



DEPARTMENT OF EDUCATION AND SCIENCE

ELIZABETH HOUSE YORK ROAD LONDON SE1 7PH

TELEPHONE 01-934 9000

FROM THE SECRETARY OF STATE

The Rt Hon Leon Brittan QC MP
Secretary of State for Trade
and Industry
1 Victoria Street
LONDON SW1H 0ET

cc ~~10/10~~ 2
cf. Minister
of Education
Prime Minister
Sir Keith has
shifted the balance
towards polytechnics
slightly as you wished.

24 September 1985 Pmg

Unit have no
further comments

Dear Leon.

ENGINEERING AND TECHNOLOGY PROGRAMME

When I wrote to Norman Tebbit and other colleagues on 12 July setting out my preliminary proposals for allocating the resources available under Phase 2 of this Programme to universities and some other institutions, I explained that discussions about the public sector were still in progress and that other points were still outstanding for resolution.

In the light of the replies I received, officials have continued and completed appropriate discussions with individual institutions and others in the interests of securing cost savings, where possible, and ensuring that necessary conditions are recognised. We have, moreover, now received the advice of the National Advisory Body on provision within polytechnics that can be commended for the Programme. In our further considerations, I might add, we have been fully assisted by Sir Robert Clayton and members of ITSA.

I am now sending you my final recommendations for bids to be supported under the second phase of the Programme. Annex 1 to this letter summarises the breakdown of this second phase into constituent areas, with associated costs; provision in the universities is displayed in Annex 2; in the polytechnics in Annex 3; the product in terms of places by disciplines is displayed in Annex 4; and the balance of provision overall for both phases of the Programme is in Annex 5.

The proposals for the universities remain close to those set out in my earlier letter. Provision at Bristol University has been excluded as being too costly to present competitive value for money. Having regard to further analysis of industrial support, we have also included provision at Warwick and increased the provision at Manchester. This has meant that provision at Kent and York must now join the "reserve list" with other bids well qualified in terms of academic quality and industrial value.

The National Advisory Body have recommended provision at a top group of 5 polytechnics which have been judged, by the expert group convened for the purpose, to be of high academic quality and value to industry. To increase the proportion of advanced manufacturing technology in the Programme as a whole, however, I also propose to fund provision specifically in this area at 3 further polytechnics. The latter provision is also judged to be strong in terms of academic quality and industrial value. This takes the overall proportion of resources to be devoted to the public sector up to the level of £5.7m, which is somewhat above my initial expectation. However I believe that this figure can be defended on the ground that it maximises take up of good quality provision in important subject areas. To go beyond this, however, would undoubtedly lead to a fall off both in quality and industrial usefulness.

My proposals for undergraduate provision at Cranfield and Salford and for provision at the Open University remain unchanged in substance though some cost re-calculations have led to a slight reduction in the overall total of resources they will require. The revised figures are in Annex 1.

Colleagues will be glad to note that the projected number of steady state places arising from this Programme is now 5,350, compared with our original projection of around 4,000. This increase arises principally from the success we have had in bearing down on the capital costs of the more expensive institutions - and has been secured without conceding ground on either academic quality or industrial relevance.

These final recommendations have been shown within the last few days to Sir Robert Clayton who has in turn consulted some senior industrial colleagues at ITSA and the CBI. They have expressed their support for them and have asked that this be made known as part of our present discussions.

One problem remains outstanding. In his letter to me of 25 July Nicholas Edwards argued that - to achieve an appropriate regional balance for the Programme as a whole - it would be right for an institution in Wales to receive an allocation under Phase 2 to add to the allocation of approximately £1m to the University Colleges at Bangor and Swansea in Phase 1. This has presented difficulties. We were not advised by the University Grants Committee to commit resources to a Welsh University under this phase of the Programme and, after careful consideration of a bid from the Polytechnic for Wales, the expert group convened by the National Advisory Body (and which the Wales Advisory Body had agreed should advise on provision in Wales as well as England) similarly failed to recommend the bid from the Polytechnic of Wales above others contained in their advice and carried forward to my recommendations. I understand that in reaching their view, they considered the bid from the Polytechnic of Wales less strong in academic terms than others to which our inevitably limited resources could be allocated. While I appreciate that this may cause presentational difficulties for Nicholas, quality - both in absolute and relative terms - has been a major consideration for this Programme from the outset. In terms both of consistency and of equity, therefore, I have not felt able to stretch a point for the Polytechnic of Wales and I hope that Nicholas will, albeit reluctantly, understand my reasons for this.

As I have explained in earlier correspondence, we shall make it a condition for taking up these funds that institutions report to us within a prescribed period on the additional industrial assistance they have secured-representing industry's contribution to the objectives of the Programme. Guidelines to institutions have been made available for this by officials and while account will be taken, naturally, of institutions' existing track records, we shall be looking for evidence that the commitments given in general terms to the Prime Minister earlier this year will be carried through into genuine responses. I would hope that, by the time the Prime Minister next meets industrialists early in the New Year, more detailed information about the outcome will be available.

In addition, monitoring is to be developed. of the actual increase in student intakes to the courses included in the Programme, as well as the effect of the Programme on aggregate intakes to universities and polytechnics, at first degree and masters' degree level, in the relevant subjects.

Given the way the expenditure for this Programme is to be phased, there is now some urgency about announcing decisions and a keen wish on the part of institutions to get matters on the move (including the question of industrial support). I would therefore ask for any further reactions from you or others by 1 October. If these proposals meet, as I hope, with general acceptance, it would be my intention to make an announcement before the Party Conference on 8 October. Detailed letters to institutions would issue later.

Copies of this letter go to the Prime Minister, the Chancellor of the Exchequer, the Chancellor of the Duchy of Lancaster, the Secretaries of State for Defence, Employment, Energy, Scotland and Wales, the Chief Secretary to the Treasury, Sir Robert Armstrong and Sir Robin Nicholson.

Yours ever,

Hein

ENGINEERING AND TECHNOLOGY PROGRAMME

PROPOSED ALLOCATION OF PHASE 2 FUNDS

	£m
UGC institutions (other than Salford)	19.3
Salford IT Institute	1.41
Public Sector institutions	5.7
Cranfield (undergraduate provision)	0.52
Open University	<u>1.4</u>
Total expenditure on Phase Two	<u>28.33</u>

ENGINEERING AND TECHNOLOGY PROGRAMME

UGC INSTITUTIONS AND COURSES PROPOSED FOR INCLUSION IN PHASE 2

Bath:	Electrical Engineering
Cambridge:	Computer Science
Durham:	Integrated Physics and Electronics (undergraduate and postgraduate)
Edinburgh:	Artificial Intelligence and Computer Science; Computer Science and Electronics; Computer Science; Integrated Circuit Technology; VLSI Design and Fabrication (postgraduate)
Glasgow:	Electronic Engineering; Computer Integration and the Engineering Environment
Liverpool:	Advanced Manufacturing Systems Technology (postgraduate)
Imperial College:	Computing and Software Engineering; Electronics Engineering
UCL:	Electronic Engineering
Manchester:	Computer Science; Electrical Engineering
UMIST:	Micro-electronics Systems
Newcastle:	Computer Science; Micro-electronics and Software Engineering; Electronic Engineering
Oxford:	Engineering and Electronics and Structural Materials; Engineering and Computer Science (leading to a degree in either Computer Science or General Engineering)
Sheffield:	Information and Control Engineering
Southampton:	Integrated Information Engineering; Computer Science
Strathclyde:	Electrical Engineering
Warwick:	Computer Systems Engineering
Salford:	IT Institute

PUBLIC SECTOR INSTITUTIONS AND COURSES PROPOSED FOR INCLUSION
IN PHASE 2

Central London:	Software Engineering; Computer Technology; Engineering Preparatory Course (1 year).
Coventry:	Advanced Manufacturing Technology (postgraduate).
Hatfield:	Electronics and Manufacturing Systems.
Huddersfield:	Computer-Aided Engineering
Kingston:	Manufacturing Engineering (undergraduate and postgraduate); Computer Science (Software Engineering).
Middlesex:	Electronic Engineering; Microelectronic Engineering; Electronic Engineering Design and Production; Micro-Electronics Technology (postgraduate); Computer Graphics (postgraduate).
Plymouth:	Information, Electronic and Communication Engineering; Software Engineering and Mechanical and Electronic Engineering.
South Bank:	Electrical and Electronic Engineering; Information Systems Engineering (postgraduate).

ENGINEERING AND TECHNOLOGY PROGRAMME : STUDENT PLACES* ARISING
FROM PHASE 2, (AS PROPOSED), BY SUBJECT AREA

	ENTRANTS	STEADY STATE
Electronic Engineering	435	1536
Software Engineering and) Design and Computer Science)	451	1401
General Engineering	30	75
Production Engineering	161	474
Applied Physics and) Material Science)	50	150
TOTAL	<u>1127⁺</u>	<u>3636^x</u>

* Excluding Open University.

+ Of which postgraduate places = 117

x Of which postgraduate places = 155

ENGINEERING AND TECHNOLOGY PROGRAMME : STUDENT PLACES* ARISING
FROM THE PROGRAMME (PHASES 1 & 2) BY SUBJECT AREA

	ENTRANTS	STEADY STATE
Electronic Engineering	766	2508 (47%)
Software Engineering and Design and Computer Science)	528	1652 (31%)
General Engineering	92	273 (5%)
Production Engineering	270	768 (14%)
Applied Physics and Material Science)	50	150 (3%)
	1706 ⁺	5351 ^x (100%)

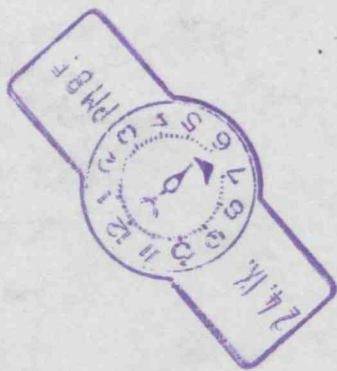
* Excluding Open University

+ Of which postgraduate places = 221

x Of which postgraduate places = 259

SCIENCE + TECHNOLOGY

SCIENCE BUDGET PT 4



CCNO



DW665

Secretary of State for Trade and Industry

DEPARTMENT OF TRADE AND INDUSTRY
1-19 VICTORIA STREET
LONDON SW1H 0ET

TELEPHONE DIRECT LINE 01-215 5422
SWITCHBOARD 01-215 7877

2 October 1985

The Rt Hon Sir Keith Joseph BT MP
Secretary of State for Education
and Science
Department of Education & Science
York Road
LONDON
SE1 7PH

[Handwritten signature]

2 Keith,

ENGINEERING AND TECHNOLOGY PROGRAMME

Thank you for your letter of 24 September setting out your final recommendations for phase 2 of the Programme. I am content with the allocations you propose.

I attach particular importance to the arrangements you propose to monitor the effect that the Programme has on student intakes. I would be grateful if my officials could be kept in touch with the development of these arrangements, and with the progress made in securing industrial support for the chosen courses.

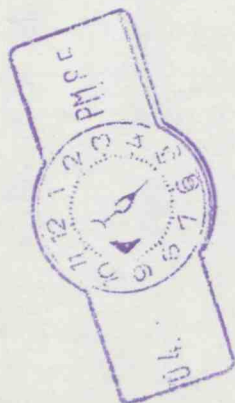
I am copying this letter to the Prime Minister, the Chancellor of the Exchequer, the Chancellor of the Duchy of Lancaster, the Secretaries of State for Defence, Employment, Energy, Scotland and Wales, the Chief Secretary to the Treasury, Sir Robert Armstrong and Sir Robin Nicholson.

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LEON BRITTAN

SCIENCE + TECHNOLOGY
SCIENCE BUDGET

PT 4



Y SWYDDFA GYMREIG
GWYDYR HOUSE
WHITEHALL LONDON SW1A 2ER
Tel. 01-233 3000 (Switsfwrdd)
01-233 6106 (Inell Union)

Oddi wrth Ysgrifennydd Gwladol Cymru



CC 20
WELSH OFFICE
GWYDYR HOUSE
WHITEHALL LONDON SW1A 2ER
Tel. 01-233 3000 (Switchboard)
01-233 6106 (Direct Line)

From The Secretary of State for Wales

The Rt Hon Nicholas Edwards MP

3rd October 1985

De Keir

N 4/10

Thank you for copying to me your letter of 24 September to Leon Brittan.

You say in your letter that it has not been possible to include an application from an institution in Wales in the Phase 2 list of successful bids. I am very disappointed that neither the University of Wales nor the Polytechnic of Wales have been able to put forward proposals of a sufficiently high standard to receive approval in this Phase. As I said in my letter to you of 25 July the absence of all the Welsh institutions from the Phase 2 list will not help me in my efforts to persuade advanced technology companies that Wales can offer the expertise which is so important in these fields. I am disappointed too, that the regional balance which we hoped could be achieved is not reflected, as far as Wales is concerned in the Phase 2 proposals set out in annexes to your letter. Criticism of the proposals is inevitable in Wales - not least, I would expect, from the Wales Advisory Board who gave strong support to the application from the Polytechnic of Wales.

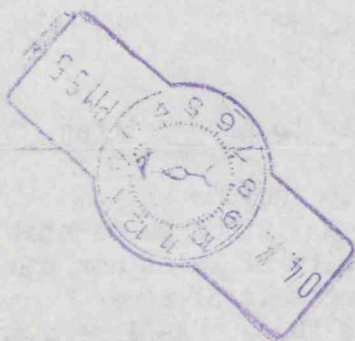
However I appreciate that when we decided to mount the engineering and technology programme it was with the aim of increasing the supply of high quality graduates at institutions who were able to command the greatest support from industry. I believe my officials have done everything possible to ensure that the institutions in Wales have been given every opportunity to present their bids in a favourable light and in the circumstances I am prepared reluctantly to accept the Phase 2 proposals contained in your letter.

/ I am copying this letter to the Prime Minister, the Chancellor of the Exchequer, the Chancellor of the Duchy of Lancaster, the Secretaries of State for Defence, Employment, Energy, Scotland, the Chief Secretary to the Treasury and Sir Robin Nicholson.

f *ev*
Nick
The Rt Hon Sir Keith Joseph Bt MP
Secretary of State for Education and Science

SCIENCE BUDGET

PT 4.





SCOTTISH OFFICE
WHITEHALL, LONDON SW1A 2AU

Rt Hon Sir Keith Joseph MP
Secretary of State for Education and Science
Elizabeth House
York Road
LONDON
SE1 7PH

3 October 1985

Dear Keith,

ENGINEERING AND TECHNOLOGY PROGRAMME

Thank you for copying to me your letter of 24 September to Leon Brittan.

You will recall from my letters of 14 March and 17 July that I was anxious for it to be made clear that my own contribution to the programme related to UGC Institutions rather than the public sector. In my letter of 17 July I did indicate that I might find myself in some difficulty if more than £5 million were to be suggested as a target figure for the public sector. However, on the basis of the arguments you have outlined, I am prepared to accept that the overall proportion of resources to be devoted to the public sector be increased to a level of £5.7 million and I am content that you should proceed within an announcement on this basis.

As far as the UGC institutions are concerned, I am glad that Scottish institutions appear to be well represented in the final programme. With the assistance of the Scottish Development Agency, I am sure that these institutions will be able to confirm industry's commitment to each of the courses of study mentioned in Annex 2 of your letter.

I am copying this letter to the Prime Minister, the Chancellor of the Exchequer, the Chancellor of the Duchy of Lancaster, the Secretaries of State for Defence, Employment, Energy and Wales, the Chief Secretary to the Treasury, Sir Robert Armstrong and Sir Robin Nicholson.

Yours well,

George

SCIENCE + TECHNOLOGY

SCIENCE BUDGET

RT 4



ENGINEERING AND TECHNOLOGY PROGRAMME

Thank you for replying to the first of 24 September to the Department.

You will recall that the first of 11 March and 11 July last I was anxious for you to be made clear that my own contribution to the programme related to the Institute rather than the public sector. In my letter of 11 July I said that I might have meant to show difficulty in more than one direction were to be suggested as a target figure for the public sector. However, on the basis of the arguments you have outlined, I am prepared to accept that the overall position of the sector is not favourable to the public sector and to accept that the overall position is not favourable to the public sector and to accept that the overall position is not favourable to the public sector.

As far as the public sector is concerned, I am not sure that the Institute can be expected to make a significant contribution to the overall position of the public sector. I am not sure that the Institute can be expected to make a significant contribution to the overall position of the public sector. I am not sure that the Institute can be expected to make a significant contribution to the overall position of the public sector.

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CNO



Caxton House Tothill Street London SW1H 9NF

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The Rt Hon Sir Keith Joseph Bt MP
Secretary of State
Department of Education & Science
Elizabeth House
York Road
Waterloo
LONDON SE1 7PH

30 September 1985

*ps Keith,**N
1/10***ENGINEERING AND TECHNOLOGY PROGRAMME**

You sent me a copy of your letter of 24 September to Leon Brittan.

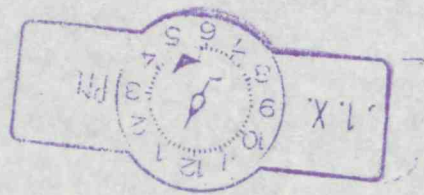
I am content with the allocations as they are now proposed, and am pleased that Sir Robert Clayton and his colleagues have expressed their support.

I would only like to reiterate what I said in July about the announcement. This programme is critically dependent on industrial support. I believe, therefore, that we should stress this in the announcement not least because it might lead to more companies becoming involved.

I am sending copies of this letter to the Prime Minister, the Chancellor of the Exchequer, the Chancellor of the Duchy of Lancaster, the Secretaries of State for Defence, Trade and Industry, Energy, Scotland and Wales, the Chief Secretary to the Treasury, Sir Robert Armstrong and Sir Robin Nicholson.

*Yours
Keith*

Sci & TECH: Budget: Pt 4



Polytechnic of the South Bank



Borough Road
London SE1 OAA
01-928 8989

From the Deputy Director: A C Morris MA FCA FSS

Mr A Turnbull
Private Secretary to the Prime Minister
(Economic Affairs)
The Cabinet Office
70 Whitehall
London SW1

15th October 1985

freddy
ack PM
18/10

Dear Mr. Turnbull

I attach a photostat of a letter to Lord Weinstock regarding the 'Switch' initiative. Similar letters have been sent to several other industrialists who attended the Prime Minister's 'Switch' meeting last May. I thought that you might be interested to know of our efforts and later this year I will let you have a summary of the responses.

Yours sincerely

Alfred Morris

Alfred Morris
Acting Director

Encl.

ACM/toh

Polytechnic of the South Bank



Borough Road
London SE1 0AA
01-928 8989

From the Deputy Director: A C Morris MA FCA FSS

Lord Weinstock of Bowden FSs
Managing Director, General Electric Company

11th October 1985

Dear Lord Weinstock

MRS THATCHER'S 'SWITCH' INITIATIVE

South Bank's share of the £28.3M 'Boost for Engineering and Technology' announced by Sir Keith Joseph earlier this week will be based on 80 additional students. Only the allocation to Edinburgh University equals that at scale and the South Bank total includes many more postgraduates than any other institution. This reflects our position as Britain's largest engineering institution and the unrivalled track record over the last five years of Dr Agnes Kaposi, our Head of Electronic Engineering, in switching resources to the areas in which skilled manpower is in shortest supply and persuading women to study engineering.

South Bank is required to provide concrete evidence, by Friday 13th December, of new support from industry and other private sources of the sort set out in the 'Guidelines' attached to this letter. This is consistent with the Prime Minister's discussions with you and other senior industrialists last May. We understand that a further Downing Street meeting will take place early in 1986 to review progress.

South Bank hopes to draw on the experience of the Ministry of Defence in adapting their successful 'Undergraduate Science Studentship' and 'Graduate Retraining' schemes as our contribution to this national attack on skills shortages. This means that we will need sponsors for eighty students who can make a valuable contribution to the sponsor during the 'project' or 'placement' periods of their course.

Please may I meet with you or a senior colleague as soon as possible to discuss sponsorships and other ways in which your company can help match central government's contribution to this vital task.

Yours sincerely

Alfred Morris: Acting Director
(P.A. Tricia O'Hara, Extension 2013)

cc: A Turnbull, Prime Minister's Private Secretary (Economic Affairs)

P.S. We are due to meet on November 7 and you may prefer to discuss this letter at that meeting. I am copying it to Mr Prior (who arranged for us to meet) Sir Robert Clayton and Mr D H Roberts (because of their roles in the IT Skills Agency), and to Dr John Brown who succeeded Professor Leslie Thomas of GEC as the nominee of the Engineering Council on our Governing Body.

