(K)

[redacted]

BNSC

...TIONAL SPACE CENTRE

[redacted] We discussed this SMART application briefly on 20 Friday. I am returning the advice to you in [redacted] absence.

You will probably get the gist of my advice from reading what I have said. If not, then the message is that whilst I would support the application being funded, I do not view it as very high priority. There may be worthier causes.

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With Compliments

[redacted]

Smart proposal advice

Reference	1939
Applicant	Satellite Propulsion Research Ltd
Project Title	Development of a Microwave Theng for Sat Propulsion
Advice Required From	BNSC
Type of Project	Development
To be returned by	25 July 2003

SBS SMART & ENTERPRISE

LEVEL OF TECHNOLOGICAL INNOVATION

[Is the proposed work likely to lead to a technolgocial advance over existing products or processes? Does the end deliverable meet the purpose of this scheme element (that is, is the work more experimental research than straightforward 'development' or vice versa? Does the work have any 'strategic importance' for industry in England?]

The proposed work, if successful, has the potential to lead to a technological advance in some applications. There is some degree of development in the proposed work, although the prime objective is to design and evaluate the performance of a non-production like spacecraft engine. As such, it will serve to validate the concept over a wider range of conditions than were possible with the initial experimental engine. It is very much aimed at advanced experimentation, but with development in mind. The work is not strategically important to UK.

Please rate the level of technological innovation	High	☐	Medium	☑	Low	☐

TECHNICAL RISKS

[Does the work involve technical risks that need to be overcome by R&D? Does it appear that the applicant has accounted for the risks? Does the applicant have a clear method of countering these risks?]

The purpose of the work is to quantify the technical risks. The applicant has a clear plan of action, and the programme would serve the purpose for which it is intended.

Please rate the level of technical risk	High	☐	Medium	☑	Low	☐

COMMERCIAL POTENTIAL/MARKET NEED/EXPLOITATION ROUTE

[Is there a market need for the work? Will people buy it? Is the exploitation route realistic (that is, has the applicant considered a realistic means of exploiting the results?]

There is some market need for the work, but its scope for application is limited. That said, the areas in which the technology is applicable would benefit from it if it were successful. This would then serve to stimulate a market. Exploitation potential is limited.

Please rate the level of market potential	High	☐	Medium	☐	Low	☑

ENVIRONMENTAL IMPACT

[What will the wider effect of take-up be (that is, the effect on the natural and social environments, environmental sustainability, health and safety and so on).]

The fact that the propulsion technology proposed requires no reaction mass will mean that propellants, many of which are hazardous or expensive will not be required. Even "greener" propellants will no longer be required.

Please rate the level of positive environmental impact	High	☐	Medium	☑	Low	☐

DESIGN IMPACT

[What will the impact be on design (if any)? Does the project incorporate good design principles and/or enhances design capabilities. Or is design is not considered important?]

Limited impact on design.

Please rate the level of design impact	High		Medium		Low	✓

DO YOU KNOW THE APPLICANT? Yes ☐ No ☑

⇩

[If **"Yes"** please include what capacity you know the applicant in and take a view on the competence of the applicant to carry out the project in your comments below.]

BASED ON THE GIVEN INFORMATION, WOULD YOU RECOMMEND SUPPORTING OR REJECTING THE PROJECT?	SUPPORT ☑
	REJECTION ☐

[Please provide a general conclusion to support your recommendation. If you recommend rejection, please clearly list the reasons for rejection (N.B. we need sufficient reasoning behind rejections).]

Support is based on the proposed technology being novel, and having potential benefits as outlined in the proposal. The initial work carried out under SMART funding demonstrated basic feasibility, but continuous thrust and its conversion into kinetic energy need to be demonstrated, as do efficiency of the power and scalability. Even if favourable results were to be forthcoming from the work, the issue of potential cost of any market remains. I do not feel it would be appropriate to reject the application, but with limited funding available, there may be more worthy contenders.

PLEASE INDICATE YOUR KNOWLEDGE OR EXPERTISE IN THE SUBJECT AREA

Recognised world/national/sector expert or practitioner	☐
Over 5 years practical knowledge of the subject area	☐
Less than 5 years practical knowledge	☐
No practical knowledge of the subject, but some policy or related knowledge	☑
New to the subject area with limited or no knowledge. If you have ticked this category can you suggest an alternative source, if possible:	☐

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NAME OF PERSON WHO COMPLETED THE FORM:

DIRECTORATE:

ESTABLISHMENT: BRITISH NATIONAL SPACE CENTRE

DIRECT TELEPHONE NO: [redacted]

E Mail: [redacted]

PLEASE RETURN COMPLETED FORM TO:

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Direct Line: 01483 470126
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