

Public Works
Marine (1897) Department.

✓ G.O., No. 326/25

DATED 22 Nov 1897

[Despatch Abstract.]

Training & services by certain Assistant Engineers
Govt of India letter enclosing a report showing
the character of the — who have been posted
to Madras, recorded.

Saw
22/11/97

9025/10

Sir,

I have the honour to report for the information of the Government of India on the kind of training received by the 12 Assistant Engineers appointed by the Secretary of State in 1896 during the practical course which terminated on 31st August 1897.

Messrs. R. B. Addis and G. F. Dawson have throughout the year been trained under Mr. Elliott Cooper on the Clown section of the Lancashire, Derbyshire, and East Coast Railway, the work in progress comprising some very heavy cuttings and embankments, the construction of a number of small bridges and of two large tunnels in faulty rock. They have both had a good deal of out-of-door work and have assisted in levelling, fixing centre lines, and making measurements of work done. They also visited the following works: Birmingham Water-works in the Elm Valley, the Barnstaple-Lynton Light Railway, Kendal Water-works Extension, and the Edinburgh Water-works.

Messrs. J. D. Stuart and F. C. Lewis have undergone 12 months training on the Barnstaple-Lynton Railway in North Devon. The line, though a small one, being on a two-foot gauge, traverses very hilly country, and the Assistant Engineers have had more opportunity of seeing a variety of works carried out without the aid of special plant than is usually the case with large works in England. Their work during the year has consisted mainly in laying out curves, levelling, setting out earthwork and masonry works, and measuring up completed works. Mr. Chanter, the Company's Engineer under whom they were employed, has taken much trouble to give them a sound practical training. They have also visited and taken notes on the following works: the Birmingham Water-works in the Elm Valley, the Kendal Water-works, the Lancashire, Derbyshire, and East Coast Railway at Clown, and the Edinburgh Water-works.

Messrs. J. K. William and W. B. Bucknill received their year's practical training at Rhyader in Radnorshire on the large water-supply scheme designed by Mr. Manseigh for the city of Birmingham. The works are now in active progress and comprise the construction of a series of high masonry dams in the Elan and Clanwen valleys, a tunnel to connect the two, and a conduit, 8 miles in length. Being on such a large scale, the works present unusual opportunities for observing the organisation required to house and provide for a large body of work people, and the subsidiary works necessary in connection with a big engineering work, such as temporary bridges, railways, workshops, etc. They also visited the Barnstaple-Lynton Light Railway, the Kendal and Edinburgh Water-works, and the Lancashire, Derbyshire, and East Coast Railway, in the neighbourhood of Chesterfield.

Mr. A. W. Campbell has been attached during the year to the Kendal Water-works Extension, which were designed and are being carried out under the superintendence of Mr. Deacon, Consulting Engineer. The work is of a comparatively simple character and not on a very large scale. It consists of the construction of a masonry dam for a new reservoir to supplement the existing supply, and a short pipe line to connect the new with the existing reservoirs. Mr. Campbell has been constantly kept at work out of doors, and has assisted in levelling, laying out, and measuring up completed work. He has also visited the following works: the Birmingham Water-works in the Elan Valley, the Lancashire, Derbyshire, and East Coast Railway, at Renishaw, the Edinburgh Water-works, and the Barnstaple-Lynton Light Railway.

Mr. W. G. Molesworth has throughout the year been under Mr. J. W. White of Leeds, Consulting Mining Engineer. In addition to studying the various systems of mining engineering in Yorkshire and South Wales, Mr. Molesworth has assisted in the construction and surveying of several small branch lines which are being carried out to connect various collieries with the main line of railway. Mr. White has expressed himself as being very pleased with the interest Mr. Molesworth has displayed in his work, and with the energy shown by him in connection with the preparation of the estimate and in the field-work for the parliamentary report on the Weare Valley Railway. He has also visited the works in the Elan Valley, the Kendal and Edinburgh Water-works, and the Barnstaple and Lynton, and the Lancashire, Derbyshire, and East Coast Railway.

Mr. A. Sisson during his year of practical training has been attached to the signalling department of the Caledonian Railway, with a view to his acquiring a thorough knowledge of point and signal interlocking, block-working of trains, and the laying and maintenance of points and signals. A considerable portion of his time has been taken up by work in the office in tracing plans for the arrangement of signals, etc., at new stations, but whenever work has been in progress Mr. Sisson has been given every opportunity of inspecting it and of assisting in fixing the position of signals, etc. He has also visited the Edinburgh and Kendal Water-works, the large works in the Elan Valley for Birmingham water-supply, the Barnstaple-Lynton, and the Lancashire, Derbyshire, and East Coast Railways.

Mr. G. H. Bell has received his year's training under Messrs. McAlpine and Sons, Railways Contractors, Glasgow. Until the end of January he was employed on the Bridgetown Cross and Carmyle Railway (under construction by the Caledonian Railway), a short length of line in connection with the Central Railway of Glasgow. The railway for the most part was through a thickly populated part of the city. Mr. Bell had therefore excellent opportunities of seeing a variety of large works carried out under exceptional difficulties, and of learning how such works are carried out expeditiously and with the least hindrance to the traffic of a large city. As soon as the construction of the line was completed Mr. Bell was transferred to a line under construction near Banavie where he was employed in surveying, levelling, and setting out of the centre line for the railway. He has also visited the Kendal and Edinburgh Water-works, the Lancashire, Derbyshire, and East Coast Railway works in the Clown district, the Barnstaple-Lynton Railway, and the Birmingham water-supply works in the Elan Valley.

Messrs. W. C. Ross and D. W. McGuffie underwent their year of practical training under Messrs. Leslie and Reid, Consulting Engineers, Edinburgh. The principal works on which they were engaged were the construction of a large clear water reservoir and additional filters for the Edinburgh water-supply, the construction of a large conduit, partly in tunnel and partly out, and cover in connection with the Jalla scheme for supplementing the existing supply, and the Wemyss water-supply scheme which was under construction. They had therefore excellent facilities for seeing a variety of different classes of work in connection with water-supply under construction, as well as with acquainting themselves with the method of working sand filters. They also visited the following works :- the reconstruction of Broomielaw Bridge, Glasgow, the Kendal Water-works, the works in the Elan Valley for the Birmingham water-supply, the Barnstaple-Lynton Light Railway, and the Clown district works of the Lancashire, Derbyshire, and East Coast Railway.

C. PERRIN, Mem. Inst. C.E.,
Superintendent, Practical Course.

The President,
Royal Indian Engineering College,
Coopers Hill.

G. C. Press Simla, No 1186 P. W. D.—3-11-97—30.

All communications
should be addressed
to the Secretary.

No. 2983 G.

GOVERNMENT OF INDIA.

PUBLIC WORKS DEPARTMENT.

GENERAL.

To

The Secretary to the Government of Madras,
Public Works Department.

Simla, the 3rd November 1897.

Sir,

With reference to Public Works Department Notification No. 447 dated the 27th October 1897, I am directed to forward for information an extract from the report by Mr. C. A. Perrin

-----+	Superintendent of the practical
x	:
Mr. W. A. Campbell	:
" W. G. Molesworth	:
-----+	training course, showing the
	:
	character of the training received
	x

by the Assistant Engineers noted on the margin who have been posted to Madras.

I have the honour to be,

Sir,

Your most obedient servant,

G. H. Walker

Under Secy. to the Govt of India.

R

Document accompanying:-

Extract referred to.

2983-1
11/25/97