

## Export/sampling permits

Please note an export permit must be linked to an object that has to be created on SAHRIS! If the object you want to work on has not been created yet, you would need to **create an ObjectID**.

Required documents:

- For export of material from KZN, Eastern Cape or Western Cape that involves destructive analysis, the **destructive sampling permit** from the respective Heritage Authority must be submitted;
- A consent letter from the accessioning institution.

The proposal should include (you can fill these in below):

- a list of participants (name, affiliation, phone no, email addresses) and how they are involved;
- the name and address of the facility, including address, it is being analysed at;
- name and address of the museum/university department that currently hosts the object;
- names of the responsible person(s) during transport and while the fossil is at the facility;
- the period/time frame during which the fossil(s) will be outside the country;
- detailed information on the fossil(s), especially as it is a "unique" specimen;
- detailed information on the research project behind it & methodology including expected outcomes (i.e., the reason for export);
- the written confirmation of the institution that currently hosts the object that the object may be used as proposed and be returned in good condition;
- should there be any damage/destructive analysis (e.g., coating for higher resolution) undertaken, this needs to be stated in detail;
- Statement why this study cannot be done in South Africa.

### **Applicant (name and affiliation): this is usually the museum curator!**

Dr. Gerrit Dusseldorp  
University of Johannesburg and Leiden University  
Faculty of Archaeology, Leiden University  
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### **Applied for (principal researcher):**

Irini Sifogeorgaki MSc  
Faculty of Archaeology, Leiden University  
2300 RA Leiden, The Netherlands  
[e.sifogeorgakis@arch.leidenuniv.nl](mailto:e.sifogeorgakis@arch.leidenuniv.nl)

### **Participants with affiliations, email addresses, phone numbers (& their role):**

1) Dr. Gerrit Dusseldorp  
University of Johannesburg and Leiden University  
Faculty of Archaeology, Leiden University  
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[g.l.dusseldorp@arch.leidenuniv.nl](mailto:g.l.dusseldorp@arch.leidenuniv.nl)

Role: Project leader

2) Irini Sifogeorgaki MSc

Faculty of Archaeology, Leiden University

2300 RA Leiden, The Netherlands

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Role: micromorphology analyst

3) Prof. Hans Huisman

State Heritage Agency of the Netherlands and Groningen University

Smallepad 5

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[h.huisman@cultureelerfgoed.nl](mailto:h.huisman@cultureelerfgoed.nl)

+31334217606

Role: micromorphology expert

The material will be **shipped as fragile luggage and hand carried** to transported to the laboratory of the State Heritage Service in Amersfoort in September 2018 by by Dr. Dusseldorp and Ms Sifogeorgaki. Professor Huisman and Ms Sifogeorgaki will be involved with thin section preparation and analysis

**Institution incl. address that currently hosts the object:**

KwaZulu-Natal Museum

237 Jabu Ndlovu Street

Pietermaritzburg South Africa

**Facility incl. address at which the experiment will be done:**

State Heritage Agency, the Netherlands

Smallepad 5

3811 MG Amersfoort, the Netherlands

Material Studies Laboratory

Faculty of Archaeology Leiden University

Einsteinweg 2 2300 RA Leiden, The Netherlands

**Table of objects or upload file:**

*List of micromorphology samples to be exported*

Find no	Sample no	Sample type	Length	Width	Depth
UMH64	1	Tin	11	7	2*
UMH94	2	Tin	11	7	2
UMH4733	3	Plaster	17	14	7

UMH4711	4	Plaster	21	15	8
UMH4757	5	Plaster	17	14	6
UMH4755	6	Plaster	17	12	8
UMH4794	7	Plaster	14	14	6
UMH4795	8	Plaster	16	13	6
UMH4796	9	Plaster	16	11	6
UMH4798	10	Plaster	14	12	6
UMH4801	11	Plaster	16	12	8
UMH4896	12	Plaster	16	12	7
UMH4897	13	Plaster	15	11	8
UMH4898	14	Plaster	16	12,5	7
UMH4899	15	Plaster	14	10	6
UMH4900	16	Plaster	16	12	7
UMH4901	17	Plaster	17	12	8
UMH4902	18	Plaster	15	12	8
UMH4903	19	Plaster	14	12	7
UMH4916	20	Plaster	15	10	6,5
UMH4917	21	Plaster	15	11	7
UMH5044	22	Plaster	36	10	7
UMH5050	23	Tin	11	7	2
UMH5051	24	Tin	11	7	2
UMH5052	25	Plaster	18,5	11	8

UMH5060	26	Plaster	17	10	8
UMH5061	27	Plaster	17	11	7
UMH5062	28	Plaster	16	10	7
UMH5063	29	Plaster	18	12	8
UMH5088	31	Plaster	18	10	8
UMH5064	30	Tin	11	7	2

*Details of complementary sediment sample*

Remarks	Unit	Weight (grams)	Square
S1	14	656	L2b
S2	49	699	L2b
S3	10	577	L3a
S4	11	491	L3a
S5	12	633	L2b
S6	35	594	L2a
S7	41	568	L2a
S8	7 or 58	466	L2a
S9	5	506	L3a
S10	50	652	L3a
S11	13	598	L2b
S12	1b	295	L2a
S13	9	373	L3a
S14	1c	464	L2a
S15	1a	292	L2a
S16	33	636	L3a
S17	7	304	L2b
S18	15	598	L3a
S19	48	723	L3a

Also see attached file

**Site including age at which object was found:**

Umhlatuzana rockshelter

The samples span the sequence from the Holocene to the Late Pleistocene approximately the last 60 000 years.

**Time frame:**

Transport to State Heritage Agency (facility): September 2018

Return date: October 2021

**Aim/rationale:**

The stratigraphy of Umhlatuzana rockshelter is badly understood. We want to conduct morphological analysis to clarify the depositional processes of the sequence and to address two important problems to our understanding of the site:

- In the lower two-thirds of the sequence, no natural stratigraphy was visible to the original excavator (Kaplan 1990). We have found subtle differences between different units and want to understand the depositional history of these units better so we can better analyse the archaeological assemblages excavated from them.
- The possibility that some mechanism of sediment displacement post-depositionally affected the archaeological deposits was proposed after previous excavations. We want to better understand the extent of the displacement and the chronology of its occurrence.

**Methodology (short):**

Micromorphology samples were taken from the stratigraphic profile either encased in plaster or in Kubiena tins. The samples will be dried and subsequently impregnated at the laboratory of the State Heritage Service of the Netherlands. From the impregnated blocks, thin sections will be produced for micromorphological analysis. The thin-sections will be analysed using a stereo-microscope under normal and cross-polarized light.

Complementary sediment samples were taken from the same stratigraphic units.

They will be used for pH, granulometry, magnetic susceptibility and loss of ignition analyses to provide information on the sediment properties that cannot be obtained from the micromorphology samples,

**Confirmation/permit by museum (Attached?):**

Attached excavation permit and letter of support from KZN museum

**Damage/destructive analysis? (if yes, explain in detail)**

The micromorphology samples will be used to produce thin sections this will involve the destruction of parts of the sample. The sample will also be impregnated in resin.

The sediment samples will among others be exposed to loss on ignition analysis, heating the samples to very high temperatures, which is destructive.

**Statement why this study cannot be done in South Africa:**

To the best of our knowledge there are no fully equipped micromorphological laboratories in South Africa. The State Heritage Agency in the Netherlands has a state-of-the-art laboratory where all aspects of sample preparation and analysis can be undertaken.