

# Proposed Langstone Harbour Air Base



Photograph of a Short S.23 Empire flying boat that might one day have flown from Langstone Harbour.

Havant History Booklet No. 63

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# Proposed Langstone Harbour Air Base

For some time past the Air Ministry, in conjunction with Imperial Airways have been seeking a suitable place to establish a base in this country to form the terminus for the long distance Empire and Trans-Atlantic air routes. These long distance routes are to be operated by means of flying boats rather than land planes and a number of large machines are at present being built for Imperial Airways.

The Air Ministry required a site having a considerable area of sheltered water, of reasonable depth, free from obstructions to flying and in a situation not subject to fogs in order that the air liners could operate at all seasons of the year. It was also of material advantage if the site were easily accessible by road and rail from London.

After considering a number of alternative sites in Ireland, on the Medway, at Southampton and Portsmouth, the Air Ministry and Imperial Airways have decided that Langstone Harbour, which is on the East side of Portsmouth, is suitable and the Portsmouth City Council are proposing to proceed with a comprehensive scheme estimated to cost about £1,200,000 for the development of the harbour as an Empire Air Base.

In view of the fact that a large portion of Langstone Harbour is situated within the Urban District of Havant and Waterloo it is necessary for the County Council to consider the possible effect of the proposed scheme on the areas of the County which adjoin the harbour.

The scheme may be divided into two parts - first, the preliminary works and secondly the main part of the scheme. Only the broad outlines of the latter part of the proposal have so far been indicated and the details have not yet been settled so that only a general idea of the probable effect of the works can be given now.

The preliminary works include the dredging of runways to a minimum depth of 10 feet [3 metres] at low tide in the existing channels to enable aircraft to take off and alight at all stages of the tide. A hangar with a slipway adjoining is also to be constructed on the shore near the existing Portsmouth Airport.

The whole of the preliminary work is to be completed before January 1st next when the new air services are to be inaugurated. The main part of the scheme is to be completed by the end of 1938. The preliminary works will have practically no effect whatever on the County area as the harbour will remain tidal as at present. The extent of the preliminary work is shown on the first of the two maps which accompany this report.

The main part of the scheme includes the construction of three barrages (1) at the Southern entrance to the harbour (2) at Langstone adjoining Hayling Toll Bridge, and (3) at the North-West corner of the harbour across Ports Creek.

The water level inside the harbour is to be maintained nearly constant at a minimum level of 5.00 feet above Ordnance Datum by means of sluices to be constructed in the Langstone Barrage; this will result in a permanent water level considerably above normal low water level.

Further runways and channels are to be dredged to a minimum depth of 10 feet [3 metres] to enable aircraft to take off in any direction and also to taxi to the landing stages. The material obtained from the dredging of these channels is to be used in reclaiming an area of mud land at the North end of the Harbour between Farlington Marshes and the Binnesses Islands.

The land so reclaimed, together with part of the Farlington Marsh is to be developed for use as an aerodrome complete with the necessary offices, hangars, hotels and probably factories and workshops for the manufacture and repair of aircraft. This aerodrome will be a terminus for air lines serving other parts of this country and the continent and making direct connection possible with the flying boats operating on the long distance routes.

The existing aerodrome at Portsmouth will probably cease to be used as such and the various activities new carried on will be transferred to the new aerodrome at Farlington. No decision has, however, yet been reached on this point.

The barrage across Ports Creek at the North-Western corner of the harbour is to be constructed sufficiently wide to carry the extension of the new Eastern road out of Portsmouth. The barrage will be between 60 and 70 feet

wide at the top with a crest level of about 13.00 O.D. The Eastern Road is to connect with A27, the Brighton-Southampton-Salisbury Road, via Station Road, Farlington.

No provision has been made in the scheme as at present proposed for either of the other two barrages to carry roads. They are to be constructed about 30 feet wide at the top with a crest level of about 13.00 O.D.

The probable effect on the County area may conveniently be considered under three main headings, namely, that due to impounding the water permanently to a level of approximately 5.00 O.D., that due to the construction of the barrages, and that due to flying operations.

The minimum water level of 5.00 which is proposed is about 2 feet 6 inches lower than the normal high water level at spring tides. It is, however, about 18 inches higher than the normal high water level at neap tides.

The maintenance of the water in the harbour at an artificial level will naturally be detrimental to the drainage of the land adjoining the harbour. Some of the land at Farlington, Bedhampton, Langstone and Hayling which borders on the harbour is very low-lying and is at present drained by tidal action. When the tide is high the sea water is kept out by means of tidal flaps and the surface and sub-soil water from the land is collected in large ditches and ponds. As the tide recedes the tidal flaps open and the water which has been penned up is released. With the water in the harbour maintained permanently at a high level the natural system of drainage will be prevented and if the land is to be drained the water must be pumped. A considerable area in the centre of Hayling Island, which is drained into Langstone Harbour, will also be affected in the same way and provision must be made for dealing with this water.

At Bedhampton is the outfall of a culvert 60 inches in diameter which discharges surface water from a large area of Bedhampton, Waterlooville and A3, the London-Portsmouth Road; it also takes the effluent from the Waterlooville sewage disposal works. The invert of this pipe is approximately 5.00 O.D. and under normal conditions little interference with the proper discharge from the culvert should be experienced. Should the

water level in the harbour be above normal for any reason and heavy rain occur serious flooding may take place in the Stockheath Lane area where flooding has occurred in the past at times of heavy rain combined with a high tide.

The outfall from the Bedhampton sewage disposal works will be approximately at water level and as sufficient head is available no alteration will be required if the 5.00 foot water level is adhered to. The Havant Urban District Council have in view, however, a scheme whereby the existing works in the Purbrook and Waterlooville area may be closed down and the works at Bedhampton extended so that the whole of the sewage from these areas may be treated at one point. The water level in the harbour will have considerable bearing on the practicability of such a scheme.

The outfall from the main Havant sewage disposal works is situated near Langstone Mil and is a little above 5.00 O.D.; it does not appear, therefore, that it will be very much affected. A watercourse, taking surface water which discharges at the same point will not be affected also.

All sewage from Hayling Island is discharged into Chichester Harbour and will not, therefore, be affected by the proposed works.

The old mills at Bedhampton, Brockhampton and Langstone have been disused for many years and the two first named have been demolished; the mill at Langstone is still standing but is in a derelict condition. The water in the old mill dams is penned back either for ornamental purposes, or watering cattle, etc. at such a level that it will be unaffected by the scheme. The mills at Havant which are still operated are further up the streams and will not be affected in any way.

During strong South-Westerly winds which are prevalent in the autumn and winter it is possible that some damage may be caused by wave action to the sea banks on the North and East shores of Langstone Harbour. These banks protect the adjoining land from inundation and erosion by the sea and they have been frequently damaged in the past at periods of high water, but this damage only takes place for a short time at the top of each tide. Although at first the water may only reach part of the way up the beaches the latter may

in time be denuded by littoral drift caused by the constant action of the waves.

Owing to the cessation of the scouring action of the tides and the cushioning effect of the water in the harbour on the streams running into it the whole of the North part of the harbour may become silted up and overgrown with rice grass which even now is rapidly spreading over the mud flats. This silting up may in time affect the drainage of the adjoining land.

A certain amount of fishing now takes place in the harbour and it is not known whether this will be permitted in the future. It is certain that fishing will, in any case, be prohibited in the buoyed fairways to be used by aircraft. It may be that in due course the water in the harbour will cease to be as saline as at present and unless re-stocked the existing supply of fish may disappear. It is doubtful, however, if the fishing rights in the harbour are of much value.

A colony of house boats in the Kench at the South end of the harbour will be deprived of their normal means of sanitation as they will be in stagnant water instead of tidal as at present. The owners' rights have not been investigated but it may be necessary to find them alternative accommodation.

The barrage across the Southern or main entrance to the harbour will be about 470 yards long and 30 feet wide at the top. This barrage is the most important item in the whole scheme and will be expensive to construct. The channel is about 50 feet deep and the tidal currents run very strongly. The construction of this barrage opens up the possibility of direct communication between Portsmouth and Hayling Island as the barrage could be widened comparatively easily at a later date and a new road built over the top. One half of the barrage will be situated within the City of Portsmouth and the other half in the Urban District of Havant and Waterloo so that any scheme for the construction of a road would be a joint affair with the Portsmouth City Council.

The traffic which would use the road would be almost exclusively local traffic between Portsmouth and Hayling Island. The existing road to the ferry on the

Hayling side could be widened and improved without very much difficulty. At the present time there is a passenger ferry between Hayling Island and Eastney across the mouth of the harbour, but there is no means of taking a vehicle over.

The ferry may become redundant and the proprietors would no doubt make a claim for compensation owing to the loss of their business.

The main sewage outfalls for the City of Portsmouth are situated at Port Cumberland on the West side of Langstone Harbour entrance. The raw sewage is stored in large tanks on the shore during flood tide and is released soon after the tide has begun to ebb. The strong ebb current in the narrow channel carries the sewage well out to sea. The East Winner, an extensive shoal of sand and shingle, on the East side of the harbour entrance deflects the ebb current from Hayling beach and so protects the latter from contamination. The construction of the barrage will, of course, stop this ebb current and in order to surmount the difficulty which will arise in connection with the disposal of the sewage the Portsmouth City Council propose to extend their sewer outfalls seaward for a distance of approximately 1,500 yards. It has not yet been decided whether sewage is to be discharged continuously from the new outfalls.

The closing of the harbour entrance will probably result in the channel South of the barrage becoming filled up with sand and shingle as there is a pronounced littoral drift from the West to East along this part of the coastline. In course of time a continuous beach may be formed from Eastney to the Western end of Hayling Island. The littoral drift, unchecked by the tidal currents from Langstone Harbour may ultimately result in the complete disappearance of the East and West Winners. The preservation of the East Winner is of vital importance to Hayling Island as a seaside resort as at the present time the last Winner forms a very extensive and efficient natural breakwater. The removal of this natural breakwater would probably mean that serious erosion would take place along the whole of the South coast of Hayling Island and that artificial groynes would be required in the same way as at Eastoke. At the same time the character of the beach may be entirely changed from gently shelving sand to steeply sloping shingle as at Southsea.



Such a change would, of course, have a detrimental effect on the attractiveness of Hayling island as a holiday resort. At the present time no dredging for shingle is permitted by the Board of Trade within 1,000 yards of the Eastney shore as it was found that if material was removed from the Winners within this limit it caused serious coast erosion at Eastney.

There is some trade in dredging shingle from the Winners and conveying it in barges through Langstone Harbour to Langstone Quay. Road stone, coal, etc. is also brought by sea over this route which will, of course, become impracticable after the barrages have been constructed.

It is proposed that the barrage at Langstone shall be constructed adjoining the existing toll bridge between Hayling Island and the mainland. The barrage would be about 400 yards long and thirty feet wide at the top. It would be built immediately to the west of the Toll Bridge and connected at each end to the existing causeways which carry the road. At present the barrage is not designed to carry a road, but no doubt arrangements could be made for it to be built on the site of the existing toll bridge in such a way as to accommodate a road and footways. A scheme of this kind would render unnecessary the building of a new bridge to replace the existing timber toll bridge which is not only narrow but is restricted to loads not exceeding 4 tons in weight. This scheme would, however, involve the acquisition of the toll by the County Council from the Southern Railway Company and this is likely to be a costly undertaking.

Owing to the far greater length involved it is not a practicable proposition to construct the barrage on any other site than one near the toll bridge. The question of whether the Railway Company has a vested right in the road crossing at this particular spot is of great importance as, if not, a contribution to the City Council for the use of the barrage as the site for a road would no doubt prove less expensive than acquiring the Railway Company's interest in the toll bridge and building a new bridge. A complication, however, is that the Railway Company own all the land on the Hayling side of the channel with which a connection could be made.

It is proposed that the sluices for controlling the level of the water in the harbour shall be located in this barrage but at the present time no details of

these proposals are available. It would no longer be possible to use the quay belonging to the Southern Railway which adjoins the existing toll house.

At the present time a number of yachts and boats are laid up during the winter months in mud berths between the road and railway bridges. After the completion of the scheme these facilities would no longer be available.

Owing to the prevention of the scouring action of the tide it is possible that the channels in the New Cut and Swear Deep which connect Langstone Quay with Chichester Harbour may become silted up unless these channels are constantly dredged.

The barrage to be constructed at the North-West corner of the harbour across Ports Creek will be situated within the City of Portsmouth and will not affect the County.

The effects on the surrounding district of flying operations are extremely problematical. There are local sailing and boating clubs which use the harbour but it is not yet known whether the use of small boats in the harbour will be prohibited altogether. It is certain, however, that it will not be permitted in the fairways to be used by the aircraft.

The possible detrimental effect on the rateable value of properties in the neighbourhood owing to the noise of the machines may have to be considered.

The area to be reclaimed and developed as an aerodrome at the North end of the harbour is shown coloured purple on the plan. It is situated partly within the City of Portsmouth and partly in the Urban District of Havant. The Portsmouth City Council propose at some time in the future to construct a new road along the Northern boundary of this re-claimed area to connect with the new Eastern Road out of Portsmouth just North of the Ports Creek barrage and with the proposed Havant By-pass just to the East of the point where the latter crosses the Southern Railway Company's main line. This road will be about 3,400 yards long of which approximately 1,600 yards will be within the County area. It will also be necessary for provision to be made in the Havant By-pass scheme for a junction with the new road. Unfortunately the site proposed by the Havant Council for the extension of the

Bedhampton sewage disposal works is situated on the best route for this road and if the road is to be constructed a fresh site must be found for the disposal works. The new works are urgently required by the Havant Council as their existing works are overloaded and parts of the area are rapidly developing.

Careful consideration must be given to the effect of the scheme on the various public works which are projected for this area. If the construction of the barrage at Langstone is to be taken advantage of for improved road facilities to Hayling, a large expenditure in this respect will be incurred much earlier than anticipated.

At the present time sufficient detail is not available to ascertain whether the proposal to widen the barrage will show any saving over the cost of re-building the existing bridge and widening its approaches.

It is not considered likely that the scheme will have very much effect on the volume of traffic through Havant for the first few years at any rate or that any real need for the acceleration of the Havant By-pass on this account will arise.

Any schemes for widening the South Barrage between Portsmouth and Hayling, for widening and reconstructing the ferry approach road in Hayling and also for the portion situated in the County, of the proposed new road along the Northern boundary of the reclaimed area would all be additional to the County Council's programme for Major Improvements.

The road proposals for Hayling, included in the Town Planning Scheme, will need to be reconsidered.

Finally the probability that, on completion of the scheme, the Portsmouth City Council may wish to extend the boundaries of the City to take in Hayling Island and possibly Havant must not be overlooked.

A.C. HUGHES.

County Surveyor.

22nd June, 1935.

# Langstone Harbour Development Scheme

With reference to Minute No.2 of the 8th March, 1937, the Cleric reported that the representatives mentioned in that Minute had met the representatives of the County Council and the City of Portsmouth Corporation as arranged, and he submitted the following report thereon:-

The Earl of Malmesbury presided at the Conference.

At the request of the Lord Mayor of Portsmouth the Town Clerk stated the proposals of the Portsmouth City Corporation and the City Engineer read a detailed report.

It was proposed to carry out the scheme in two instalments.

The first instalment would be dredging to provide the runways. On the area marked blue on the plan submitted it was proposed to dredge so that there would always be 8 feet of water at all states of the tide. The dredging would be on the sides of the channel in order to provide the runways.

The material taken out of the channel would be dumped on land at Farlington, which would ultimately be raised 9 feet above O.D. On this would be erected the works etc. of about 110 acres which would be surrounded by a sea bank.

A road would be constructed parallel to the Southern Railway which would only give entrance to the proposed Air Port.

The channels or runways would be properly buoyed and their construction would in no way interfere with the Harbour.

The second instalment would be the construction of three barrages.

One in the North-West of Langstone Harbour across Port Creek. This barrage would also serve as the new Eastern Road and the width at the top would be 66 feet to carry the road. This would be wholly within the City of Portsmouth. One in the North-East corner of the Harbour immediately adjoining Langstone Road Bridge. This was to be purely a barrage constructed of chalk with a slope of 2 - 1 on either side, and the top width would only be 20 feet as no road was proposed.

There would also be sluices in this barrage to allow for the water to flow in and out at approved- times. The whole of these works would be in the Urban District of Havant and Waterloo.

The third barrage would be at the Southern end of the Harbour across the mouth or entrance. This barrage was to be also constructed of chalk at a slope of 2 - 1 on the sea side and 1 - 1 on the land side. The top width would be 30 feet and no road was proposed. The Western half of this would be within the City of Portsmouth and the Eastern half within the Urban District of Havant and Waterloo.

The level of the tops of the barrages would be 13 feet O.D. and at least 6 feet above High Water Mark.

The matter of dealing with the surface water surrounding the whole of Langstone Harbour had been considered, and the level of the impounded water would be below the level of the outfalls, particularly the Lavant Stream. All of the outfalls would be above the level of the impounded water.

# Langstone Harbour Development Scheme

## Objects of the Scheme.

The object of this scheme is to provide in Langstone Harbour and on Farlington Marshes the facilities required to serve as a "terminus for the long distance Empire and Trans-Atlantic Air Routes by the construction of a combined land and marine airport.

The scheme is to be carried out by the Portsmouth Corporation in conjunction with the Air Ministry.

The estimated gross capital cost of the scheme is £1,221,454. towards which there will be a Government grant.

## Requirements of the Scheme

The main requirements of the scheme which are applicable to both a land aerodrome and the water area for flying boats are:-

The site should be so situated that there are no natural or artificial obstructions to flying in the vicinity.

The area should be of sufficient size for immediate requirement and be capable of economical extension if and when flying conditions make this necessary.

The locality should be reasonably free from fog so as to enable the airport to be used at all seasons of the year.

Ready access to road and rail transport must be available.

The special requirements of a marine airport are:-

It should be sheltered and free from serious disturbance during rough weather.

The depth of water should be such that the minimum required to enable flying boats to "land" and "take off" is always available.

It should be in close proximity to an aerodrome, as the latter

can accommodate the "feeder services" operated by land aircraft in conjunction with long distance routes.

Representatives of the Air Ministry and other experts have carried out a very careful investigation into the possibilities of creating such an airport at Langstone Harbour, and as a result have come to the conclusion that whilst the area fulfils the essential features it is also a practicable proposition from a constructional point of view.

## Description of Scheme

The scheme may be divided into two instalments.

### First Instalment

(a) Dredging the sides of the existing Langstone Channel as necessary to provide N.E. to S.W. and N to S water runways each 200 yards wide and one mile in length, having a minimum depth of water of 8 feet below L.W.M.O.S.T.

It will be appreciated that a considerable area of the existing channels to be incorporated in these runways have already got the necessary depth of water at L.W.M.O.S.T.

(b) Dredging an approach channel 200 yards in width leading up to and including a mooring basin at the north-west corner of Langstone Harbour near the eastern entrance to Port Creek,

This approach channel and mooring basin will also provide a minimum, depth of water of 8 feet below L.W.M.O.S.T.

It is estimated that the dredging work referred to will take about 9 months to complete, after which facilities for flying boats will be available pending the completion of the remainder of the dredging to give the total water area eventually required, which will be done in the Second Instalment.

A slipway will be built to give access to the flying boat hangars on the north side of the mooring basin.

(c) Aerodrome - The spoil brought up by the dredgers will be put into reclamation barges, from which it will be pumped on to the existing Farlington Marshes area so as to raise the general level to an average of 9 feet above O.D.

In addition an area outside the City boundary of approximately 110 acres consisting of existing mud lands east of the marshes and part of North Binness Island is to be enclosed by a sea bank. The area will then be filled up by spoil to the required level.

When the reclamation of mud land and the levelling up of the low portions of the Farlington Marshes area has been completed, a new land aerodrome site of 530 acres will be obtained. This will provide a N.S. to S.W. runway of 600 yards width one mile in length, for blind landing, and other runways N to S to W and S.E. to N.W. each 200 yards wide and one mile in length.

It is anticipated that this area will be sufficient for landing purposes for some time to come.

During the deposit of the dredging spoil, the necessary work to deal with the surface water of Drayton and Farlington and the effluent from the Farlington Sewage Disposal Works which at present enters Langstone Harbour via the ditches on Farlington Marshes will be put in hand and completed.

The areas, of the new aerodrome immediately adjoining the section of the Eastern Road north of Port Creek will be used as a site for hangars, workshops, terminal buildings (which include offices, restaurant, Customs facilities) etc.

The hangars for land machines will adjoin the aerodrome, and those for flying boats will be erected on the water frontage to the north and east sides of the mooring basin.

The number of hangars to be erected in the early stages will be such as is sufficient to meet early demands for accommodation.

The main approach road to the Aerodrome will be from the Eastern Road.

This road will be continued in an easterly direction parallel with the Southern Railway, sufficient land being reserved on both sides to provide



sites for commercial purposes which will undoubtedly be required as the airport develops.

It is not proposed to construct the whole length of this road in the initial stages of the scheme.

The equipment will include a wireless installation, lighting for night flying, control tower and other items incidental to an up-to-date airport.

The water area and channels will be adequately marked by means of suitable buoys so as to indicate clearly the alighting area reserved for flying boats to other craft using Langstone Harbour.

The whole of the work to be carried out in the first instalment described above will not interfere with the existing conditions in the harbour, since the latter will remain tidal as at present.

## Second Instalment

The object of the work to be carried out in this instalment is to close the three entrances to Langstone Harbour by means of barrages in order to enable a constant water level to be maintained in the harbour, as this is considered by flying experts to be ideal for a marine airport since it makes for safe landing, and it is therefore very desirable.

The proposed permanent level of the impounded water is just below 5 O.D.

## Barrages

The three barrages will be constructed at the following points:-

(a) North-west corner of the Harbour across Ports Creek.

This will be on the line of the Eastern Road. It will have a top width of 66 feet so as to be of sufficient width for the road, which is 60 feet wide.

(b) North-east corner of the Harbour, adjoining the Toll Bridge leading to Hayling Island.

It will have a top width of 20 feet and be provided with sluices to enable the water level in the enclosed Langstone Harbour to be controlled if necessary.

It is not proposed to construct a road on this barrage, which is outside the City boundary and in the area of the Havant and Waterloo Urban District Council.

These two barrages will probably be constructed in chalk, and will have a base of sufficient width to give a side slope of 2 to 1.

(c) Main Barrage at South entrance to Langstone Harbour.

This barrage will have a top width of 30 feet, and be of sufficient width at the base to give a side slope of 2 to 1 on the sea side and 1 to 1 on the Harbour side.

It will probably be constructed in chalk with clay or other suitable filling in the centre.

It is not proposed to construct a road on this barrage, the western half of which is situated within the boundary of the City of Portsmouth, and the eastern half within the Havant and Waterloo Urban District.

The site of the barrage is some distance south of the existing Hayling Ferry, which will not be interfered with.

The approximate level of the top of each barrage is 13 feet above O.D., or about 6 feet above H.W.M.O.S.T.

It is estimated that 1½ to 2 years will be required for the construction of the barrages, depending on the time of the year when the work is started.

## Dredging

When the barrages have been completed, the remainder of the dredging will be put in hand, the necessary dredging unit or plant for the work having been previously left in the Harbour before the commencement of the construction of the southern barrage.

The area to be dealt with is that known as the Sword Sands, which will be dredged to approximately 3 feet below O.D., thus giving 8 feet depth of water below the impounded water level.

The spoil will be deposited as previously described on the new aerodrome site.

The maintenance of the water level at 5 O.D. will affect some of the existing surface water outfalls which at present discharge into Langstone Harbour through tidal flaps at various states of the tide.

These will be dealt with as necessary to the reasonable satisfaction of those concerned, provision having been made for this work in the estimated cost.

It should be noted that the proposed level of the impounded water is just below the invert level of the 5 foot diameter outfall culvert which discharges the surface water from Bedhampton etc. into the northern part of the harbour near the Bedhampton Waterworks.

The conditions of discharge should be improved, as the culvert will not be subject to the restrictions now caused by its outlet being partly submerged at high water.

The discharge from the streams at Bedhampton and the old mills of Brockhampton and Langstone will not be affected as these are well above the proposed impounded water level.

## Portsmouth Sewage Outfalls

The existing sewage outfalls of the Portsmouth Main Drainage Scheme are situated in the Southern entrance channel to Langstone Harbour.

The sewage is at present pumped into collecting tanks at Fort Cumberland where it is stored until one hour after high water, at which time the tanks commence to discharge their contents through a number of outfall pipes into the ebb current from the Harbour for a period of about 1½ hours.

In addition to this time, if the collecting tanks happen to be full, it is permissible to discharge the sewage into the sea at any time, provided it has passed through the specially constructed Storm Tanks.

In dry weather, the 1½ hours period mentioned above is generally sufficient to empty the tanks, but during times of heavy rainfall the Storm Tanks have frequently to be brought into use.

The whole of the sewage discharged at this point passes through an efficient mechanical screening plant at Eastney before it is pumped to the tanks adjoining the Outfalls.

The sewage mixes with a considerable volume of sea water, and owing to the strong current it, is taken out to sea.

When the barrage is constructed it will not be possible to take advantage of the ebb current from the Harbour, and it will therefore be necessary to provide a new outfall.

This will be done by means of a new pipe line taken seaward for a distance of 1,500 linear yards, or just outside the Langstone Bar. It is confidently anticipated that this distance will be more than sufficient to prevent any sewage matter being washed back on to the beach at either Southsea or Hayling.

The time during which the sewage is discharged from the new outfall will be capable of control as at present if necessary because the existing collecting tanks will still be used to receive the sewage through the rising mains from Eastney Pumping Station.

The above description is intended to give some idea of the scheme. There are, however, other points which will require consideration, which may be raised in discussions with persons representing the interests likely to be affected by the proposal to establish the airport at Langstone Harbour.

J. PARKIN. A.M.Inst.G.I.

City Engineer's Office,  
The Guildhall,  
Portsmouth.  
March, 1937.

# Langstone Harbour Air Base.

Notes on Memorandum prepared 22nd June 1936.

Owing to slight modifications of the original scheme, the following notes should be read in conjunction with the above memorandum:

The dredging in the preliminary scheme is to be taken to 8 feet below low water instead of 10 feet.

The final dredging is to be taken 8 feet below the impounded water level of approximately 5.00 O.D.

The mooring basin, channels and runways in the preliminary scheme are more extensive than in the original proposal.

It is not now proposed to construct a slipway and hangar in the existing airport.

The dates for the completion of the various portions of the scheme require revision. The revised dates are not known.

The area to be reclaimed at the northern end of the airport and used as an aerodrome has been reduced in size. Only a small area at the eastern end will be situated outside the Portsmouth City Boundary.

It is proposed to construct a branch line from the Southern Railway to connect with the terminal buildings on the aerodrome.

The road to the south of the railway and along the Northern boundary of the aerodrome is proposed to be used for access to the aerodrome and factories only.

A revised plan dated February 1937 is attached.

The Castle,  
Winchester.  
4th March 1937.

# The Urban District Council of Havant and Waterloo

ALBERT E. MADGWICK  
CLERK OF THE COUNCIL.  
TELEPHONE: HAVANT 456/7. (2 lines)  
Town Hall,  
Havant.

23rd April 1937

Dear Sir,

Langstone Harbour Development Scheme.

I send you herewith for your information a copy of the report made by the County Surveyor to the County Roads and Bridges Committee in June, 1936, and a Memorandum bringing the report up to date, dated the 4th March, 1937.

I enclose this for your private information only in order that you may know more details about the proposed scheme as you will appreciate that this report was a private report made to the County Roads and Bridges Committee.

Yours faithfully,

ALBERT E. MADGWICK.

Clerk of the Council.

# The Urban District Council of Havant and Waterloo

2nd April 1937.

At a Meeting of the Harbour Order Committee held at The Town Hall, Havant, on Friday, the 2nd day of April, 1937.

Present:-

Collr. R. C. Lane, Chairman

Collr. J. Combs,

Collr. Harvey A. Dixon.

Collr. T.A. Herriott.

Collr. J. Lewis.

Collr. E.H, Mitchell.

### 3. Langstone Harbour Development Scheme

With reference to Minute No.2 of the 8th March, 1937, the Clerk reported that the representatives mentioned in that Minute had met the representatives of the County Council and the City of Portsmouth Corporation as arranged, and he submitted the following report thereon:

The Earl of Malmesbury presided at the Conference.

At the request of the Lord Mayor of Portsmouth the Town Clerk stated the proposals of the Portsmouth City Corporation and the City Engineer read a detailed report.

It was proposed to carry out the scheme in two instalments.

The first instalment would be dredging to provide the runways. On the area marked blue on the plan submitted it was proposed to dredge so that there would always be 8 feet of water at all states of the tide. The dredging would be on the sides of the channel in order to provide the runways.

The material taken out of the channel would be dumped on land at Farlington, which would ultimately be raised 9 feet above O.D. On this would

be erected the works,-etc. of about 110 acres which would be surrounded by a sea bank.

A road would be constructed parallel to the Southern Railway which would only give entrance to the proposed Air Port.

The channels or runways would be properly buoyed and their construction would in no way interfere with the Harbour.

The second instalment would be the construction of three barrages.

One in the North-West of Langstone Harbour across Port Creek. This barrage would also serve as the new Eastern Road and the width at the top would be 66 feet to carry the road. This would be wholly within the City of Portsmouth.

One in the North-East corner of the Harbour immediately adjoining Langstone Road Bridge. This was to be purely a barrage constructed of chalk with a slope of 2 - 1 on either side and the top width would only be 20 feet as no road was proposed.

There would also be sluices in this barrage to allow for the water to flow in and out at approved times. The whole of these works would be in the Urban District of Havant and Waterloo.

The third barrage would be at the Southern end of the Harbour across the mouth or entrance. This barrage was to be also constructed of chalk at a slope of 2 - 1 on the sea side and 1 - 1 on the land side. The top width would be 30 feet and no road was proposed. The Western half of this would be within the City of Portsmouth and the Eastern half within the Urban District of Havant and Waterloo.

The level of the tops of the barrages would be 13 feet O.D. and at least 6 feet above High Water Mark.

The matter of dealing with the surface water surrounding the whole of Langstone Harbour had been considered, and the level of the impounded water would be below the level of the outfalls, particularly the Lavant Stream. All of the outfalls would be above the level of the impounded water.



The Clerk reported that since the last Meeting the Town Clerk of Portsmouth had forwarded to him a copy of the report of the City Engineer which had been circulated to each Member of the Council,

The Clerk also reported that Minute No.2(4) of the 8th March, 1937, had been referred back to the Committee at the last Meeting of the Council for further consideration with power to act.

The Committee resolved that the Clerk write to Sir Cyril Kirk-patrick and Partners and ascertain an Inclusive fee for the preparation of a report on the proposals as affecting this District.

The Committee also resolved that the Clerk communicate with the Clerk of the County Council to ascertain if it would be possible for the County Council and this Council to co-operate in connection with the proposals of the City of Portsmouth

# Extract from Portsmouth Corporation Records

## Empire Air Base Schemes

Visions of Langstone Harbour as an Empire Air Base loomed large at the beginning of 1937, but towards the end of the year they faded and almost disappeared.

For two years negotiations had been proceeding and schemes formulated, but on November 23rd the City Council decided not to promote a Parliamentary Bill which would have given them various powers necessary for the carrying out of the scheme by the Corporation.

Inadequate financial assistance from the Government was the rock on which the scheme foundered. Although there were subsequent attempts to proceed with an alternative tidal scheme, the idea of an Empire terminal for flying boats at Langstone as a Corporation undertaking had received its death blow. The story of the proposed air base begins in May of 1935, when Portsmouth, Southampton and other places were considered in connection with the provision of a land and marine airport for the big flying boats of Imperial Airways under construction at Rochester. A centre was required for flying routes to India, South Africa and Australia and for trial flights across the Atlantic.

The then Lord Mayor (Councillor Frank J. Privett) met the Director of Civil Aviation and representatives of Imperial Airways with a view to Portsmouth providing the base, and he impressed upon them that the City Council would not agree unless substantial help was forthcoming from the Government. He was told the matter was secret and that other centres were being considered. As it was a question of some magnitude, the Lord Mayor called into consultation the Chairman and Vice-Chairman of the Docks and Airport Committee (Councillors A. Johnson and J. E. Lane), the Chairman of the Airport Sub-Committee (Councillor L. N. Blake) and the Chairman of the Finance and General Purposes Committee (Alderman Sir Harold R. Pink) to form a special committee.

Certain survey work proceeded as unostentatiously as possible. It was not until January, 1936, that the first official statement was made to the City Council by the Lord Mayor (Alderman W. J. Avens) - and only then, because

there was apprehension on the part of some members as to delay in carrying out the proposed extension of the Eastern Road, the route of which was likely to be affected.

It was reported that for seven months members of the Council had been in consultation with the Air Ministry and had endeavoured to get negotiations to a stage at which they could be handed over to the Docks and Airport Committee for their consideration and report.

The scheme under discussion provided for a new aerodrome at Farlington on the shore of Langstone Harbour, partly on Corporation land and partly on land to be acquired, and for dredging of the harbour to make it suitable as a landing place.

In March, 1936, there were rumours of the base being prepared at Southampton, and two of the Portsmouth M.P.'s (the Hon. Ralph Beaumont and Admiral of the Fleet Sir Roger Keyes, Bart.) attended a meeting of the Docks and Airport Committee to urge the necessity for speedy action if the base was to be secured by Portsmouth. A visit to London to ascertain the requirements of the Air Ministry and Imperial Airways followed.

By May the Committee produced their scheme with the help of the consultant engineering firm of Messrs. Coode, Wilson, Mitchell and Vaughan-Lee. The estimated cost was £1,114,850.

The scheme was in two parts.

The first provided for dredging two runways and for the use of the existing aerodrome by the construction of a slipway or small jetty for the landing of passengers. The cost was estimated at £271,350.

The second provided for the construction of three barrages - one across the harbour entrance and two across the creeks - so as to landlock the harbour and give a constant water level. It was also proposed that further dredging should be carried out and a considerable area at Farlington reclaimed. The cost of this part, to be completed by the end of 1938, was estimated at £843,500.

It was argued that the creation of a new aerodrome at Farlington would release the existing aerodrome, the value of which was placed at £161,000, thus reducing capital costs to £953,850. It was estimated that maintenance

and loan charges for the first six years would be £78,000 and the income £32,500, leaving an annual deficit of £45,500. The Council accepted the Committee's scheme subject to satisfactory financial assistance being guaranteed by the Government, the voting being 53 for and one against.

The Committee thought the Government should be asked for a grant equal to 75 per cent of the annual loss. When the Council met on July 14th, no reply had been received and the Lord Mayor intimated that negotiations were continuing. The impatience of the Council was reflected in the suggestion by Councillor John Privett that an ultimatum should be sent to the Government to the effect that the Council would have nothing more to do with the scheme unless terms were received for consideration by July 21st or 28th.

On July 22nd the Docks and Airport Committee had a final meeting with officials of the Air Ministry and agreed upon a formula under which the Ministry offered a capital grant equal to 40 per cent of the total cost within a maximum of £400,000. This grant was roughly equivalent to an annual payment of £20,000 for 30 years.

The City Council discussed the position at two special meetings held on July 28th and 31st, and it was reported that the average estimated operating cost in the first six years would be £52,483 per annum. Income was estimated at £32,500, leaving a yearly deficit of approximately £20,000, equivalent to a rate of 3d. in the £.

It was decided that the Government grant was insufficient and further negotiations were ordered with a view to obtaining 75 per cent of the capital cost.

Lieut-Colonel Sir F. C. Shelmerdine (Director-General of Civil Aviation at the Air Ministry) regretted this decision and in a letter placed before the Docks and Airport Committee on August 13th, he made it clear that the Ministry could not go beyond the limit of £400,000. The Government felt it was a generous offer.

An encouragement to the Portsmouth Council was an offer by Alderman Major H. D. Gilbert, JP, of 36 acres of his land at Farlington, as a gift on condition it was utilised solely for the new air base.

This generous gift was accepted by the Council on September 8th, when the Docks and Airport Committee, ordered to consider the respective merits of a barrage scheme and a tidal scheme, presented comparative costs as follows:

Barrage Scheme: £1,141,797, less Government grant of £392,319, leaving £749,478 to be borne by the Corporation. Annual excess of expenditure over income, £35,345, or a rate of 4 4/5d. in the £ in the first six years.

Tidal Scheme: £863,297, less Government grant of £280,919, leaving £582,378 to be borne by the Corporation. Annual excess of expenditure over income, £21,939, or a rate of 3d. in the £.

The costs were based on extended loan periods and did not allow for the release and sale of the existing aerodrome.

The Committee favoured the barrage scheme, but the Council by 36 votes to 19 decided upon negotiations for a tidal scheme and appointed the Lord Mayor, Town Clerk, City Treasurer and the City Engineer to confer with the Air Ministry and Imperial Airways and report to the Docks and Airport Committee, who were in turn to report to the Council as soon as possible. During the year negotiations were opened by the Air Ministry with authorities at Southampton, and at the annual meeting of Imperial Airways on November 10th, 1936, Sir Eric Geddes admitted that Langstone Harbour held the balance of advantages over other sites as a base for flying boats, but the interests of various parties had not been reconciled and in the meantime they had been obliged to make arrangements to use Southampton Water for the commencement of their Empire flying boat services.

Nevertheless, the Lord Mayor and Corporation officials concerned carried out the Council's instructions and met Imperial Airways and the Air Ministry. On January 27th, 1937, representatives of the Docks and Airport Committee met representatives of the Ministry. Sir Francis Shelmerdine stated that the Ministry adhered to their preference for the barrage scheme, but put forward two proposals.

For the barrage scheme:

(1) To pay a grant equal to 50 per cent of the net cost by instalments during the carrying out of the work, up to a maximum of £600,000 - the net cost to be the actual cost, less a sum of £85,000 in respect of the value of the land reclaimed, but without deduction of any amount in respect of the value of the existing airport.

(2) To guarantee the annual income to be not less than £30,000 in respect of the use of the base by British and reciprocal services for a period of 15 years this contribution to be paid at the rate of £35,000 per annum for the first five years when the loan charges were heaviest, £30,000 per annum for the next five years and £25,000 for each of the last five years.

For a tidal scheme:

(1) The Government grant to be limited to 40 per cent and the guaranteed annual income to be £16,000 per annum.

The Ministry, however, were prepared if the tidal scheme were - carried out first and completed by a barrage scheme at a later date, to grant during the tidal stage 50 per cent, while the guaranteed income would be limited to £20,000 per annum, plus 50 per cent of the cost of the extra necessary maintenance and dredging up to a total additional allowance of £1,000 per annum.

It was also reported that the Ministry of Health had agreed to extending the loan period from 30 to 60 years in the event of the barrage scheme being adopted.

In the light of these new terms the Committee thought a barrage scheme carried out in one stage was preferable. They accordingly proposed this scheme. The estimated cost was now £1,221,452, Government grant £568,226, leaving £653,226 to be borne by the Corporation. On the first full working year expenditure was estimated at £63,784 and income at £41,000, leaving a deficit of £22,784, equivalent to a rate of 3 1/8d. in the £. Loan charges on the existing airport of £9,000 (1 1/4d. in the £) were not taken into account.

It was estimated that the sale of 180 acres of the existing airport would yield £450,000 which, after paying the outstanding debt of £110,000, would leave a balance of £340,000 and 95 acres of playing fields free of debt.

The Council adopted this scheme (No. 3) by 29 votes to 27 at a meeting on February 23rd, 1937, after rejecting by 45 votes to 10 a proposal to lease all lands required for the scheme at a nominal rental of £1 per annum.

One of the objections raised to the barrage scheme was the problem of sewage disposal, and the Chairman of the Docks and Airport Committee (Councillor A. Johnson) who had spent much time and effort in attempting to secure the base for Portsmouth, intimated that his Committee were prepared to take other expert advice.

In July the Council decided to appoint Messrs. John Taylor and Sons, consulting engineers, to submit joint reports with Mr. N. G. Gedye on the effect of the barrage across the mouth of the harbour, on the discharge of sewage and on the works that were considered necessary, on the littoral drift of sand and shingle, and on internal and land drainage.

The consulting engineers expressed the opinion that a new outfall sewer to a distance of 4,500 feet seaward would free the foreshore from risk of pollution.

A Protest Association of Ratepayers sent a letter to the Council stating they had carried out a test canvass of local government electors and submitted 6,694 signatures against expenditure by the Corporation in the establishment of an air base and seven in favour. It was read when the Council held a special meeting on November 23rd, 1937, to consider the promotion of a Bill in Parliament to empower the Corporation to establish a base, impound the waters of Langstone Harbour, construct works and acquire lands and easements, to dredge, to extinguish all public and other rights over a portion of the harbour, to lay out and develop lands and advance money for the erection of buildings, to extend the City boundaries and to borrow and raise money.

A new estimate was presented to the Council at this November meeting, showing the cost of the scheme at £1,348,343, Government grant £600,000, leaving £748,343 to be borne by the Corporation. The City Treasurer estimated the annual charge upon the rates as rising from 1/2d. in the £ to 3

1/8d. in 1942-43 (in which five years there would also be a charge of about id. in respect of the existing airport) and as decreasing in the next ten years from 2 7/8d. in 1943-44 to 1 3/8d. in 1952-53, when the outstanding loan would be £168,556.

As to the sale of the existing aerodrome, it was estimated that, after paying the outstanding balance which would then be £92,324, the profit of £357,676 would be transferred to the redemption of loans outstanding on the new air base. No credit was taken in the figures for 95 acres of the existing aerodrome to be retained and the value to the Corporation of the new land aerodrome of 530 acres at Farlington.

The Council, however, refused to promote the Bill by 29 votes to 26.

On December 8th, a letter from the Air Ministry stated that the Secretary of State would be happy to direct that negotiations should be re-opened on the question of a tidal scheme, with a view to arriving at mutual satisfactory terms, and although this line was pursued for a time, the scheme as a Corporation scheme ceased to take its place in local politics.

The cost of the preliminary and survey work in connection with the project amounted to nearly £8,000.

On the 14th December, 1937, the Council, having refused some weeks earlier to promote a Bill in Parliament for the setting up of the Air Base in Langstone Harbour by means of a barrage scheme resolved to consider any further schemes and financial proposals which the Air Ministry might put forward. The first move in this direction came from the Air Ministry who stated that as the Barrage Scheme was unacceptable to the Council something less expensive might be negotiated upon in the general interest. The Council accepted the invitation to renew negotiations on the basis of a Tidal Scheme.

On the 14th February, 1938, the Chairman of the Docks and Airport Committee (Councillor Albert Johnson) reported upon a letter which had been received from the Air Ministry viz.:

*(1) That the previous offer relating either to the Tidal or Barrage Scheme had not been renewed.*

*(2) That in consequence of certain circumstances which had now arisen, the field of selection of possible locations had been widened.*



*(3) The interest of the Ministry appeared now to be directed towards a smaller scheme (which in his opinion lacked the magnificence, importance, utility and all round value of the former consideration).*

*(4) That the flying boat base, irrespective of its location may be severed from a land aerodrome and may be solely controlled by the Government.*

It was reported in the local press on the 28th July that Southampton was to be the first permanent Empire Air Base in this country.

This was decided at a meeting of the Southampton Harbour Board when it was agreed to surrender to the Air Ministry a stretch of water one mile in length and 1,200 feet in breadth in Southampton Water to become an Empire Air Base Terminal.

However in September, 1938, the Council accepted a proposal through a firm of London solicitors to negotiate for the acquisition of the existing airport and of certain lands belonging to the Corporation with a view to the establishment of an Empire Air Base at Langstone Harbour. It was understood that no expense or loss would be incurred by the Corporation, and the Chairman (Alderman Sir Harold Pink) and Vice-Chairman (Councillor J. E. Lane) of the Finance and General Purposes Committee and the Chairman of the Docks and Airport Committee (Councillor Albert Johnson) and Alderman Blake with the Town Clerk were authorised to conduct the negotiations on behalf of the Corporation. Three months later in December, 1938, a letter was submitted to the Council from the Solicitors concerned setting out the terms and conditions on which their clients were prepared to construct a combined marine and land airport in Langstone Harbour on a tidal basis. These were (summarised):

(1) To purchase the existing Airport at a figure equivalent to the outstanding liability of the Corporation in respect of it.

(2) To purchase land at Farlington and certain mudlands belonging to the Corporation at a figure similarly calculated.

(3) To reserve a right for the Corporation to construct a road across the existing Airport from the Eastern Road to the Copnor Road in a position to be mutually agreed.

These proposals were agreed to by the Council on the 15th December, 1938, subject to heads of agreement being prepared.

A mild sensation was caused when it was reported that there had been a telephonic communication by the Civil Lord of the Admiralty to the Lord Mayor followed by the letter set out below which had been sent by special messenger:

*14th December, 1938.*

*I am commanded by my Lords Commissioners of the Admiralty to state for the information of the Portsmouth City Council that they have received information that the project for the construction of an air base in Langstone Harbour has been resuscitated and that this matter is about to be considered by the Council. In these circumstances and in view of the close and cordial relations which have, at all times, subsisted between the Admiralty and the Council, my Lords feel it incumbent upon them to provide the Council with an indication of what their attitude would be towards such a scheme. »*

*When the original scheme was brought to their notice in 1936, they saw grave difficulties from the point of view of naval interests. Apart from the general un-desirability in principle of having so important a civil air base in such close proximity to the premier naval base of the Empire, it was obvious that vital naval activities in the area would be most gravely prejudiced. As, however, they were anxious not to do anything to hinder the development of Imperial communications or to impede in any way a development likely to bring increased prosperity to Portsmouth, if this could be avoided, they were prepared to acquiesce in principle to the scheme, despite their misgivings, subject to it being found possible to provide suitable alternative accommodation for certain of the naval activities which could not exist side by side with the air base. It proved impossible, however, to find any suitable alternative sites for these facilities, and it became more and more apparent that the great volume of traffic inevitably involved in the development of the air base at Langstone Harbour would most seriously impair services vital to the efficiency of the Navy.*

In November, 1937, however, the Council decided against promoting a Bill in Parliament for the furtherance of the scheme, so that the matter was not pursued.

Since that date the Government have accepted in principle the establishment of an Empire Flying Boat Terminal Base at Southampton as was announced in the House of Commons by the Under Secretary of State for Air on the 29th July.

The Admiralty at present have no detailed information on the new scheme now before the Portsmouth City Council.

Any proposals would, of course, receive full examination, but the Lords Commissioners think it only right to indicate at this early stage that, so far as can be foreseen any scheme for utilising Langstone Harbour for an air base must be incompatible with the maintenance of essential naval services in the Portsmouth area without the most serious detriment.'

The Lord Mayor said that in his opinion he should make a suitable reply to the Admiralty, thanking them for their courtesy in informing the Council of their views, but beyond that the Council should take no action and go on with their debate and to this the Council agreed.

After a three-and-a-quarter hours debate and upon a formal division the Council approved the air base scheme as then envisaged in principle.

## Langstone Harbour Air Base

It was reported on the 10th May that in reply to a question, Captain Balfour, Under Secretary of State for Air, said alternative sites for an Air Base had been considered, but after consideration of the various factors, and the time involved in construction, it had been decided that the Marine Base should remain at Southampton.

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