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The Secretary
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Town Clerk's Office
City of Glasgow District Council
City Chambers
GLASGOW G2 1DU

Our reference AO 'N/GF/GP/2/11/0

Your reference

Date 24 March 1988

FIRST CLASS

For the attention of Mrs Rachel Slaven

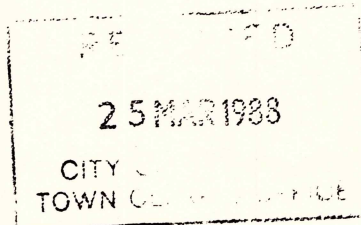
Dear Sir

**EAST CENTRAL SCOTLAND PLANNING ASSUMPTIONS STUDY
MINUTE OF MANAGEMENT COMMITTEE MEETING 4 MARCH 1988**

... Please find attached a copy of the East Central Scotland Planning Assumptions Study Management Committee Minute of the meeting held in Glenrothes on 4 March 1988, for circulation at the Nuclear Free Zones Scottish Steering Committee meeting in Dundee on Monday 28 March 1988.

Yours faithfully

C M HOOD
for Regional Secretary



If telephoning please ask for Mr O'Neill : Ext 2718

All communications to be addressed to the Regional Secretary

EAST CENTRAL SCOTLAND PLANNING ASSUMPTIONS STUDY

MANAGEMENT COMMITTEE

Fife House, Glenrothes, 4 March 1988 - At a meeting of the Management Committee.

Present:-

Councillor W Herald, Lothian RC (Chairman)
Mr E Bain, Lothian RC (Solicitor's Department)
Col I Cameron, Lothian RC (Regional Emergency Planning Officer)
Councillor T Darby, Lothian RC
Mr C M Hood, Lothian RC (Secretary's Department)
Mr A O'Neill, Lothian RC (Secretary's Department)
Councillor T Coll, Central RC
Mr B M Smith, Central RC (Regional Emergency Planning Officer)
Councillor C J Groom, Fife RC
Councillor W G Anderson, Fife RC
Mr D Ross, Fife RC (Chief Executive's Department)
Mr J Turner, Fife RC (Regional Emergency Planning Officer)
Councillor P Doran, Tayside RC
Councillor G Allen, Tayside RC
Mr J Smith, Tayside RC (Regional Emergency Planning Officer)
Ms A Baillie, Dundee DC (Administration Department)
Mr J MacPherson, Dundee DC (Principal, Chief Executive Assistant)
Councillor W Milne, Falkirk DC
Councillor F Ballantyne, Kirkcaldy DC
Councillor A Fraser, Midlothian DC
Mr R Attack, Midlothian DC (Administrative Assistant)
Councillor D Flannigan, West Lothian DC
Miss D Burrows, West Lothian DC (Administrative Assistant)
Mr A Walker, University of Edinburgh (Study Co-ordinator)
Mr R Mackenzie, University of Edinburgh (Research Assistant)

Apologies:-

Councillor E B Fallon, Lothian RC
Councillor Mrs H Livingstone, Central RC
Councillor T Downs, Clackmannan DC
Councillor Luke, Dundee DC
Councillor P Callaghan, Dunfermline DC
Mr M Robertson, Dunfermline DC (Corporate Planning and Co-ordination)
Councillor G P Campbell, East Lothian DC
Mr M Duncan, East Lothian DC (Chief Executive)
Councillor R Alexander, Edinburgh DC
Mr A Laing, Edinburgh DC (Technical Services Department)
Mr D Nelson, Kirkcaldy DC (Director of Planning)
Councillor E Carrick, Stirling DC
Councillor Caldwell, Chair NFZ Scotland

1. WELCOME

The Chairman welcomed Midlothian District Council to its first meeting of the Management Committee and intimated that the formal acceptance of the authority as a member of the Management Committee would be dealt with later in the meeting.

Councillor Herald also thanked Fife Regional Council for the use of their Council Offices in which the meeting was taking place.

2. MINUTE OF MEETING OF 11 DECEMBER 1987

The Committee approved, as a correct record, the minute of the meeting held in Central Regional Council's Chambers, Stirling on 11 December 1987.

3. MATTERS ARISING FROM MINUTE

- (a) Constitution - Personal Liability of Elected Members (item 3(a))

Fife Regional Council had sought the advice of COSLA concerning the question of the personal liability of elected members serving on the Management Committee. Mr Ross indicated that, as yet, no reply had been received.

DECISION

To continue the matter to await the reply from COSLA.

- (b) Constitution - Minute of Agreement (item 4)

Mr Hood informed the Management Committee that all the participating authorities had now paid their first year's contribution to the Study. The Treasurer would shortly be issuing invoices for the second and final payment by member authorities, which was due by 30 April 1988.

DECISION

To note the information.

4. CONSTITUTION OF MANAGEMENT COMMITTEE

- (a) Application for Membership by Midlothian District Council

Mr Bain informed the Management Committee that Midlothian District Council had recently applied to participate in the Planning Assumptions Study and had advised the Secretary of the Management Committee that they wished Councillor D R Smith to serve as their representative on the Management Committee with Councillor J G Hope or his nominee as the substitute member.

The Management Committee was asked to approve formally the participation of Midlothian District Council in the activities of the Management Committee.

DECISION

- (1) To approve the participation of Midlothian District Council in the East Central Scotland Planning Assumptions Study

(2) To authorise Lothian's Regional Solicitor to amend the Minute of Agreement constituting the Management Committee accordingly.

(b) Amendments to the Minute of Agreement

Fife Regional Council had previously made proposals for minor amendments to some of the clauses of the Minute of Agreement. However, at that time, Fife Regional Council did not wish to press for reconsideration of the terms of the Minute of Agreement, but had instead agreed that if the Minute of Agreement were ever to be reviewed, the points which Fife had made would also be considered.

Mr Bain said that in his opinion the amendment of the Minute of Agreement to bring in Midlothian District Council represented such an opportunity for the review of the contents of the Minute of Agreement.

The points previously made by Fife Regional Council were as follows:-

Clause 7

This Clause, as previously approved, laid down a quorum of 5 (of whom at least 3 were representatives of a regional participating authority). Fife Regional Council had suggested that a quorum of more than 5 might be appropriate.

Clause 11

Fife Regional Council had expressed the view that the current content of this Clause was restrictive, requiring 3 months written notice in respect of withdrawal from membership and also it required that any authority remains liable for its total contribution even although withdrawal had taken place during the first year of the study.

Mr Bain pointed out that the Management Committee had deliberately made the clause about liability for the total contribution restrictive in nature.

Clause 12

This Clause indicated that a special meeting of the Committee would be held if either:-

- (a) 2 of the regional participating authorities; or
- (b) 7 of the total number of participating authorities withdrew.

Fife Regional Council had suggested amending this Clause so that the Management Committee would be forced to review its continued existence in the event of 4 of the participating authorities deciding to withdraw.

Mr Bain sought the views of the Management Committee. However, Councillor Groom stated that, on reflection, Fife no longer wished to pursue the three changes suggested above.

DECISION

To note that Fife Regional Council no longer wished to pursue their proposed amendments to the Minute of Agreement, and accordingly to take no further action on this matter.

(Reference - report by Lothian's Regional Solicitor, 24 February 1988, submitted.)

5. REPORTS BY STUDY CO-ORDINATOR

The Chairman expressed on behalf of the Management Committee its sympathy to Mr A Walker for his two recent family bereavements.

(a) Progress Report

Mr Walker, the Study Co-ordinator, informed the Management Committee of the progress which had been made in the consolidation of the casualty figures prepared by Earth Resources Research Ltd (ERR) and which had been presented at the last meeting, by running consistency checks with in-house calculations on the micro-computer. Mr Walker also referred the Management Committee to the National Guidance papers on various topics related to the Study.

Further contact had been made with the Strathclyde Planning Assumptions Study at which discussion had taken place concerning the general methods of approach to the Planning Assumptions Study. At a second meeting in Edinburgh, agreement had been reached on a joint approach to the assumptions which were to be made in respect of target list modifications and the parameters to be used in casualty and damage calculations. (For a full report see item 5(b) below.) The officers of the South Yorkshire Planning Assumptions Study had also been contacted and fruitful discussions had taken place with them on casualty data, the NUKECALC programme and the methodology of assessing the protection factors.

Consultation had also taken place with the Scottish Meteorological Office, Lothian Regional Council's Architect's Department and Edinburgh University's Computing Service and Departments of Defence Studies and Meteorology. These discussions had helped the furtherance of the Study.

Mr Walker also reported the successful press launch of the Study which had taken place on Tuesday 19 January 1988 at the University of Edinburgh, King's Buildings Campus which had attracted wide media coverage.

DECISION

To note Mr Walker's progress report.

(Reference - report by Study Co-ordinator 4 March 1988, submitted.)

(b) **Finalised Scenarios for Scotland Agreed with Strathclyde Planning Assumptions Study**

The Study Co-ordinator reported that at a meeting with the Strathclyde Planning Assumptions Study Team he had agreed an amended target list to be used in casualty and physical damage calculations using the NUKECALC programme. Lists and maps of these targets (amended from those previously issued) were presented for the Management Committee's information. Mr Walker accepted Mr Tunnah's request to delete Leuchars from the list of targets in Scenario 2.

Agreement had also been reached on the parameters to be used in the NUKECALC calculations in order that both studies could present data which used the same assumptions. Details of the agreed assumptions were reported by the Study Co-ordinator later in the meeting.

DECISION

The Management Committee agreed to endorse the amended target lists (as further amended at this meeting) and parameter choices for the basis of further research.

(Reference - report by Study Co-ordinator 4 March 1988, submitted.)

(c) **Detailed Casualty Calculations Using NukeCalc for East Central Scotland**

The Study Co-ordinator explained to the Management Committee that the detailed casualty calculations were derived using two software programmes, these being the Earth Resources Research Ltd (ERR) package and the Nukecalc programme. However, both these packages had their advantages and disadvantages.

The target lists used by the ERR programme were inflexible and contained targets, some of which were considered to be inappropriate and others which needed amendment. Casualty figures had no breakdown in terms of cause of death or injury, casualty figures were given for regions and districts as a whole rather than in more detail, there also appeared to be problems associated with the plotting of some of the fall-out plume contours, although this was under investigation.

At present there did not seem any possibility of further computations using amendments to the original ones, no assessment of damage and casualties due to the outbreak of fires

could be provided and although verbal briefings, documentation of the detailed methodology had not yet been delivered, this inevitably made definitive comparisons with the NUKECALC calculations difficult.

In comparison with the ERR package, the NUKECALC programme had complete flexibility in choice of target lists, type of burst, and the choice of weapon yields. Adjustments could be made to the parameters used within certain limits and there was also an optional fire hazard model. Casualty figures could be broken down in terms of cause of death or injury, detailed casualty figures could be produced for each one kilometre square, if required, and similar details could be produced for physical damage. The NUKECALC programme therefore provided output which was amenable to map-making, including overlays. However NUKECALC had its limitations in that the programme could only deal with an area of a maximum of 64 10km squares, which meant that East Central Scotland was split into 5 major blocks, and there was a choice of only two wind speeds (15 and 22.5 mph).

The Study Co-ordinator tabled an interim report on the casualty calculations using the Scenarios and parameters agreed with the Strathclyde Planning Assumptions Study.

DECISION

To note the report by the Study Co-ordinator on the interim casualty calculations for East Central Scotland.

(Reference - report by Study Co-ordinator 4 March 1988, submitted.)

(d) **Criteria for Casualty Calculations**

(i) **Protection Factors of Buildings in the East Central Scotland Area**

The Study Co-ordinator commented on the amount of protection given by any shelter from the effects of radiation from fall-out and how such protection was measured in terms of the Protection Factor.

In agreement with the Strathclyde Planning Assumptions Study, it had been decided to use the values for Protection Factors as used by ERR in computations which were also the default values in the NUKECALC programme. These were listed in the report and took into account the level of blast damage in the zones around the explosion point.

The assumptions about the damage to buildings were explained and for the shelter available, it was assumed that people would stay indoors for 14 days.

DECISION

To note the progress which had been made on the protection factors of buildings in the Study area.

(Reference - report by Study Co-ordinator 4 March 1988, submitted.)

(ii) **Weather Conditions Assumed for Nuclear Attack Short Term Casualty and Damage Calculations**

The Study Co-ordinator informed the Management Committee of the assumed values for wind direction and speed used in the NUKECALC programme. The data demonstrated that a major factor in determining the pattern of fall-out from weapons in the yield range likely to be used in a nuclear attack on Scotland, was the wind speed and direction at levels up to 20km (12 miles). This was of considerable importance when considering the effects on Central Scotland of attacks on targets on the mid-west coast and centre of the area. The Study Co-ordinator pointed out that he had agreed with the Strathclyde Planning Assumptions Team to use the standard wind directions (WSW and ENE) and speed (15 mph) in the preliminary joint NUKECALC calculations.

At this stage, the possible effects of cloud cover and precipitation on fall-out estimates were not included in the calculations; clear visibility and no cloud or snow cover is assumed.

DECISION

To note the report on the assumptions made about weather conditions.

(References - report by Study Co-ordinator 4 March 1988, submitted.)

(iii) **Fatal Radioactive Dose**

In calculating the number of casualties from radioactive fall-out, it was necessary to estimate the total accumulated radioactive dose that would be received at a given point, taking into account the length of time over which exposure took place and the protection offered by the shelter available. The Study Co-ordinator pointed out that his calculations assumed: that the wind remained constant in a given direction at a given speed for 14 days; that there was no variation of wind speed with height; and that people took cover for the whole of this 14 day period in housing or other shelter which afforded them a level of protection which was adjusted for the blast damage it had received.

This was clearly an idealised situation and had inherent limitations. Also, the exposure would be increased beyond the casualties calculated using the above assumptions for those who left their shelter and would continue (although much attenuated) beyond the two week nominal period.

In order to calculate, from the accumulated dose in any particular location, a more precise number of casualties, an understanding of the mortality rates for a given dose must be acquired. There was some controversy in this assessment and a choice had to be made before the calculations were performed. Usually, this was expressed in terms of the 'lethal dose for 50% of fatalities' (LD50), which was more precisely defined as the acute accumulated dose resulting in 50% of those exposed dying within 30 days, without medical attention. An acute dose was one which was received over a matter of days. Although the accumulated dose was calculated over the 14 days, the level of radioactivity from nuclear weapons fell rapidly with time in such a way that as much as 70-80% of the 14 day accumulated dose might actually be received within the first two days.

Having consulted a wide range of published sources, the Study Co-ordinator had concluded that, in the circumstances of nuclear attack, 450 rads was the appropriate LD50 level and this assumption had been agreed with the Planning Assumptions Team in Strathclyde.

DECISION

To note the assumptions about fatal radioactive dose which would be used in the casualty calculations for the East Central Scotland area.

(Reference - report by Study Co-ordinator 4 March 1988, submitted.)

(e) Progress Report on Resources Information Gathering

The Management Committee had previously agreed to send letters to various outside bodies requesting their co-operation in the collection of information on resources and, if any, civil defence plans written by the organisations concerned. The Secretary had sent appropriate letters to the various organisations and the Study Co-ordinator now updated the Management Committee on the number and content of replies received and reminders sent where necessary.

Mr Walker pointed out that some confusion had been encountered with the four Health Boards who seemed to be replying collectively, although this had not been explained to the Secretary of the Management Committee by any of the Health Boards. However, the situation was being clarified. The SSEB had also replied by forwarding a copy of their Annual Report

which, although interesting, did not provide the information needed for the Study. A further approach to the SSEB would therefore be made.

DECISION

- (1) To note the Study Co-ordinator's report on the responses received.
- (2) To authorise the Chairman to write to the SHHD as no indication of their attitude had been received.

(References - Management Committee 11 December 1987, item 6(f); report by Study Co-ordinator 4 March 1988, submitted.)

6. THE PLANNED PROGRAMME FOR IMPLEMENTATION (PPI)

(a) 1 April 1988: Target Date

Mr Hood reminded the Management Committee that the 1 April 1988 Target Date was approaching. By this date, under the PPI, regional authorities were required to submit up-to-date operational plans dealing with the collection and distribution of information, the control and co-ordination of action and introductions and advice which would be given to the public.

Earlier NFZ guidance, which the Management Committee had accepted, had stated that planning assumptions research had a key role to play in the production of plans.

DECISION

To recommend that Regional Councils, if they so wish, submit plans in accordance with the 1 April Target Date, with the qualification that such plans might be changed at a later date.

(b) NFZ National Steering Committee Guidance Papers 4 and 5

Mr Hood informed the Management Committee that 2 further Guidance Papers had been received from the National Steering Committee dealing with public information, the designation of staff for civil defence roles and the basis of extended consultation.

DECISION

To note the Guidance Papers for the Management Committee's interest and refer them to member authorities for consideration.

(References - NFZ Guidance Papers Number 4 and 5 on the Planned Programme for Implementation, January and February 1988, submitted.)

7. NEXT MEETING

It was agreed that the next meeting of the Management Committee would be held on Friday 10 June 1988 at 2.00 pm and that the invitation by Tayside RC to host the meeting in its Council Offices, Dundee be accepted.