

The Government Pipelines and Storage System (GPSS)

As part of their planning for the possibility of a war with Germany in 1936, the Air Ministry recognised that survival of the country would be dependent upon air superiority. The need to keep the aircraft of the RAF flying was to be given top priority. It was estimated at that time the country only had enough aviation fuel reserves to survive just 10 days of war, and so a plan was conceived to build a series of fuel storage tanks to greatly increase capacity. These would be constructed, partially buried, in order to hide them from aerial attack, and would later prove invaluable, supplying the vital fuel needed to power the Spitfires and Hurricanes that would slowly gain victory in the Battle of Britain over the summer of 1940.

Following the declaration of war in September 1939, the vulnerability of existing road and rail distribution networks to airstrikes by enemy bombers was also recognised. The planners quickly set into motion the next phase of their operation; the joining together of the Stanlow Refinery at Liverpool with Avonmouth Docks at Bristol via a secret underground pipeline, that would ensure fuel distribution could be maintained irrespective of which port the oil was actually landed. The whole project was completed and operational by 1942, after which the next phase was undertaken; a secret underground network of pipes to deliver aviation fuel from the two western seaports to the key RAF airfields in the Midlands, south and east of England. In order to avoid detection by enemy reconnaissance aircraft, construction of the pipeline was primarily carried out at night. Progressively, the underground network expanded to reach RAF bases in Berkshire, Essex, Kent, Lincolnshire, Middlesex, Norfolk, Oxfordshire and Wiltshire, providing vital fuel for the new Lancaster bombers that were beginning to take the fight to the enemy in occupied Europe.

With the arrival of United States Army Air Force (USAAF) VIII Bomber Command from mid-1942, this 1,000 miles long pipeline network was further increased to supply the hastily constructed USAAF airfields. The fight was now entering its next phase, with British and American bombers carrying out joint raids together over Germany itself. In August 1944, the network was expanded even further when Operation PLUTO (Pipe-Lines Under the Ocean) was completed, providing the Allied armies that had landed in occupied France on D-Day, with the fuel for their tanks and other armoured vehicles. This 70 mile long underwater extension stretched from Shanklin Chine on the Isle of Wight across the English Channel to Cherbourg in Normandy. By the end of the Second World War the entirety of the GPSS covered approximately 1,550 miles of pipe, along with associated storage depots, pumping stations and other sites. Immediately following the end of the war, most of the system was mothballed with surplus fuel disposed of, sites reduced to minimum manning, and the pipelines filled with water. However, this changed with the Cold War and the decision was taken to recommission the network.

The route of the pipeline was originally identified by a white stile post and marker plate at field boundaries and other significant linear features, such as drainage ditches. After the Second World War pipeline markers of white identification posts with bright yellow roofs and broad vertical black line either replaced, or were added alongside, the original wartime markers. Marker plates were placed in alignment with the pipeline and include information including letter codes for the depots the flow is from and to, direction of flow relative to the facing of the marker, pipe diameter, unique serial number and emergency contact phone number.

The GPSS network continues to provide an important link around the country. Unobtrusive, its presence removes the need for significant tanker movements across the UK and distributes some 40% of aviation fuel within the UK to a number of important civil airports such as Heathrow and Gatwick as well as significant military airfields.



Figure 1.1: United Kingdom Oil Pipelines, Refineries & Connected Storage 1944 (Historic UK, n.d.)



Figure 1.2: World War 2 era pipeline marker and marker plate, Chapel End/Fen Lane ©Sawtry History Society



Figure 1.3: Post-World War 2 pipeline marker and marker plate, B1049 Woodwalton Lane (north), with fuel depot in background ©Sawtry History Society

Additional to the pipeline within the boundaries of the Civil Parish is Sawtry fuel depot located southeast of the village and junction 15 of the A1(M), and north of the B1090 Woodwalton Lane. The site of the fuel depot compound, originally a WWII Prisoner of War camp (No 59, opened in 1942) that was repurposed as temporary housing until the mid-1950s, became operational in the mid- to late 1950s; although it is not known when it ceased to be operational. The site is listed on the Cambridgeshire Historic Environment Record (CHER) as CHER number MCB26629. South and southeast of the depot are the World War 2 era airfields of Royal Air Force (RAF) Alconbury (constructed during 1937/1938, operational with RAF Bomber Command in 1938, operated by the United States Army Air Force from 1942 to 1945 and then by the United States Air Force since 1951, the airfield was closed in 1995) and RAF Wyton (built in 1915 and operated by the Royal Flying Corps from 1916 to 1918 then, continuously from formation, by the Royal Air Force until 2013 when the Station became a Joint Force establishment, and flying operations were significantly

curtailed to the light aircraft of two University Air Squadrons and an Air Experience Flight, until full cessation of flying in mid-2014).

Management of the storage depots and pipeline network was initially under the Board of Trade until 1942 when it came under the Ministry of Fuel Power, which became the Department of Energy in the 1970s. In 1975, the British National Oil Corporation (BNOC) was established and assumed responsibility for the management and operation of the GPSS on behalf of the Government until the end of 1985, when it was succeeded by the Oil and Pipelines Agency (OPA); a public corporation within the budgetary control of the Ministry of Defence (MoD). The GPSS was subsequently privatised in 2015 and acquired by Spanish fuel transportation specialist *Compañía Logística de Hidrocarburos* (CLH). Since then the GPSS was more formally called the CLH Pipeline System. In 2021 Exolum took over ownership of the system and it was renamed the Exolum Pipe System.

Location of Pipeline Markers

Table 1.1: Government pipelines and storage (GPSS) – Glatton and Sawtry

Marker	Location	Reference	Main Branch	Section
G6	Field Boundary (n of G5)		Sandy - Misterton	Misterton - Sawtry
G5	B660		Sandy - Misterton	Misterton - Sawtry
G4	B660	MP1285	Sandy - Misterton	Misterton - Sawtry
G3	Field Boundary (n of G2)		Sandy - Misterton	Misterton - Sawtry
G2	Field Boundary (n of G1)		Sandy - Misterton	Misterton - Sawtry
G1	Field Boundary (n of Middlemarsh Farm)		Sandy - Misterton	Misterton - Sawtry
SU22	Field Boundary (north of SU21)		Sandy - Misterton	Misterton - Sawtry
SU21	Sawtry Brook		Sandy - Misterton	Misterton - Sawtry
SU20	off Church Street		Sandy - Misterton	Misterton - Sawtry
SU19	Church Street	MP1286	Sandy - Misterton	Misterton - Sawtry
SU18	All Saints Way		Sandy - Misterton	Misterton - Sawtry
SU17	Chapel End	MP1287	Sandy - Misterton	Misterton - Sawtry
SU16	Fen Lane	MP1264	Sandy - Misterton	Misterton - Sawtry
SU15	off Beaumaris Road	MP2304	Sandy - Misterton	Misterton - Sawtry
SU14	off Stanch Hill Road	MP2299	Sandy - Misterton	Misterton - Sawtry
SU13	Stanch Hill Road	MP1331	Sandy - Misterton	Misterton - Sawtry (Sawtry - Sandy)
SU12	off Gloucester Road	MP1289	Sandy - Misterton	Misterton - Sawtry
SU11	Saxon Close	MP1288	Sandy - Misterton	Misterton - Sawtry
SU10	N off Buckingham Way		Sandy - Misterton	Misterton - Sawtry
SU9	S off Buckingham Way		Sandy - Misterton	Misterton - Sawtry
SU8	off Green End Road		Sandy - Misterton	Misterton - Sawtry
SU7	Green End Road	MP1332	Sandy - Misterton	Misterton - Sawtry (Sawtry - Sandy)
SU6	Green End Road	CP1265	Sandy - Misterton	Misterton - Sawtry
SU5	Field Boundary/Drainage Ditch		Sandy - Misterton	Misterton - Sawtry
SU4	Toll Bar Way		Sandy - Misterton	Misterton - Sawtry
SU3	Toll Bar Way		Sandy - Misterton	Misterton - Sawtry
SU2	Old Great North Road	MP1302	Sandy - Misterton	Misterton - Sawtry
SU1	Field Boundary/Drainage Ditch		Sandy - Misterton	Misterton - Sawtry
SD1	B1090	MP1341	Sandy - Misterton	Sawtry - Sandy
SD2	B1090	MP1338	Sandy - Misterton	Sawtry - Sandy



Figure 1.4: GPSS Markers - Glatton and Sawtry (Google Earth, 2025)



Figure 1.5: GPSS Markers - Sawtry, upstream of disused fuel storage site (Google Earth, 2025)

Table 1.2: Government pipelines and storage (GPSS) - Alconbury Weston, Alconbury and Brampton

Marker	Location	Reference	Main Branch	Section
AW1	Ermine Street			
AW2	Ermine Street			
AW3	Nora Wood Way	MP1350	Sandy - Misterton	Sawtry - Sandy
AW4	Nora Wood Way	CP3100/ MP4286	Sandy - Misterton	Redmile - Sandy / Sawtry - Sandy
AW5	Vinegar Hill	CP3101	Sandy - Misterton	Redmile - Sandy
AW6	Hill Top		Sandy - Misterton	
A1			Sandy - Misterton	
A2			Sandy - Misterton	
B1			Sandy - Misterton	
B2			Sandy - Misterton	
B3			Sandy - Misterton	
B4			Sandy - Misterton	
B5			Sandy - Misterton	

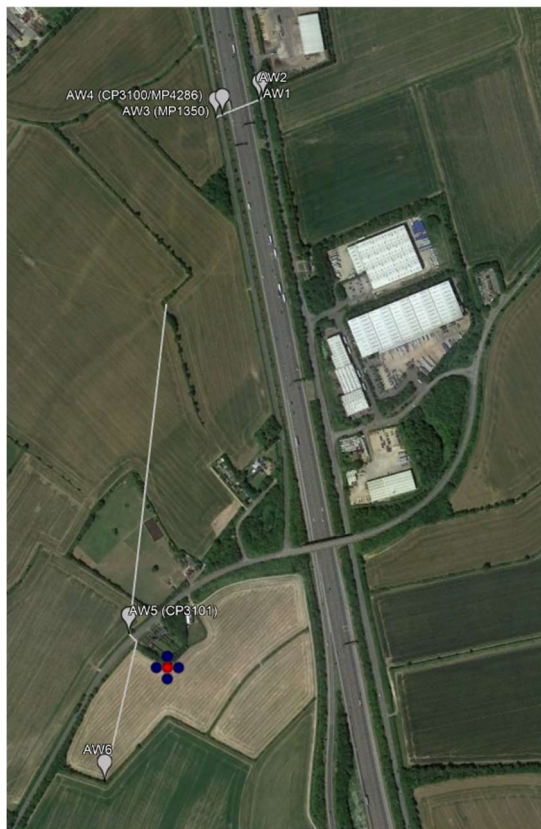


Figure 1.6: GPSS Markers - Alconbury Weston (Google Earth, 2020)

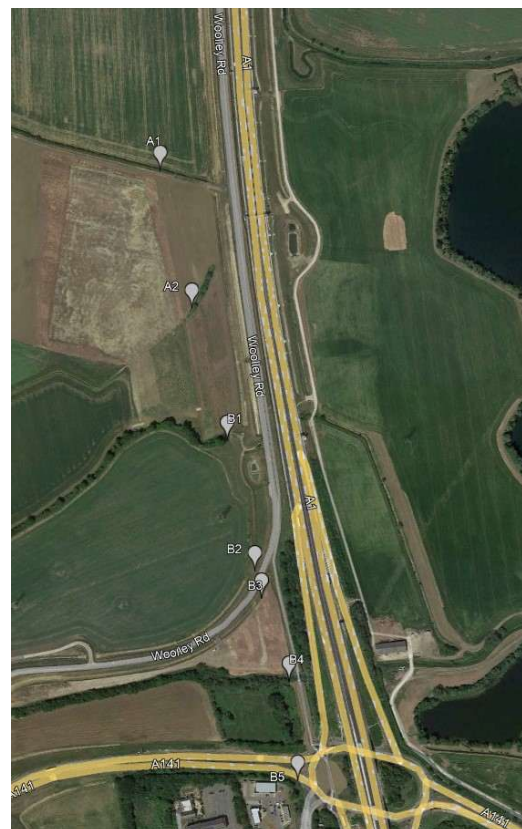


Figure 1.7: GPSS Markers - Alconbury and Brampton (Google Earth, 2020)

Photos of Pipeline Markers not used Elsewhere in this Article

Sawtry



Figure 1.8: Pipeline marker, Field Boundary @Sawtry History Society



Figure 1.9: Pipeline marker, Sawtry Brook @Sawtry History Society



Figure 1.10: Pipeline marker, off Church Street @Sawtry History Society



Figure 1.11: Pipeline marker and marker plate, and WW2 era marker, Church Street/Tort Hill @Sawtry History Society



Figure 1.12: Pipeline WW2 era marker, All Saints Way @Sawtry History Society



Figure 1.13: Pipeline WW2 era marker and marker plate, Fen Lane @Sawtry History Society



Figure 1.14: Pipeline marker plate, off Beaumaris Road @Sawtry History Society



Figure 1.15: Pipeline marker plate, off Stanch Hill Road @Sawtry History Society



Figure 1.16: Pipeline marker plate, Stanch Hill Road @Sawtry History Society



Figure 1.17: Pipeline marker and marker plate, off Gloucester Road @Sawtry History Society



Figure 1.18: Pipeline marker and marker plate, Saxon Close @Sawtry History Society



Figure 1.19: Pipeline WW2 era marker, N off Buckingham Way @Sawtry History Society



Figure 1.20: Pipeline marker, S off Buckingham Way @Sawtry History Society



Figure 1.21: Pipeline marker, off Green End Road @Sawtry History Society



Figure 1.22: Pipeline marker plate, Green End Road (east) ©Sawtry History Society



Figure 1.23: Pipeline marker and marker plate, Green End Road (west) ©Sawtry History Society



Figure 1.24: Pipeline marker and WW2 era marker, field boundary/drainage ditch ©Sawtry History Society



Figure 1.25: Pipeline marker, Toll Bar Way (west) ©Sawtry History Society

Alconbury Weston



Figure 1.29: Pipeline marker and marker plate, Norah Wood Way (east) ©Sawtry History Society



Figure 1.26: Pipeline marker and marker plate, Toll Bar Way (east) ©Sawtry History Society



Figure 1.27: Pipeline marker and marker plate, Old Great North Road (east) ©Sawtry History Society



Figure 1.28: Pipeline marker and marker plate, B1049 Woodwalton Lane (south) ©Sawtry History Society



Figure 1.30: Pipeline marker and marker plate, Norah Wood Way (west) ©Sawtry History Society



Figure 1.31: Pipeline marker and marker plate, Vinegar Hill (northwest) ©Sawtry History Society

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