

# West Penwith Habitat Surveys: Bosulow (part) (survey area 30 (part) – 2021) Natural England

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## Project details

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## Natural England Project manager

Mark Beard

## Keywords

Penwith, SSSI, survey, NVC, habitat

## Further information

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# Contents

Project details.....	3
Natural England Project manager.....	3
Keywords.....	3
Further information .....	3
West Penwith Habitat Surveys: Bosullow (part) (survey area 30 (part) – 2021).....	5
Natural England .....	5
1.General Information .....	5
1.1 Location.....	5
1.2 Summary description.....	5
1.3 Access.....	6
1.4 Tenure.....	6
1.5 Survey methodology and season .....	6
2. Biological description .....	6
2.1 Habitats .....	6
2.1.1 Wet grassland (rush pasture) / dry acid grassland mosaic.....	6
2.1.2 Scrub and underscrub.....	9
2.1.3 “Grown in pond” .....	10
2.2 Species .....	10
3. Condition Assessments .....	10
4. References .....	12
Annexes.....	13
Annex 1 Species lists for MG10, U4b, W24 & W25.....	13
Annex 2 Location of survey site .....	15
Annex 3 NVC map of area .....	16

# West Penwith Habitat Surveys: Bosullow (part) (survey area 30 (part) – 2021)

## Natural England

### Bosullow (part) (Survey Area 30 (part) – 2021)

Vegetation survey & Condition Assessment:	Mark Beard
Report compiled by:	Mark Beard
Date surveyed:	24/09/2021

## 1. General Information

### 1.1 Location

Site name / No.	Bosullow (part) / Site 30 (part)
County	Cornwall
Parish	Morvah
Central OS Grid Ref	SW41393475
Natural England Area Team	Devon, Cornwall & Isles of Scilly
National Character Area	West Penwith (No. 156)

### 1.2 Summary description

Area	2.28 ha
Altitude	195m AOD Aspect
Drainage	Slightly impeded, damp.
Area	2.28 ha

In 2012 a vegetation survey of Watch Croft (Survey Area 31) recorded the presence of a “grown in pond” at OS grid reference SW41473477 described in a target note as: “appears somewhat enriched/degraded. Species present include: *Eleocharis palustris*, *Sphagnum fallax*, *Potamogeton*, *Juncus effusus*, *Hydrocotyle vulgaris*, *Gallium palustre*, *Glyceria fluitans*.” This grown in pond was re-assessed in 2021 as being an acid wetland (mire) feature of sufficient interest to warrant inclusion as part of the SSSI, along with the adjacent/surrounding land between the public highway (Madron to Morvah road) and Survey Area 29 Carn Downs. This area is assumed to be important for the supply of groundwater to the grown in pond wetland feature. Survey area 30 Bosullow was originally surveyed in 2019 by Natural England. That survey covered an extent of some 3.59 ha but excluded the area described in this report. This survey site is treated as an extension to Survey Area 30 Bosullow (rather than Survey Area 31 Watch Croft).

### 1.3 Access

Access is possible via a field gate off the public highway at the northern end of the site. A hedged lane along the southern end of the site is accessible from the eastern end, close to the public highway and (unofficial) parking area.

### 1.4 Tenure

The survey site is owned by National Trust. At the date of survey there was no known tenant or other occupants. Access was with the permission of the National Trust Countryside Manager for the area.

### 1.5 Survey methodology and season

The site was surveyed by a 'walk-over' survey during which observations of the habitat present were made. For each distinct stand of vegetation observed a species list was compiled with an associated estimate of frequency based upon the DAFOR-scale and the most likely vegetation community type of the National Vegetation Classification (Rodwell, 1991a; 1991b; 1992) was assigned. This community assignment was implied, based upon a working knowledge of the NVC by the surveyor, and is not based upon an analysis of quadrat data. As such the full NVC methodology has not been applied. Nevertheless, the experience of the surveyor in the field is considered sufficient for the implied NVC communities to be reliable for the purposes of this survey. Owing to the methodology applied it was not possible to assign to sub-communities to all stands, though where considered possible this was done.

## 2. Biological description

### 2.1 Habitats

The survey site supports an area of acid grassland, bracken and very small pockets of blackthorn scrub. Each habitat is discussed in turn below.

#### 2.1.1 Wet grassland (rush pasture) / dry acid grassland mosaic

##### **MG10 (*Holcus lanatus*-*Juncus effusus* rush-pasture)**

The majority of the site was occupied by wet mesotrophic grassland. Yorkshire fog *Holcus lanatus* was abundant forming luxuriant mats over large areas (the site did not appear to have been grazed or otherwise managed in 2021). Soft rush *Juncus effusus* was locally abundant, particularly on the eastern-most parts of the site, though elsewhere was no more than occasional. In areas with abundant *J. effusus*, bramble *Rubus fruticosus* agg. and wild angelica *Angelica sylvestris* were also

frequent. In areas with sparse *J. effusus*, common sorrel *Rumex acetosa* was frequent.

*Agrostis* spp. was also abundant throughout. This was identified in the field as common bent *Agrostis capillaris*. Creeping bent *A. stolonifera* is more commonly associated with MG10 rush pasture, but was not observed during the field survey. It is possible that the late seasonal timing of the survey (September) hampered identification to the correct species. Alternatively, the abundance of *A. capillaris* may be evidence that the site formerly supported a greater cover of dry acid grassland (such as U4b *Festuca ovina*-*Agrostis capillaris*-*Galium saxatile* grassland, *Holcus lanatus*-*Trifolium repens* sub-community) which has subsequently transitioned to MG10 rush pasture as a result of increasing wetness as might be caused by, for example, the long-term failure of land drains.



Figure 1 Plate 1 – rush pasture with abundant soft rush *J. effusus* and localised patches of bramble *Rubus fruticosus* agg.





*Figure 2 Plate 2 – rush pasture in mosaic with acid grassland (also see Plate 4)*



*Figure 3 Plate 3 – luxuriant mat of Yorkshire fog *H. lanatus* with occasional soft rush *J. effusus* at the western part of the site (note buildings in corner of field assumed to be for bore-hole / water supply)*



#### **U4b (*Festuca ovina*-*Agrostis capillaris*-*Galium saxatile* grassland, *Holcus lanatus*-*Trifolium repens* sub-community)**

Many small patches of dry acid grassland occurred in mosaic with rush-pasture, particularly within the eastern parts of the site. Common bent *A. capillaris*, Yorkshire fog *H. lanatus* and tormentil *Potentilla erecta* were locally abundant. Springy turf-moss *Rhytidiadelphus squarrosus* and pointed spear-moss *Calliergonella cuspidata* were also occasional. These patches of acid grassland were atypical of the U4b sub-community lacking in, for example, *Festuca ovina* and *Galium saxatile*, but it was judged by the surveyor that this was the closest affinity to any of the described communities/sub-communities within the published NVC. These small patches of acid grassland occurred in mosaic with MG10 rush pasture accounting on average for around 40% cover (visually estimated) within those mosaic stands.



Figure 4 Plate 4 – small patches of acid grassland with tormentil *P. erecta* in mosaic with rush-pasture

#### **2.1.2 Scrub and underscrub**

##### **W24 (*Rubus fruticosus* - *Holcus lanatus* underscrub)**

A single stand bramble *Rubus fruticosus* agg. was present along the northern edge of the site. This stand was species-poor and given that this is not a priority community type for SSSI selection, a full species-list was not recorded.

## **W25 (*Pteridium aquilinum* - *Rubus fruticosus* underscrub)**

Marginal areas of the site, including the hedged lane along the southern edge and along the remnant internal field boundary, supported underscrub with abundant bracken *Pteridium aquilinum* and bramble *R. fruticosus* agg. This stand was species-poor and given that this is not a priority community type for SSSI selection, a full species-list was not recorded, though red campion *Silene dioica* was also locally frequent.

### **2.1.3 “Grown in pond”**

The grown in pond is mapped in the 2012 NVC survey as “open water”. On the date of the site survey in 2021 no open water was present (although this was at the end of

a relatively dry summer). Instead, there was a floating ‘raft’ of bog-moss *Sphagnum* spp. covering the entire surface area with water beneath. This wetland feature (“grown in pond”) was not surveyed in any detail as part of this 2021 survey, though bog pondweed *Potamogeton polygonifolius*, soft rush *J. effusus*, common spike-rush *Eleocharis palustris* and floating sweet-grass *Glyceria fluitans* were all noted as present. Open water may be present during the winter and/or following periods of prolonged wet weather. This wetland feature has some affinities with communities as described in the published NVC; for example, M2 bog pool vegetation, M6 *Carex echinata*-*Sphagnum* mire, though the match is not strong for either, or M30 vegetation of seasonally inundated habitats.

## **2.2 Species**

No rare, scarce or threatened species were noted during the survey.

## **3. Condition Assessments**

Lowland acid grassland stands occurred as small patches within a mosaic with mesotrophic rush pasture and accounting for less than 50% cover, making application of CSM condition assessment impracticable. There were no other priority habitats observed. For these reasons, no habitat condition assessments were made.

*Table 1 Summary of habitats and vegetation communities*

<b>Site 30 (part) – Bosulow (part) (2021)</b>				
<b>Habitat</b>	<b>NVC communities</b>	<b>Area (ha)</b>	<b>Priority Habitat area (ha)</b>	<b>CA category</b>
Mesotrophic grassland	MG10	1.45	n/a	n/a
	MG10 / U4b mosaic	0.49	n/a	n/a
Underscrub	W24	0.06	n/a	n/a
	W25	0.28	n/a	n/a
Condition assessment reporting categories: Favourable (F), Unfavourable Recovering (UFR), Unfavourable No Change (UFNC), Unfavourable Declining (UFD)				

## 4. References

Beard, M. G. (2019) West Penwith Habitat Surveys: Bosulow (survey area 30 – 2019). Natural England.

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Sproull, J. (2012) West Penwith Habitat Surveys: Watch Croft (Survey Area 31 – 2012). Cornwall Environmental Consultants (CEC) Ltd.



## Annexes

### Annex 1 Species lists for MG10, U4b, W24 & W25

DAFOR ratings:

D = dominant; A = Abundant; F = Frequent; O = Occasional; R = Rare

L = Locally (frequent, abundant, dominant)

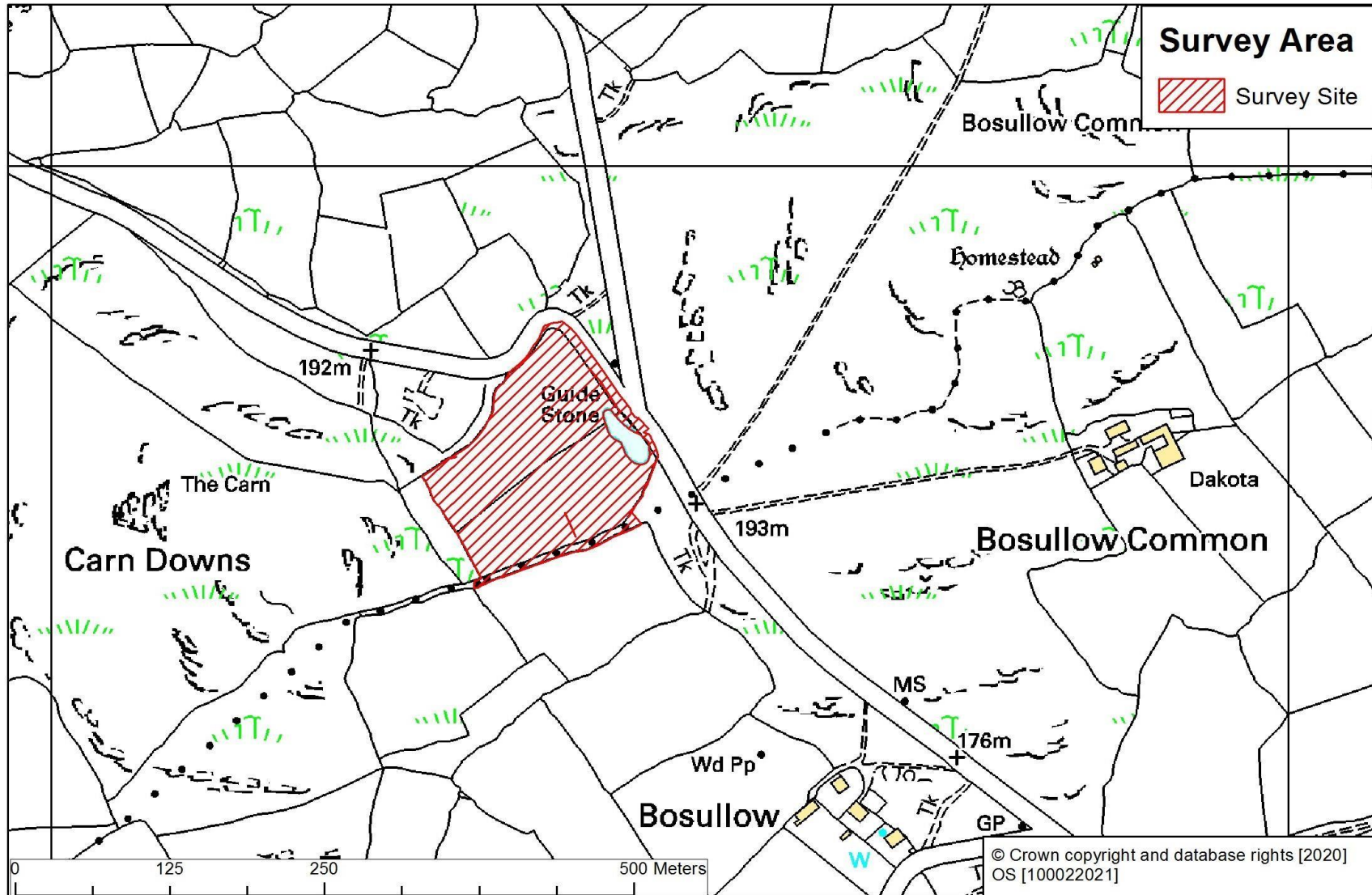
E = Edge (i.e. a species recorded from the margins of the mapped habitat/community)

		Community / sub-community			
Scientific name	Common name	MG10	U4b	W24	W25
<i>Agrostis capillaris</i> *	common bent	A	LA		
<i>Angelica sylvestris</i>	wild angelica	LF			
<i>Anthoxanthum odoratum</i>	sweet vernal grass		R		
<i>Calliergonella cuspidata</i>	pointed spear-moss		O		
<i>Carex binervis</i>	green-ribbed sedge		R		
<i>Carex demissa</i>	common yellow-sedge	R			
<i>Carex panicea</i>	carnation sedge	R			
<i>Digitalis purpurea</i>	foxglove	R			R
<i>Dryopteris dilatata</i>	broad buckler-fern	O			
<i>Dactylis glomerata</i>	cock's-foot	R			
<i>Festuca rubra</i>	red fescue		R		
<i>Holcus lanatus</i>	Yorkshire fog	A	LA		O
<i>Hypochaeris radicata</i>	common cat's-ear		R		
<i>Juncus acutiflorus</i>	sharp-flowered rush	R			
<i>Juncus effusus</i>	soft rush	LA / O			
<i>Molinia caerulea</i>	purple moor-grass	R			
<i>Plantago lanceolata</i>	ribwort plantain	R			
<i>Polytrichum commune</i>	common haircap	R			
<i>Potentilla erecta</i>	tormentil		LA		
<i>Pteridium aquilinum</i>	bracken				A
<i>Ranunculus repens</i>	creeping buttercup	O			
<i>Rhytidiadelphus squarrosus</i>	springy turf-moss		O		

<i>Rubus fruticosus</i> agg.	bramble	LF		D	F
<i>Rumex acetosa</i>	common sorrel	F			
<i>Rumex obtusifolius</i>	broad-leaved dock	O			
<i>Silene dioica</i>	red campion				LF
<i>Ulex gallii</i>	western gorse	R			
<i>Urtica dioica</i>	stinging nettle	R			

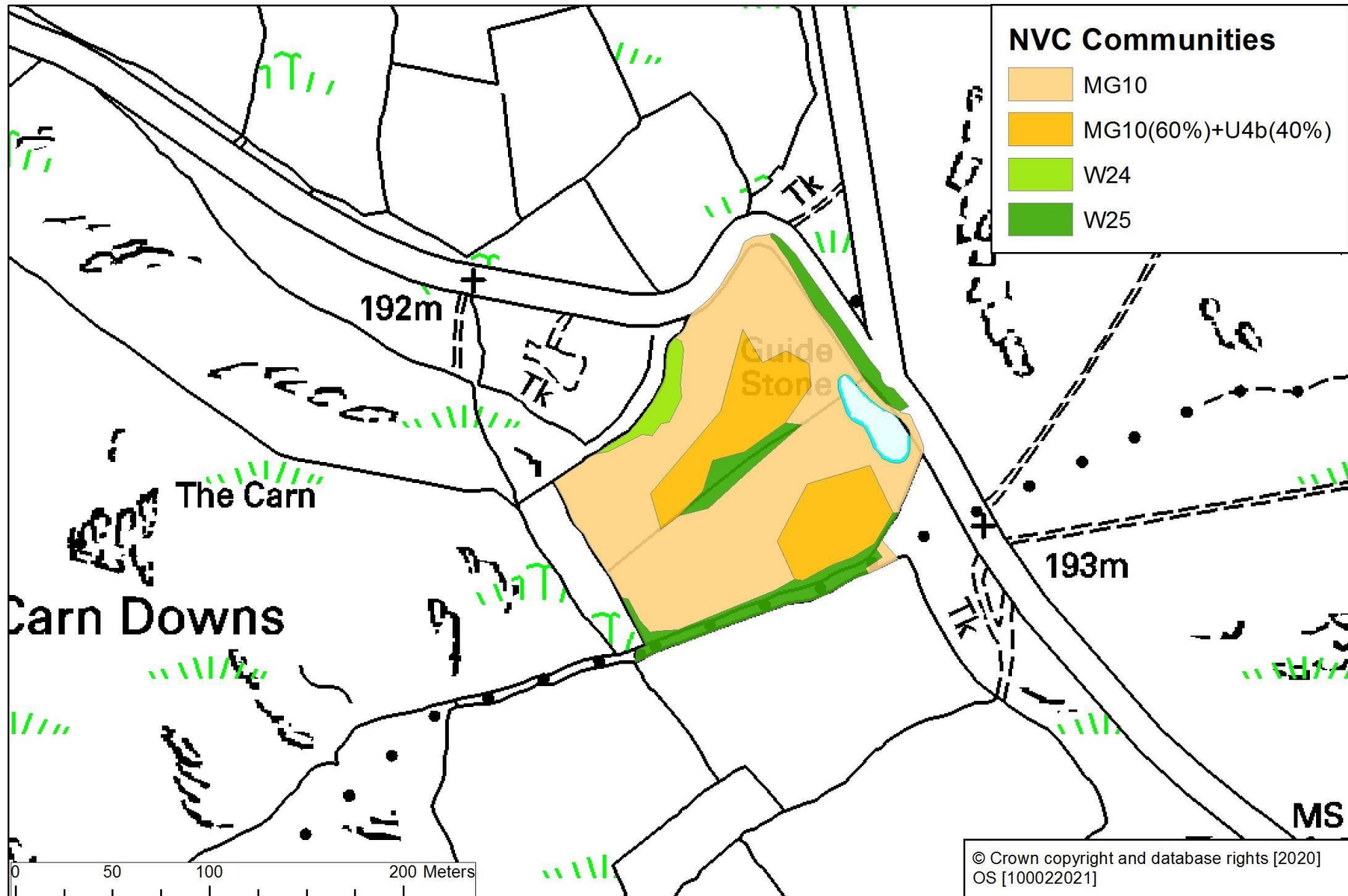
**\*creeping bent *Agrostis stolonifera* may also have been present**

## Annex 2 Location of survey site



### Annex 3 NVC map of area

Map showing extent of NVC communities found within survey area.





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