.0000</b>

- Start page
- Instructions
- Technical data
- Results

Start here



## The Biodiversity Metric 2.0 - Calculation Tool

Return to start  
page

Headline results

Detailed results

Habitat trading  
summary

A47 Wansford

**Headline Results**

Return to  
results menu

<b>On-site baseline</b>	<i>Habitat units</i>	194.78
	<i>Hedgerow units</i>	37906.88
	<i>River units</i>	0.00
<b>On-site post-intervention</b> (Including habitat retention, creation, enhancement & succession)	<i>Habitat units</i>	269.68
	<i>Hedgerow units</i>	64080.53
	<i>River units</i>	0.00
<b>Off-site baseline</b>	<i>Habitat units</i>	0.00
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
<b>Off-site post-intervention</b> (Including habitat retention, creation, enhancement & succession)	<i>Habitat units</i>	0.00
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
<b>Total net unit change</b> (including all on-site & off-site habitat retention/creation)	<i>Habitat units</i>	74.90
	<i>Hedgerow units</i>	26173.65
	<i>River units</i>	0.00
<b>Total net % change</b> (including all on-site & off-site habitat creation + retained habitats)	<i>Habitat units</i>	38.45%
	<i>Hedgerow units</i>	69.05%
	<i>River units</i>	0.00%



Proposed habitat	Area (hectares)	Distinctiveness	Score	Condition	Score	Post development/ post intervention habitats					Habitat units delivered	Assessor comments	Reviewer comments					
						Ecological connectivity			Strategic significance					Temporal multiplier		Difficulty multipliers		
						Ecological connectivity	Connectivity	Connectivity multiplier	Strategic significance	Strategic position multiplier				Time to target condition/years	Time to target multiplier	Difficulty of creation category	Difficulty of creation multiplier	
Woodland and forest - Other woodland; broadleaved	3.83	Medium	4	Poor	1	Medium	Moderately connected habitat	1.1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	20	0.490	Medium	0.67	5.34	DESIGN STILL IN DRAFT AND SUBJECT TO REGULAR CHANGES - New broadleaved woodland planting - Condition assessed using Technical Note 2.0. Poor condition is appropriate as woodland will all have similar age and structure while establishing and will also lack fallen or standing deadwood. However woodland will be devoid of invasives (as managed) and will also be protected from grazing and other impacts. The time to achieve Target Condition (20 years) is reflected in the 'time to target multiplier'. - Habitats will be created and initially managed through a 5yr management plan (LEMP - to be produced) to ensure establishment. Following the establishment period a handover Habitat Management Plan (HEMP - to be produced) will be prepared and agreed with HE Estate management team for handover, this will cover 25 years. Habitats will then be managed and maintained by HE according to the HEMP. The result of both the establishment period and the subsequent HEMP mean the habitats created will be under controlled management for a period of 30years following creation. The habitats will then be managed according to HE's general management principals in perpetuity. This will ensure the proposed habitats reach the target conditions set out	
Heathland and shrub - Mixed scrub	0.78	Medium	4	Moderate	2	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	3	0.899	Low	1	5.61	DESIGN STILL IN DRAFT AND SUBJECT TO REGULAR CHANGES - New scrub planting - Condition assessed using Technical Note 2.0. Moderate condition is appropriate as white scrub will all have similar age and structure while establishing, the habitat consists of greater than 3 woody species and will be devoid of invasives (as managed) and will also be protected from grazing and other impacts. The time to achieve Target Condition (3 years for all Target Conditions for this habitat type) is reflected in the 'time to target multiplier'. - Habitats will be created and initially managed through a 5yr management plan (LEMP - to be produced) to ensure establishment. Following the establishment period a handover Habitat Management Plan (HEMP - to be produced) will be prepared and agreed with HE Estate management team for handover, this will cover 25 years. Habitats will then be managed and maintained by HE according to the HEMP. The result of both the establishment period and the subsequent HEMP mean the habitats created will be under controlled management for a period of 30years following creation. The habitats will then be managed according to HE's general management principals in perpetuity. This will ensure the proposed habitats reach the target conditions set out	
Grassland - Other neutral grassland	31.3	Medium	4	Moderate	2	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	10	0.700	Low	1	175.35	DESIGN STILL IN DRAFT AND SUBJECT TO REGULAR CHANGES - New Grassland planting - Condition assessed using Technical Note 2.0. Moderate condition is appropriate as grassland is dominated by indicator species ( fescuers, dogtail etc), however lacking wildflowers etc to improve to good condition. No hedges/clover etc to be planted. The time to achieve Target Condition (10yrs) is reflected in the 'time to target multiplier'. - Habitats will be created and initially managed through a 5yr management plan (LEMP - to be produced) to ensure establishment. Following the establishment period a handover Habitat Management Plan (HEMP - to be produced) will be prepared and agreed with HE Estate management team for handover, this will cover 25 years. Habitats will then be managed and maintained by HE according to the HEMP. The result of both the establishment period and the subsequent HEMP mean the habitats created will be under controlled management for a period of 30years following creation. The habitats will then be managed according to HE's general management principals in perpetuity. This will ensure the proposed habitats reach the target conditions set out	
Urban - Built linear features	9.7	V.Low	0	N/A - Other	0	N/A	Assessment not appropriate	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	0	1.000	Low	1	0.00	DESIGN STILL IN DRAFT AND SUBJECT TO REGULAR CHANGES - New Infrastructure Note: The landscape design is still in state of flux and subject to regular change therefore final installation not completed and final areas of retained habitat also still uncertain. Therefore final habitat creation scores and overall score will be subject to extensive revision over next few months.	
<b>Totals</b>	<b>45.61</b>															<b>186.50</b>		



A&T Wansford  
B-1 Site Hedge Baseline

Condense / Show Columns Condense / Show Rows  
Main Menu Instructions

Baseline ref	UK Habitats - existing habitats				Habitat distinctiveness		Habitat condition		Ecological connectivity			Strategic significance			Ecological baseline Total hedgerow length	Retention category biodiversity value						Comments	
	Hedge number	Hedgerow type	Length km	Distinctiveness	Score	Condition	Score	Ecological connectivity	Connectivity	Connectivity multiplier	Strategic significance	Strategic significance	Strategic position multiplier	Suggested action to address habitat losses		Length retained	Length enhanced	Units retained	Units enhanced	Length lost	Units lost	Assessor comments	Reviewer comments
1		Native Hedgerow	1852	Low	2	Moderate	2	Medium	Moderately connected habitat	1.1	Location ecologically desirable but not in local vicinity	Medium strategic significance	1.1	Same distinctiveness - land or better	1915	28802.84	0	1881	9104.04				
2																							
3																							
4																							
5																							
6																							
		<b>Total Site length/km</b>	<b>1852</b>											<b>Total Site baseline</b>	<b>17966.81</b>	<b>2951.00</b>	<b>0.00</b>	<b>28802.84</b>	<b>0.00</b>	<b>1881.00</b>	<b>9104.04</b>		

**A47 Wansford**  
**B-2 Site Hedge Creation**

Condense / Show Columns      Condense / Show Rows  
 Main Menu      Instructions

Baseline ref	New hedge number	Proposed habitats		Habitat distinctiveness		Habitat condition		Ecological connectivity			Spatial quality			Temporal multiplier		Difficulty of creation multiplier	Hedge units delivered	Comments	
		Habitat type	Length km	Distinctiveness	Score	Condition	Score	Ecological connectivity	Connectivity	Connectivity multiplier	Strategic significance		Strategic position multiplier	Time to target condition/years	Time to target multiplier			Assessor comments	Reviewer comments
											Strategic significance	Strategic significance							
1		Native Species Rich Hedgerow	6500	Medium	4	Moderate	2	Medium	Moderately connected habitat	1.1	Location ecologically desirable but not in local strategy	Medium strategic significance	1.1	5	0.837	0.67	35277.69		
2																			
3																			
4																			
5		Creation Length/VM	6500.00															35277.69	

Return to start

Phase 1 Habitat	UK Hab habitat	Distinctiveness band
Woodland	Woodland and forest - Other woodland; mixed	Medium
Broadleaved woodland	Woodland and forest - Other woodland; broadleaved	Medium
Semi-natural broadleaved woodland	Woodland and forest - Lowland mixed deciduous woodland	High
Plantation broadleaved woodland	Woodland and forest - Other woodland; broadleaved	Medium
Coniferous woodland	Woodland and forest - Other coniferous woodland	Low
Semi-natural coniferous woodland	Woodland and forest - Native pine woodlands	High
Plantation coniferous woodland	Woodland and forest - Other coniferous woodland	Low
Mixed woodland	Woodland and forest - Other woodland; mixed	Medium
Semi-natural mixed woodland	Woodland and forest - Lowland mixed deciduous woodland	High
Plantation mixed woodland	Woodland and forest - Other woodland; mixed	Medium
Scrub	Heathland and shrub - Mixed scrub	Medium
Dense / continuous scrub	Heathland and shrub - Mixed scrub	Medium
Scattered scrub	Heathland and shrub - Mixed scrub	Medium
Parkland / scattered trees	Woodland and forest - Wood-pasture and parkland	High
Broadleaved parkland / scattered trees	Woodland and forest - Wood-pasture and parkland	High
Coniferous parkland / scattered trees	Woodland and forest - Other coniferous woodland	Medium
Mixed parkland / scattered trees	Woodland and forest - Wood-pasture and parkland	High
Recently-felled woodland	Woodland and forest - Felled	Medium
Broadleaved recently felled woodland	Woodland and forest - Felled	Medium
Coniferous recently felled woodland	Woodland and forest - Felled	Medium
Mixed recently felled woodland	Woodland and forest - Felled	Medium
Acid grassland	Grassland - Other lowland acid grassland	Medium
Acid grassland	Grassland - Upland acid grassland	Medium
Unimproved acid grassland	Grassland - Lowland dry acid grassland	V.High
Unimproved acid grassland	Grassland - Upland hay meadows	V.High
Semi-improved acid grassland (Good quality)	Grassland - Upland acid grassland	Medium
Semi-improved acid grassland (Good quality)	Grassland - Other lowland acid grassland	Medium
Semi-improved acid grassland (Poor quality)	Grassland - Modified grassland	Low
Neutral grassland	Grassland - Other neutral grassland	Medium
Unimproved neutral grassland	Grassland - Lowland meadows	V.High
Semi-improved neutral grassland (Good quality)	Grassland - Other neutral grassland	Medium
Semi-improved neutral grassland (Poor quality)	Grassland - Modified grassland	Low
Calcareous grassland	Grassland - Upland calcareous grassland	High
Calcareous grassland	Grassland - Lowland calcareous grassland	High
Unimproved calcareous grassland	Grassland - Lowland calcareous grassland	High
Unimproved calcareous grassland	Grassland - Upland calcareous grassland	High
Semi-improved calcareous grassland (Good quality)	Grassland - Upland calcareous grassland	High
Semi-improved calcareous grassland (Good quality)	Grassland - Lowland calcareous grassland	High
Semi-improved calcareous grassland (Poor quality)	Grassland - Modified grassland	Low
Improved grassland	Grassland - Modified grassland	Low
Marsh/marshy grassland	Wetland - Purple moor grass and rush pastures	V.High
Marsh/marshy grassland	Grassland - Other neutral grassland	Medium
Marsh/marshy grassland	Grassland - Modified grassland	Low
Poor semi-improved grassland	Grassland - Modified grassland	Low
Strandline vegetation coastland	Sparsely vegetated land - Coastal vegetated shingle	High
Sand dune	Sparsely vegetated land - Coastal sand dunes	High
Dune slack sand dune coastland	Sparsely vegetated land - Coastal sand dunes	High
Dune grassland sand dune coastland	Sparsely vegetated land - Coastal sand dunes	High
Dune heath sand dune coastland	Sparsely vegetated land - Coastal sand dunes	High
Dune scrub sand dune coastland	Sparsely vegetated land - Coastal sand dunes	High
Open dune sand dune coastland	Sparsely vegetated land - Coastal sand dunes	High
Maritime cliff coastland	Sparsely vegetated land - Maritime cliff and slopes	High
Hard maritime cliff coastland	Sparsely vegetated land - Maritime cliff and slopes	High
Soft maritime cliff	Sparsely vegetated land - Maritime cliff and slopes	High
Crevice/ledge vegetation	Sparsely vegetated land - Maritime cliff and slopes	High
Crevice/ledge vegetation	Grassland - Tall herb communities	High
Coastal grassland	Sparsely vegetated land - Maritime cliff and slopes	High
Coastal grassland	Grassland - Lowland meadows	V.High
Coastal grassland	Grassland - Lowland dry acid grassland	V.High
Coastal grassland	Grassland - Other lowland acid grassland	Medium
Coastal heathland	Sparsely vegetated land - Maritime cliff and slopes	High
Coastal heathland	Heathland and shrub - Lowland Heathland	High
Standing open water	lakes - Aquifer fed naturally fluctuating water bodies	V.High
Standing open water	Lakes - Ditches	Medium
Standing open water	Lakes - High alkalinity lakes	High
Standing open water	Lakes - Low alkalinity lakes	High
Standing open water	Lakes - Marl Lakes	High
Standing open water	Lakes - Moderate alkalinity lakes	High
Standing open water	Lakes - Peat Lakes	High
Standing open water	Lakes - Ponds (Priority Habitat)	High
Standing open water	Lakes - Ponds (Non- Priority Habitat)	High

Standing open water	Lakes - Reservoirs	Medium
Standing open water	Lakes - Temporary lakes, ponds and pools	High
Dry dwarf shrub heath	Heathland and shrub - Lowland Heathland	High
Dry dwarf shrub heath	Heathland and shrub - Upland Heathland	High
Acidic dry dwarf shrub heath	Heathland and shrub - Lowland Heathland	High
Acidic dry dwarf shrub heath	Heathland and shrub - Upland Heathland	High
Basic dry dwarf shrub heath	Heathland and shrub - Lowland Heathland	High
Basic dry dwarf shrub heath	Heathland and shrub - Upland Heathland	High
Wet dwarf shrub heath	Heathland and shrub - Lowland Heathland	High
Wet dwarf shrub heath	Heathland and shrub - Upland Heathland	High
Lichen / bryophyte heath	Heathland and shrub - Lowland Heathland	High
Lichen / bryophyte heath	Heathland and shrub - Upland Heathland	High
Montane heath / dwarf herb	Heathland and shrub - Mountain heaths and willow scrub	V.High
Dry heath / acidic grass mosaic	Heathland and shrub - Lowland Heathland	High
Wet heath / acidic grass mosaic	Heathland and shrub - Lowland Heathland	High
Dry heath / acidic grass mosaic	Heathland and shrub - Upland Heathland	High
Wet heath / acidic grass mosaic	Heathland and shrub - Upland Heathland	High
Bracken	Grassland - Bracken	Medium
Continuous bracken	Grassland - Bracken	Medium
Scattered bracken	Grassland - Bracken	Medium
Other tall herb or fern (Good quality)	Sparsely vegetated land - Inland rock outcrop and scree habitats	High
Other tall herb or fern	Grassland - Bracken	Medium
Tall ruderal	Sparsely vegetated land - Ruderal/Ephemeral	Low
Non-ruderal	Sparsely vegetated land - Ruderal/Ephemeral	Low
Bog	Wetland - Lowland raised bog	V.High
Sphagnum bog	Wetland - Lowland raised bog	V.High
Blanket bog	Wetland - Blanket bog	V.High
Raised bog	Wetland - Lowland raised bog	V.High
Wet modified bog	Wetland - Transition mires and quaking bogs (H7140)	V.High
Dry modified bog	Wetland - Blanket bog	V.High
Dry modified bog	Wetland - Lowland raised bog	V.High
Flush and spring	Wetland - Fens (upland and lowland)	V.High
Acid/neutral flush	Wetland - Fens (upland and lowland)	V.High
Basic flush	Wetland - Fens (upland and lowland)	V.High
Bryophyte-dominated spring	Wetland - Fens (upland and lowland)	V.High
Fen	Wetland - Fens (upland and lowland)	V.High
Valley mire	Wetland - Oceanic Valley Mire[1] (D2.1)	V.High
Basin mire	Wetland - Oceanic Valley Mire[1] (D2.1)	V.High
Floodplain mire	Wetland - Oceanic Valley Mire[1] (D2.1)	V.High
Bare peat	Wetland - Depressions on Peat substrates (H7150)	V.High
Swamp	Wetland - Fens (upland and lowland)	V.High
Marginal and inundation	Wetland - Fens (upland and lowland)	V.High
Marginal and inundation	Wetland - Reedbeds	High
Marginal vegetation	Use the Feature that it is within, i.e. River, Lake type etc.	
Inundation vegetation	Wetland - Reedbeds	High
Natural rock exposures and caves (Good quality)	Sparsely vegetated land - Inland rock outcrop and scree habitats	High
Natural rock exposures and caves	Sparsely vegetated land - Other inland rock and scree	Medium
Inland cliff (High quality)	Sparsely vegetated land - Inland rock outcrop and scree habitats	High
Inland cliff	Sparsely vegetated land - Other inland rock and scree	Medium
Acidic inland cliff	Sparsely vegetated land - Inland rock outcrop and scree habitats	High
Basic inland cliff	Sparsely vegetated land - Inland rock outcrop and scree habitats	High
Scree	Sparsely vegetated land - Inland rock outcrop and scree habitats	High
Acidic scree	Sparsely vegetated land - Inland rock outcrop and scree habitats	High
Basic scree	Sparsely vegetated land - Inland rock outcrop and scree habitats	High
Limestone pavement	Sparsely vegetated land - Limestone pavement	V.High
Other natural rock exposure	Sparsely vegetated land - Other inland rock and scree	Medium
Other acidic natural rock exposure	Sparsely vegetated land - Other inland rock and scree	Medium
Other basic rock exposure	Sparsely vegetated land - Other inland rock and scree	Medium
Artificial rock exposures	Sparsely vegetated land - Other inland rock and scree	Medium
Artificial rock exposures	Sparsely vegetated land - Other inland rock and scree	Medium
Artificial rock exposures	Sparsely vegetated land - Other inland rock and scree	Medium
Artificial rock exposures	Sparsely vegetated land - Other inland rock and scree	Medium
Artificial rock exposures	Sparsely vegetated land - Other inland rock and scree	Medium
Artificial rock exposures	Sparsely vegetated land - Other inland rock and scree	Medium
Quarry	Urban - Sand pit quarry or open cast mine	Low
Spoil heap	Urban - Sand pit quarry or open cast mine	Low
Mine	Urban - Sand pit quarry or open cast mine	Low
Refuse tip	Urban - Artificial unvegetated, unsealed surface	V.Low
Cultivated/disturbed ground	Cropland - Cereal crops other	Low
Arable	Cropland - Cereal crops	Low
Amenity grassland	Urban - Amenity grassland	Low
Ephemeral / short perennial	Sparsely vegetated land - Ruderal/Ephemeral	Low
Introduced shrub	Urban - Introduced shrub	Low
Fence	Urban - Built linear features	V.Low
Wall	Urban - Built linear features	V.Low
Built-up areas	Urban - Developed land; sealed surface	V.Low
Caravans	Urban - Developed land; sealed surface	V.Low

Sea wall (artificial materials)	Urban - Developed land; sealed surface	V.Low
Buildings	Urban - Developed land; sealed surface	V.Low
Bare ground	Urban - Vacant/derelict land/ bareground	Low

[ ]

## The Biodiversity Metric 2.0 - Calculation Tool

Return to start  
page

All area habitats

Area habitat groups

Multipliers

Temporal multipliers

Enhancement temporal  
multipliers

Hedgerow data

River data

Condition data

UKHab/Phase 1  
translation