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# ESS Cost Plan

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## ISIS Delivery of instruments for ESS:

**This document describes the cost plan for the ESS instruments.**

## 1. Introduction

This document describes the cost plan for the ESS instruments.

The outline budget was created with input from the instrument scientists, lead engineers, pan-instrument managers, various team members, previous experience of the last manufactured instruments and some check quotes on materials which could be specified.

Once the instrument outline specifications had been raised to issue 1, the individual budgets were then reviewed and critiqued by the project team as a whole. This then created a baseline costing for the instruments and the target modifications.

We will progress the instruments and re-costed based on best knowledge.

The core information on the cost build up for the instruments can be found in the individual project costings

Loki – Doc Num (ISIS-ESS-Loki-Fi-0001)

## 2. Outline budget

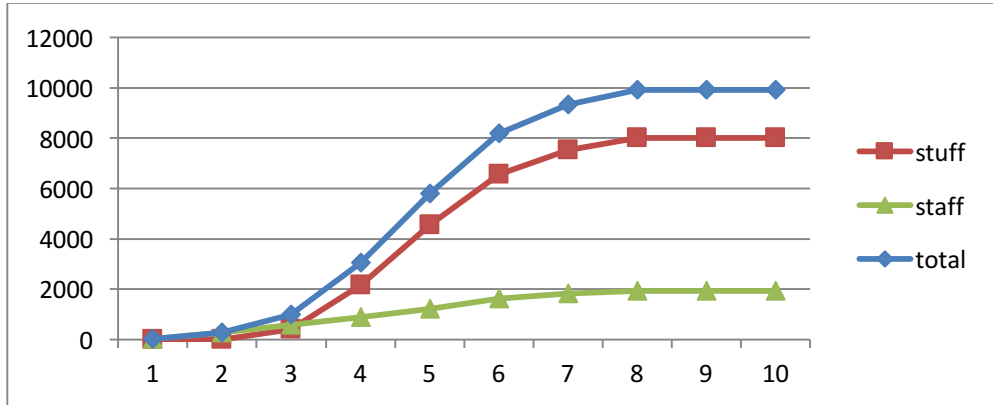
The costings have been based on the following:

- 1) Loki has a robust specification
- 2) FREIA has been taken to a layout and concept specification..
- 3) VAT will not be charged
- 4) There is no inflationary increase applied
- 5) The estimated staff increases are included
- 6) No Overheads are applied to the costing
- 7) The installation would be a combination of internal and contract personnel.  
Should this change, then the split between staff costs and capital costs will change. It is for this reason that the contract installation labour has been split out.

# ESS Instruments

	Materials Ex VAT(K)	Installation Labour (K)	Internal Labour (K)	Total No OH (K)
Loki	7400	600	1925	9925
FREIA	7400	600	1900	9900
Totals				
			Contingency	1982.5
			Total	21807.5

With a spend profile of:



This assumes:

- 1) ESS Provide the istrument team with information as required
- 2) The detector technology is succesful

**1.1.1. Breakdown**

FY	2016	2017	2018	2019	2020	2021	2022	2023
Labour	275	550	600	650	750	600	300	100
Materials	0	400	2160	4160	4400	2960	1440	480
Cont Inst								
Contingency	27.5	95	276	481	515	356	174	58
Total	302.5	1045	3036	5291	5665	3916	1914	638
Cumulative No OH	302.5	1347.5	4383.5	9674.5	15339.5	19255.5	21169.5	21807.5

### 3. Inflation

#### 3.1. Bought out items

There has been no allowance for inflation included in the material cost within the budget. In the current economic climate inflation is expected to be low. Exchange rate fluctuations are potentially significant but impossible to estimate. Items for which there are no UK suppliers (e.g. 3He detectors, guides, choppers) would be most vulnerable. However this should be accommodated within the overall 10% contingency.

#### 3.2. Internal Labour

The STFC costing guide has been used which gives the projected cost increases for the internal staff. This has been factored into the estimates dependant on the timing of the labour to be used. All values are monthly and are costed in £k.

	2016	2017	2018	2019	2020	2021	2022
Band G	7.25133 333	7.36008 333	7.4705	7.58258 333	7.69633 333	7.81175	7.81175
Band F	5.79483 333	5.88175	5.97	6.0595	6.15041 667	6.24266 667	6.24266 667
Band E	4.64825	4.718	4.78875	4.86058 333	4.9335	5.0075	5.0075
Band D	3.67883 333	3.734	3.79	3.84691 667	3.90458 333	3.96316 667	3.96316 667
Band C	2.83166 667	2.87416 667	2.91725	2.961	3.00541 667	3.0505	3.0505
Band B	2.32791 667	2.36283 333	2.39825	2.43425	2.47075	2.50783 333	2.50783 333
Band A	1.62083 333	1.64516 667	1.66983 333	1.69483 333	1.72033 333	1.74608 333	1.74608 333

### 4. VAT

VAT will not be charged on this project due to the ERIK agreement and therefore has not been accounted for.

### 5. Contingency

Contingency has been set at 10% of the estimated project cost.

The contingency has been included in the spend profiles as it is expected to be spent though the life of the project.

## **6. Currency**

All estimates have been created in Pounds Sterling.

## **7. Appendicies**