

HIGH STREET Cumbria`s Best Known ROMAN ROAD

By Thomas Cedric Bell (Cedric)

*Cedric Bell's ORCID ID, for contacting researchers working in this field (and who knew him), is <https://orcid.org/0009-0002-1189-3433> . We will happily answer your enquiries on Cedric Bell's behalf. Cedric Bell and his estate own full copyright to all his works.



Cedric Bell's Orchid ID

HIGH STREET Cumbria`s Best Known ROMAN ROAD

The Route, the Guarding Forts & the Roman
Towns and Cities and major highways it
linked from Windermere to Ullswater &
Penrith
&
the Ore Exploitation Sites it served along the
route.

T.C.Bell

(This was first published on
<https://www.glenriddingcybercafe.co.uk/docs/TCBell/Index.htm>)

HIGH STREET, THE ROUTE (S) & IT'S FUNCTION AS PART OF THE ROMAN INTEGRATED TRANSPORTATION SYSTEM..

This paper is the first to describe in detail the route of High Street, the Roman equivalent of the M6 motorway and it's functions. The survey includes the positions and routes of the many connecting roads and it's function as part of an integrated transportation system. Also highlighted is High Street's relationship with the adjacent Roman towns and deep sea ports and also the industrial operations in the North East and South East of Cumbria, comprising metallic ore extraction, processing, smelting..

The author lives in Tirril at the north end of High Street between Penrith and Ulswater and for seventeen years has been researching on a full time basis, for evidence of Roman operations in the north of Britain the Scottish Islands and Ireland, with special emphasis on water transportation and industrial operations. .

HIGH STREET SURVEYS.

The first surprise was that "High Street" consisted of two parallel c5m wide roads (over kerbs), each with it's own ditches and a five metre wide unpaved section between the inner kerbs. In many places the aggers of the double roads are still visible. No previous surveys have ever appreciated that the route was a double carriageway. With the exception of Dr Paul Hindle, (Roadways and Byeways of Cumbria), I do wonder if the authors who mention High Street have ever walked the full high level route. Over the total route, the road foundations are still in place and could be located by a magnetic anomaly survey. The majority of Cumbrian Roman roads have been built to a 3m (over kerbs) standard, only the major roads are 5m wide, with a very occasional 10m section.

The second surprise, was to appreciate that the Romans had constructed a series of forts along High Street, at each east- west major junction and at the north end, specially designed for troops on the march, barracks, granaries toilets, bath houses and temples, all designed to cater for the troops physical to spiritual requirements.

The third surprise was of the number of different routes of High Street. Two at the south as Dr Hindle had suggested. The westerly route marked by the Ordnance Survey from Limefitt Park (Camp site) to by Thornthwaite Crag and the easterly route from Dubbs Road (and reservoir) via Yoke and Freswick etc to meet with the westerly route at Thornthwaite Crag. The finding of a recorded 13th cent route of High Street "The Great Way" by the Baron of Kendal between Heltondale and Barton Church to define his hunting forest, which differed from the two routes recorded by the Ordnance Survey since the 1850. Also that nobody had appreciated that from the northern end of High Street. Tirril where I live (Tirril / Sockbridge & Thorpe, are all adjacent) a series of double carriageways connect into a spiders web of northern roads.

I have defined the northern end of High Street, as the point it connected to known Roman Road system at Tirril between the Bridges at Eamont and Pooley over the River Eamont. The south end has been taken as Troutbeck Bridge and Applethwaite Common, Windermere. The Andrews, a husband and wife team of intrepid Cumbrian Roman road surveyors, have surveyed the southern route of this major highway though South Cumbria to the coast, mostly as a double carriageways.

The final surprise was the extremely large amount of mineral exploitation undertaken by the Romans adjacent to the route of High Street and it's feeder roads, with some of these sites still in good condition. Presumably the route for this reasonably flat, ambush free highway, was greatly influenced by the requirement to both service and guard these major iron ore exploitation sites.

Sadly, Lake District National Park (LDNP) latest blurbs for visitors, project a totally erroneous picture of the Roman operations in Cumbria. LDNP claim that there is no knowledge of Roman industrial sites in Cumbria, nor of the major Roman road systems. Whilst we fully accept that to our knowledge there is no record of input from archaeologists to our understanding of Cumbria's Roman Road infrastructure, however, thanks to the years of work carried out by a number of dedicated, knowledgeable, self funded enthusiasts, we do have good records of the main Roman roads and their industrial operations in Cumbria.

THE ROMAN INTEGRATED TRANSPORTATION SYSTEM AROUND PENRITH.

The Roman interest in Britain and especially Cumbria was the presence of metallic ores. To exploit these ores the Romans had to construct a complete infrastructure comprising roads, towns, water supplies, factories, foundries and transportation highways to supply these sites. The Romans transportation highways for heavy and bulky goods were the canalized rivers, burns and lakes, not their roads. The Rivers, Lowther, Eamont, Petteril, Calder, Lyvenett, Leith and the 70mile long Eden, all which drain Cumbria's eastern mountain ranges and the western slopes of the Pennines, formed the highways. The Romans converted all these rivers for navigational purposes and linked them by a series of canals around Penrith. Canals also connected the River Eamont, via Stainton to Troutbeck, Glendermackin to Derwentwater. thus enabling water transport to service the ore exploitation sites around Ullswater, Derwentwater and Thirlmere. Harbours were constructed to service these sites. These ranged from lakeside quays, one of Ullswater's is 170 m long, to inland harbours, such as Penrith's swimming pool field, Frenchfield (now Penrith's Sports Fields) and Whins Pond. All Roman forts, towns, including Hadrian's Wall and Vindolanda and the ore exploitation sites required supplying, all had harbours, as supermarkets now have areas dedicated for their delivery wagons. The canals which supplied Hadrian's Wall ran inside the vallum. These canals also serviced the many metallic and coal exploitation sites along the Wall, all ignored by historians. The author of the Geology of Hadrian's Wall, Mr G.A.L.Johnson wrote, the siting of Hadrian's Wall ensured that all the ore deposits were south of the Wall. So the final siting of Hadrian's Wall was as much based on commercial factors as military ones. The first of at least three Roman variations of east- west defensive wall of double dyke construction was south of the River South Tyne.

Penrith from the Romans to the present day, has been the hub of all routes, north, south, east and west, this is why the Romans sited their government at Penrith, not Carlisle. The huge ramparts of a governor's major trapezium shaped turreted praetorium still overlook the site of the amphitheatre and in the distance, High Street. The Crescent sheltered accommodation is now built on the site, flanked by the A66 and the North Lakes Hotel. Penrith was a walled Roman town 75ha (180acres) with several suburbs. (Penrith's Roman Heritage. Bell). A major fortress covering 250ha (600 acres) was constructed between Carleton and Honeypot Farm. The siting of the capital and the major fortress at Penrith, the hub of all routes, provided time to organize a military response if any of the northern Newcastle to Carlisle defensive walls and their final replacement Hadrian's Wall, were overrun.

Most historians ignore High Street, the Roman equivalent of the M6 and the Roman route now overlaid by the A6 over Shap. Historians only mention the more exposed southerly access to Penrith via Low Barrow Bridge, Orton Fell and Brougham. Yet the number of forts on the High Borrow Bridge route (A6) via Shap and Eamont Bridge, prove this was a much used route. The parallel western route to the A6 was via Shap Abbey, this served the extensive iron ore workings in Wasdale, and Wet Sleddale, from Shap Abbey the route north was via Whale, Lowther to Eamont Bridge. As these are all single track roads and as the High Street was a double carriageway, the conclusion has to be, that High Street was "The" major north - south route. On High Street, one is often reminded of the Roman presence by the descendants of their Friesian cavalry mounts, these lovely, all black fell ponies, still roam the fells. Cavalry barracks existed near Ullswater at Hole Farm and Waterside Farm, with an unusual complete cavalry regiment fort by Soulby Gate fort, by the junction of the Dacre Dalemmain, Ullswater road. As the Crescent (By North Lakes Hotel Jct 40 M6) Dunmallard, (Ullswater) Brougham Hall and Lowther sites all contained Governor's praetorium they also had small cavalry units which provided the governor's guards.

HIGH STREET, THE SOUTHERN and WESTERN ROUTES AT THE SOUTHERN END..

The Southern access to High Street's double roads north, commenced at Moor Howe (Dubbs Road,) OS.SD425-006 Applethwaite Common. Immediately south of this junction is the site of a Roman harbour, accessed by canal from Troutbeck (Ambleside's). A further canal parallels the Roman double roads to a harbour south of Dubbs reservoir. (Dubb in Cumbrian, is a hollow filled with water). The harbour which served the adjacent fort, gave the road it's name. The fort's platform, is visible to the west of Dubbs Road.. The double road system follows the line of the Garburn Road. At SD4229-0354 east of the road, is a quarry exploited for iron ore, a smelter ramp containing ten smelters line the wooded bank above the road.

At SD4344—0475 the Roman double roads head north, whilst the Garburn road swings through 90 degrees eastwards. A section of Roman road heads NW, but this appears to have been washed out in the local beck. Immediately north of this beck is the site of a Roman harbour, access being via ladder locks up the beck. The double roads head northwards and split one section goes up the southern slope of Yoke and one section through a stone wall to the right, at SD 43688-05802. The roads then contours on the eastern slopes of Yoke. Passing a signal tower base at SD43777-05989 and a side road leading to the Kentmere Valley below, with it's large ore exploitation operations. At SD 44054-06557 a considerable area of roadstone is visible, adjacent are several Roman smelter ramps. The aqueducts which supplied the waterwheels, powering the smelter's combustion air bellows, still function, although leaking. The British Geology Survey records lead and copper (chalcopyrite) as being found in the Applethwaite formation (Garburn Road) SD423--034

The road then angle upwards, through a very clear cutting SD43999-06849, to meet the ridge between Ill Bell and Yoke, meeting the direct road up the southern flank of Yoke. At Yoke SD43751-06716, the Romans constructed a c40m square fortlet, much of the foundation stonework is still visible. Water was stored in an adjacent, visible reservoir, sealed with puddled clay. The double roads with roadstone still visible, continues on over Ill Bell and Foswick. Paul Hindle appears to be the only writer to have recorded this as a section of Roman Road. At SD 433-096, by Thornthwaite Crag the Roman Road from Troutbeck and Limefitt Park (Caravan Park) joins the double carriageway. For many years this route was thought to be the only route of High Street. The Roman road from Threshwaite Mouth links in near this point, this accessed the Kirkstone Pass Roman Road and Hartsop, via Pasture Beck. The High Street double roads continue northwards, following the recorded Ordnance Survey route.

HIGH STREET. WESTERN ACCESS FROM TROUTBECK , LIMEFITT PARK & WINDERMERE's ROMAN TOWN. (The Windermere Troutbeck SD41-03m. not Keswicks).

Troutbeck was a junction of several Roman roads, northwards to the head of the Kirkstone Pass via what is now the A592, then to Hartsop (lead) and Patterdale, (Iron ore and lead), westwards to Ambleside's Galava Roman fort and other adjacent forts and the large vicus or town, and Windermere's Roman town, southwards to Stavely Bridge and southeast to Kendal. My recent surveys at Bowness (Windermere) have located a Roman Governors trapezium shaped praetorium SD 4010-7545 (part under the cemetery) alongside the Bowness coach park, with a guarding fort opposite the ferry piers. Also at Rayrigg, from the Roman fort SD4020-9760, immediately south of the Steam Boat museum, running northwards, there are a series of lakeside Roman military sites, culminating in a Governors residence. This residence, a trapezium shaped turreted praetorium SD40350-98700, is situated on the hill overlooking the National Trust car park. One of the guarding forts is under the car park and play area. The Roman quayside, some stonework is visible, ran along the shore, this mean as at Ullswater, the Romans maintained the lake level. The existence of two trapezium shaped turreted praetorium fortresses specifically designed for Roman governors and similar rank (Generals), generated the thought that there must be a large Roman town nearby, as at Ullswater, where the governor's residence and probably that of the Army chief, are side by side and in the middle of the Roman city.

The Roman town of Windermere's foundations where located alongside Trout Beck, near it's confluence with Windermere, ie between Troutbeck Bridge and the lake (Windermere). SD40135-00075. Part of the Roman town is now overbuilt by the Lakes School, the Sports Centre and the Swimming Pool. Sufficient open ground eg The rugby pitch, and adjacent fields, exist for dozens of the 1m wide rubble foundations of the town's insulae, 70m x 10m with ten unpaved rooms and one paved room, to be located by magnetic anomaly. The town was very roughly one kilometre long by 200m and covered at least, 20ha (48acres). Further surveys are required to ascertain the exact boundaries of the town. The town's water supply was via Trout Beck. This canalized beck provided a transportation highway to the nearby ore exploitation areas and also to High Street. Access to the deep sea, was via Windermere and the River Duddon. There must be a major deep sea harbour for 30m x 10m vessels, near the mouth of the River Duddon, yet to be located.

Western access to High Street is from just south of Church Bridge, Troutbeck, SD41200-02580. The Roman road northwards, follows what is now a well worn track flanking Troutbeck and it's feeder High Gill, a distinct angled cut has been made into the hillside to accommodate the road. I consider that this

section of road was a single c5m, road, not a double carriageway. At SD433-096, just south of Thornthwaite Crag, it links to the eastern route of the Roman road from Yoke and Applethwaite Common.

HIGH STREET COMBINED ROADS.

At NY4400-1080, High Street is joined from the east by the road from the Nan Bield Pass, which gave access to Hawswater, Kentmere, and Kendal via Harter Fell, part of the Gatesgarth Pass and Longsleddale. The junction of the four roads at Nan Bield Pass was controlled by a fortlet (50m square) at Mardale Ill Bell NY4475-1010, the line of the walls and the south gate are still visible, stonework of the bathhouse and it's still running aqueduct can be seen on the south wall of the fort.

THE STRAIGHTS OF RIGGINSDALE & KIDSTY PIKE

The Straights of Rigginsdale (NY4390-1230) form the junction of roads from the east and west. This junction was guarded by a Roman fort (NY4405-1200) 70m x 40m, the stonework of the fort is still in place, but from it's condition it would appear to have been slighted by the Romans on leaving the area. The site is situated 300m south of the Kirkstone, Hartsop road junction with High Street. Hartsop with it's controlling fortlet was a Roman lead exploitation site. At NY4430-1270, Kidsty Pike, the large amount of fallen stone represents a Roman signal station. At this point High Street is joined from a Roman Road from the east up Kidsty Pike which accessed further ore exploitation sites, around Hawswater, now a reservoir. At the lakeside a fortlet with visible ramparts NY4685-1153 guards the road junction and the nearby ore exploitation operations situated on Rigginsdale and Kidsty Pike., both accessed by canal.

HIGH RAISE & RED CRAG

North of Kidsty Pike at High Raise NY4460-1329, is a Roman fortlet c 60m x 40m. The foundation stonework of the north and south gatehouses and the granaries are very clear. From High Raise, a further Roman road runs north easterly, via Fordingdale Bottom, to Burnbanks at the eastern end of Hawswater. A large number of disused mine workings are visible along the lower section of this road. Hawswater Beck was navigable from Burnbanks to Shap Abbey, then via the Rivers Lowther and Eden to Carlisle.

North of Red Crag at NY4530-1565, High Street is joined from the north west by the Martindale Road, this runs north of Gowk Hill and to the east of Steel Crag. Between Wether Hill and Loadpot, NY4560-1680, a road from Howtown, (Ullswater) via Fusedale links into High Street. Fusedale is one of the finest examples of a Roman Road in Cumbria. A number of ore exploitation workings are visible in the Fusedale valley and the east and west faces of Steel Crag. South of Wether Hill NY4543-1605, High Street is joined from the east, by a Roman road over Bampton Common, via Hunger Hill to Bampton and Hawswater.

LOADPOT..

At the lower, southern slopes of Loadpot, NY4580-1740, is White Moss. Some editions of OS Maps show High Street as running eastwards down Helton Dale, possibly this was the original route. Ditches, kerb stones etc are clearly visible running eastwards via Helton Dale, Askham, Heinz Wood, Yanwath Woodhouse (ore exploitation) down a lovely cutting to the Lowther campsite gatehouse and Lowther Bridge (A6), at this point the road could link into any of the multiple Roman roads. North over the River Eamont to Penrith's Roman town, or Carlisle. East over the River Lowther to Brougham. Southwards on the now A6 route to Lancaster etc. Westwards to Tirril and Pooley Bridge. Quite a choice.

At Loadpot, NY4570-1780, a Lowther shooting lodge, now marked as "The Chimney", was sited over a Roman Fortlet c60m x 40m, fed by an enormous spring (The source of Heltondale Beck) on the east of Loadpot. High Street's double roads run straight over Loadpot, past the OS triangulation post.

From Loadpot, now the bridle path, a visible Roman road, is flanked by a deep depression, this was actually a small canal which supplied the "Chimney Fort", the water was supplied via the spring fed aqueduct which first fed the "The Chimney Fort". The "bridle path" road bypasses Loadpot (Hill)

westwards, this road served the large iron ore exploitation operation based on Bonscale's igneous outcrop. Bonscale's 4acre fort alongside Ullswater, with its huge granaries, (one part excavated by the author), controlled and supplied the operation above it. The steep western side of Bonscale, above Howtown (Ullswater), forced the Romans to construct a canal eastwards, across Swarthbeck Gill, just south of Arthur's Pike, to Brown Rigg (Aik Beck). This canal is joined south of Arthur's Pike by the Loadpot, Bonscale flanking road with its deep ditches. At Brown Rigg, east of Arthur's Pike, at NY 4682-2087, a 40mx 24m now reeded harbour was constructed using puddled clay. Adjacent to the harbour and the visible canal, are a series of iron smelters, with their distinctive ramps. This harbour was accessed from Aik Beck, this beck contains some interesting dams with bye pass canals, one of the lower dams is an unusual arch dam, most Roman gravity dams are straight, with stone water and air faces, both lined with puddled clay and an earth core. From Aik Beck two canalized becks ran down to Waterside Farm and the large foundry with c 100 smelters. Waterside was the site of a 300acre Roman processing plant and support operation for the areas ore exploitation operations, the site contains, harbours, forts, fortified compounds, granary compounds, part of the Roman City of Ullswater, probably at 340ha (820acres) the largest in Britain and a graveyard containing c 1,500 inhumations, with part of the Roman graveyard wall still in place to prove it

Loadpot itself was the site of a huge Roman ore exploitation operation. The large quarry on the north side of the mountain was quarried for haematite iron ore. The smelter ramps with their access canal are immediately adjacent to the quarry. A canal was constructed to the top of the north eastern side of Loadpot to access the spring, this supplied all the water for the canal operations. A large rock, presumably glacial debris, was left by the Loadpot spring source, this formed an altar to the god of the rock workers. The altar was originally enclosed by a wall and a ditch. Terraced into the eastern flanks of The Dodd (NY4650-1950) some 1,500m to the NE of the Loadpot quarry, are sited the quarrying operations guarding fort, the workers fortified compound and an adjacent vicus. The site is connected to Helton by a visible depression of a canal. Sadly such depressions are invariably regarded by archaeologists as sunken roadways, those who understand Roman canal design and can carry out a magnetic anomaly scan, can easily locate the flanking aqueducts, a hall mark of Roman canals. A road connects "The Dodd" site to a road system guarded by Fort Divock, NY48166-22011, this is close to "The Cockpit" stone circle, Moor Divock. Fort Divock 90m x 50m, with its adjacent beautiful, now reeded, harbour, granary compound and annexe complete with its complete visible gatehouse foundations, provides a wonderful example of a small frontier fort. From the fort's ramparts looking eastwards can be seen the remains of a huge area of reeded moorland originally dammed to form a reservoir c800m x 100m NY497-226, one of two on Moor Divock. This one controlled a water supply to the section of Ullswater City located on Waterside farm, then supplied the lake side puddled clay harbours. The Askham Fell eastern reservoir fed via a siphon, the smelter blowers by the quarried iron ore terraces, alongside the eastern footpath to Helton and also fed the canals which serviced the Askham ore exploitation operations. From Fort Divock a view east was a massive monument to their future, Moor Divock's huge Roman overflow cemetery from Ullswater City, this contains several thousand of their predecessors and colleagues. This flanks the Roe Head to Helton bridle path.

Moor Divock also contains the only Souterrain located to date in Cumbria and one of the largest ever located in Britain. In 2007 I surveyed part of the route of the stone avenue which originally ran from Shap northwards. The avenue heading c 320degrees, consisted of a parallel line of upright stones set 20m apart, at 40m intervals. The Cop Stone NY4915-2165 is the only stone left of this avenue. But as all upright stones had a ring of packing stones to support them, these packing stones are easily located by magnetic anomaly, so the route of the avenue was easily determined. The large upright stones appear to have been removed by the Roman and used for dams and bridge abutments. The avenues led me to a Souterrain, NY493-225, the site is c420m x 100m and defended by a ditch and stone wall, inside is a 400m x 10m - 20m wide a 1.7m deep depression in which the original round houses were constructed. The site included drainage. The depression was banked up and surmounted by a wall. Entrance was by a walled passage and a final gated bastion, whose foundations are very clear. To my surprise I was even able to locate the buried food chambers. The last time I had located such was on a New Zealand Maori Pa. The design of this impressive site conveyed the impression that it was the abode of a local ruler, even a king. (See Bell's Stone Circles, Avenues, Temples and Souterrains. Available in Penrith Library) An ore exploitation site is adjacent, with the limestone has been excavated down to the underlying sandstone. As there is a Roman

designed toilet in the south end of the Souterrain, it is feasible that the occupants worked for the Romans.

HIGH STREET NORTH FROM LOADPOT ROUTE ONE..

From High Street between Loadpot and Brown Rigg, a double carriage way ran via Arthur's Pike through the eastern fields of Waterside Farm and Park Foot to Pooley Bridge and the centre of the Roman City of Ullswater.

HIGH STREET NORTH from LOADPOT. ROUTES TWO to EIGHT

The major route of High Street and its double roads ran northwards alongside Brown Rigg's industrial complex. The road ditches discharged into the harbour NY 4682-2087 and provided water for the series of ladder locks required for the 320m of lift from Ullswater. A further canal, still visible, accessed by ladder locks, ran alongside High Street's double roads down to Moor Divock, accessing Ullswater via Elderbeck. High Street's double roads split prior to Elderbeck and bridged it separately. Many have commented on the two bridges NW4820-2230, but had not appreciated that they carried two legs of a double road system. In this region there are several Roman minor road connections. One to Waterside Farm was via a forelet at Parkhouse, one of the fort's arched gateways being incorporated in the ruined farmhouse wall. One to Pooley Bridge, via Roe Head, another Roman ore exploitation site. A further road ran to Askham. The area is akin to a vast spider's web of roads.

From Moor Divock, High Street's double roads ran to the west of Heugh Scar, its face cut back to squeeze in two roads. All Roman canals, including those flanking Hadrian's Wall within the vallum's dykes, were constructed with the standard Roman biological oxygen control system of flanking aqueducts. This system was designed to feed oxygen rich water to an aqueduct installed at the base. At the Winder Hall gate to Moor Divock on the left (east) can be seen the remains of a Roman canal and on the right (west) a series of small ridges, these are Roman smelter ramps. The water channels between the ramps contained water wheels which drove the smelter's combustion air blowers. A large Roman fort lies to the west. The local footpath from Winder Hall cottages to by Barton Hall flanks its ramparts and canal. Nearby is the remains of a Roman Villa's walls, the most northerly located to date.

The Romans exploited large areas of Moor Divock and Askham Fell for iron ore. The so called Wofa or Sink Holes found all over the moors, are actually iron ore excavation sites within the limestone. When a metallic ore is introduced into the country rock by extreme pressure, it also creates a magnetic anomaly, so one only has to run a magnetic anomaly scan over the site to locate the presence of ores. The Roman geologists have shown that they were perfectly capable of locating such ore deposits.

From the western side of the moors the canalized becks ran into Ullswater. From the eastern side of Moor Divock and Askham Fell, the canalized Helton Beck ran to the River Lowther, or via Ladybeck and Celleron to Tirril and the River Eamont. In heavy rain conditions, water still flows down the line of the Ladybeck canal, sadly now blocked by Broad Ing housing development. This development has created flooding problems to the adjacent road and the houses which required the construction of a flood defensive wall. The local name for the road is the River Celleron. Sadly this is a typical example of builders ignoring the presence of Roman canals and aqueducts which have drained the area for hundreds of years, then cutting or blocking them, hence causing continual grief to the residents and road users. On other sites buildings have been constructed over live aqueducts resulting in settling. Then when confronted with the problems created, the perpetrators always deny the presence of aqueducts etc. Unbelievably Cumbria County Council when requested to advise developers of the risks of severing or building on Roman aqueducts, denied any had ever been discovered in the county. Their denial totally ignored the hundreds of Roman sites in Cumbria, every one served by an aqueduct and the flooded roads in the builders wake.

HIGH STREET NORTH FROM CELLERON. ROUTE TWO.

Celleron, Celle in Latin means swift, one wonders if the road should be called "The Swift Way". Celleron is SW of Tirril NY50-26, at this point, High Street split into four road systems, each with double roads.

We have covered the eastern section of High Street. One double carriageway ran down to just east of Kirkbarrow Farm, which is adjacent to Barton Church (Route recorded in the 13th cent by the Baron of Kendal) and bridged the River Eamont at NY48416-27123. The bed of the River Eamont was paved with sandstone flags in the vicinity of the bridge to prevent undercutting. The stonework of the northern bridge abutment is probably the most complete of any bridge in Cumbria and possibly in the north of Britain, the stonework covers the complete width of the double carriageway. This road served the Roman ore exploitation sites at Dalemmain, one of the industrial sections of Ullswater City and appears to have been the shortest route between the A66 Penrith – Keswick Road, and High Street.

The road by Barton Church is the only section of High Street of which there is written confirmation. The Rev Ragg in 1890 translated a transfer of hunting rights from William de Lancaster, the last Baron of Kendal to his half brother in 1227. High Street was referred to as boundary marker. The translation noted that the Great Road, *magnum viam*, came down from Brethstrett by Barton Church. For some while I wondered why Barton 12th cent Church had been constructed on a Roman fortlet platform with only three nearby ancient farm houses. Where was the congregation housed?. I noted that a visible Roman dyke ran nearby, this indicated an ancient large site had existed. So with the local farmer's permission, I decided to survey. I found that the area had housed a substantial Roman settlement, the foundations of the 70m x 10m *insulae* where still in position, so I can but assume that these housed a substantial community for several hundred years after the Romans left. Several of the houses in this area still have 1,800 year old Roman granary bases. Many of the local churches are also built on Roman granary bases, Calbeck, Penrith's St Michaels and Christ Church and Clifton, these provided the most substantial of all Roman buildings. A survey over the Kirk Barrow Farm site, revealed the key to the origin of the word Barrow. This was the standard whale shaped mound that the Romans constructed to house their forum (shops) and basilica (Offices), toilets and temples. Not an ancient burial mound as was supposed. This mound can be seen running northwards from the farm (One of the oldest houses in the area) and towering over Barton Church entrance. One has to assume that The Kirk refers to the adjacent Barton Church.

HIGH STREET NORTH FROM CELLERON. ROUTES THREE & FOUR.

From Celleron one double carriageway ran northwards following a small ridge and crossed the Tirril-Pooley Bridge road at NW49650-26300 near April Cottage. This area is called Margate Cross, the foundations of a fortlet and nearby supply granaries have been located here, possibly this was an early supply base for marching troops. Nearby in the field opposite the northern end of the Celleron Road, is a large depression, this was a Roman walled harbour, NY4980-2650, parts of the wall can actually be seen on Google Earth. A canal now called Ladybeck connected the harbour to both Moor Divock and the River Eamont. The adjacent farmhouse Thorpe, is built over a small visible Roman fort platform. Roughly 150m North from the Tirril- Pooley Bridge modern road, the north leg of the Roman road split into double carriageways, each 5m from kerb to kerb. A signal tower base is adjacent. The two roads bridged the River Eamont at NW49075-27400 and NW49264 -27549. The stonework of the easterly route bridge abutment is still visible. Near the junction of these two roads, the westerly route was serviced by an adjacent bathhouse, toilet and temple. These are alongside and to the east of an adjacent 100m x 100m Roman fort, the fort's own services are west of the fort. The site generated some interesting pieces of clay pipe and a roof tile when the site was firstly ploughed after 60 years. To the west of the junction of these two roads is a walled barracks, complete with granaries and a nearby signal tower. The site was designed to accommodate two cohorts, 960 men on the march. The site was serviced by a canal from the nearby River Eamont.

HIGH STREET NORTH WEST FROM CELLERON & The RIVER EAMONT. ROUTE THREE

The NW double carriageway bridged the River Eamont at NY49075-27400, adjacent to Stainton's old sewage plant, stonework is visible on both banks. The route was through Stainton, to the south of the quarry, at NY4780-2820, at this point the 19m wide agger can be clearly seen with visible stonework. The flanking canal from the R.Eamont bridging point, now reduced to a beck, still runs through Stainton. At the position of the visible agger, the canal cuts through the line of the double roads, to run on the north side of the roads. The stone work lining the cutting through the limestone is still in place. Between this point and Stainton the Roman double carriageway from Junction 40 (M6) Penrith and the NW section of High Street

link . The Penrith – Keswick double road system was again located c 50m south of the Dacre to A66 Road junction. The stonework and the aqueducts of the canal's biological oxygen demand control system were also located by magnetic anomaly scan, in the boggy dip adjacent to this junction, immediately to the south of the A66 ramped road. This is the canal which linked the River Eamont to Derwentwater.

HIGH STREET NORTH FROM CELLERON & The RIVER EAMONT. ROUTE FOUR.

The Easterly of these two roads bridged the River Eamont, NW 49264-27549 some of the bridge abutment stonework is in place. From the bridge the roads ran northwards via Hoghouse Hill and Newbiggin (Stainton) to connect with the Penrith to Greystoke, 10m wide Roman road, between Clickham Inn and Bunkers Hill. It also accessed the small Roman town at Johnby and the Roman governor's praetorium at Johnby Crag and the adjacent large iron ore exploitation site. From near Red Hills, Carlsike Beck, NY46-31 a canalized by the Romans connected the River Eamont to a small Roman fortlet, complete with a large external granary .NY4685-2980 opposite the turn off for Flusco quarry from Newbiggin (North of Stainton). This canalized beck was used to transport and stores. This site was designed to provision marching troops on this major road.

TIRRIL THE ROMAN SPAGHETTI JUNCTION. ROUTES FIVE TO EIGHT EASTWARDS..

Tirril and Sockbridge formed an important part of the Roman operations in the North West.

The easterly road system ran from Winder Hall (South of Celleron) towards Tirril Village Hall, NY4940-2770. In the field south of the Hall, partially visible, is the Roman equivalent of Birmingham's "Spaghetti Junction". The village Green was the site of a Roman signal tower, the stonework, which weighted the log tower is still in view, note the cutouts to hold the logs. The ramparts of the guarding fortlet can be seen at the rear of the house called "The Green". Nearby and opposite the Queen's Head Pub, can be seen a man made platform similar to a whale. This contained the barracks of the guard and the gatehouse though the fortified wall which ran from Ullswater to the River Eden. (See later description). The gateway gave access to the adjacent suburb of the Roman town of Sockbridge. The town's economy was based on iron ore exploitation. (See terraces on left hand side of road to Sockbridge Mill, after last house on left, Barn End), no doubt some income also arose from travelers over High Street. At the rear of the houses by the Queen's Head, Tirril, the Romans constructed a walled extension to the fortlet, this contained six closely spaced barracks capable of housing 480 men, a cohort. One section was uncovered during a garden redesign, the rest located by magnetic anomaly. These barracks housed troops on the march.

At Tirril - Sockbridge a Quaker Meeting House was constructed over a Roman granary, the Quaker grave yard was sited over a Romano Celtic temple, possibly dedicated to the Roman Boatmen who used Ladybeck, originally a Roman canal. The stonework of the canal and its locks can still be seen from the footpath "Eddy's Way" flanking Ladybeck. This canal linked the River Eamont to Moor Divock via Celleron. One of Moor Divock's stone circles, (the cockpit) adjacent to Elderbeck, also housed a Romano Celtic Temple, the foundations are clearly visible. The spring, over which all circles are built, supplied the water for the immersion baths, the forerunner of Christian baptism, the immersion bath then discharged to an adjacent toilet block. South of the Quaker Meeting house is a man made platform c 50m square, originally this held a stone circle and an avenue of stones leading to it from the south. Within the circle the Romans constructed a 40m square temple, presumably for the travelers using High Street to give thanks for a safe journey. The large stones of a circle or avenue are locked in position by wedge stones, these are invariably left in place when the main stones are removed, their positions are easily located by a magnetic anomaly survey homing in on the anomaly created by the locking stones

The road from Sockbridge to Sockbridge Mill, NY503 267 contains many visible reminders of the heavy Roman presence, forts, Roman town, labour camps, a large harbour, modified to form a fish farm and now a garden, canal installations and a terraced iron ore quarry. One of these terraced sites generated c 80,000tonne of spoil. Dr Andrew Bell a local geologist identified the site as resulting from Borrowdale volcanics carried to the area via glacial operation. The author has excavated the gatehouse tower of the adjacent fortlet controlling the operation. A recent chance excavation by JCB when extending Sockbridge Mill House exposed the foundations of a complete granary compound, complete with a huge rubble drain

and a huge black line of carbon along the site indicating the Roman scorched earth policy when they finally left the area.. Fortunately I was present and able to photograph the site for the owner, and posterity. At this point I must refer to the late Dr Martin Allan's pioneering work on Roman Roads in North Cumbria. Martin Allan was responsible for locating the route of the 38mile long Roman Road from Brougham to Moresby (5mile from Workington). This road ran from Brougham to Lowther Bridge, then angled by Mayburgh Henge to Yanwath Hall, crossing the River Eamont by a bridge, then to by what is now a petrol station and underground shops, called Rhyged, situated at Slapestones roundabout, then flanking the A66 to Keswick and west. (The Roman Route Across the Northern Lake District. Martin Allan). Martin based in Scotland. once commented to me that it was doubtful if he would get any acknowledgement in "this world" for his pioneering work, and would probably have to wait until he got to heaven. Sadly he was correct, the Lake District National Park authorities have ignored his major contributions to our knowledge of Roman Cumbria. Dr Allan and Dr Richardson were also responsible for the surveys of the route of the Roman Road from Ambleside to the A66, via the Kirkstone Pass and Matterdale to the A66. It was following their survey and suggestion that from Aira Force a Roman road continued along Ullswater northwards, that I surveyed the route and traced it to Soulby (By Pooley Bridge) and via Dalemmain to the A66. I also located a further East-West Roman road which ran from Brother's Water, via Scandale Pass to Ambleside.

Tirril, was connected to the River Eamont, by a minor road though Sockbridge Roman town, over a bridge whose piers up to 2010 were visible immediately down stream of the footbridge (rebuilt in (2011)). This road linked into Dr Martin Allan's Brougham to Slapestones (A66) Road near Redhills.

HIGH STREET FROM TIRRIL SOUTHWARDS to LOWTHER. ROUTE FIVE

From Tirril Village Hall, A double carriageway ran; Southwards via Old Askham Roman town to Lowther Roman town, Governor's residence and ore exploitation site.. A minor road ran Southwesterly via Roe

Head and what is called the Pipe Track to Howtown, parallel to and above the shores of Ullswater, linking both to Martindale and via Fusedale's superb Roman Road back up to High Street, south of Loadpot.

HIGH STREET NORTH EAST FROM TIRRIL via YANWATH HALL. ROUTE SIX..

From Tirril the first Ordnance Survey maps c 1845 showed the Roman road from Tirril Village Hall, as firstly running eastwards flanking the modern road towards Eamont Bridge. Then at the junction of Bobs Lonning and the Tirril Road, the Roman road arced northwards to Yanwath Hall. Adjacent and to the west of Yanwath Hall, the first road agger heads south to Lowther, the next depression is a canal, then the two roads of High Street's North Eastern route.

The River Eamont was bridged twice at Yanwath Hall, at one point even the river bed has been paved to prevent undercutting of the piers. The man formed island and adjacent harbour on the north side is part of the river navigational system. High Street's two roads still 5m wide each, ran northwards, crossing from Redhills, with its fort and small iron ore exploitation site (hence the name Redhills) across the A66 to the east of the Little Chef, then crossing the access road to the golf driving range. At NY 50323-29158, (South of the animal treatment plant), the road runs west of the road with an adjacent signal tower foundation, on the eastern side of the roads is a 6acre Roman standard ridge fort. A footpath crosses both sites. High Street's double carriageway cross the Penrith, Greystoke Road adjacent to the Greystoke Pillar, then via the ridge in the centre of Newton Reigny. The church is based on a small Roman fortlet. The double roads bridged the River Petteril, east of the Sun Hotel, passing to the west of Hutton John to Unthank, then linking in to the Roman road which connected Wigton to Stoneybeck Fort (via Junct 41 M6 route) and the Penrith to Carlisle Roman Road (now A6 route).

HIGH STREET FROM TIRRIL NORTH EAST & EAST. ROUTES SEVEN and EIGHT.

From Tirril Village Hall. A double carriage road ran Eastwards, via Glendowlin to Lowther Bridge (A6), (Penrith and Brougham). The 0.5m high x 19m wide agger carrying two 5m wide roads, is visible for the

first 100m, of the eastwards section of the footpath signed Askham from Tirril. On this footpath, some 200m east of Tirril Hall, and 80m south of the visible agger (adjacent to the footpath to the Tirril - Yanwath Road), are the foundations of a 40m x 30m granary compound, containing the foundations of three, 30m x 9m granaries. Two of the compound's walls remain, each 1.0m wide and 0.75m high, one of the most striking of all local Roman remains. The granary was supplied by canal from the River Eamont.

Presumably the purpose of the granary was provisioning troop units on the move. Between the agger and the granary, located by magnetic anomaly, lies the foundations and crypt of a double walled Romano Celtic temple, of square construction, the outer walls are 15m long, complete with an aqueduct fed immersion bath, the discharge fed the adjacent toilet block. Excavated from an adjacent garden was a broken niche carving c170mm x 100mm x 30mm thick. This appeared to have originally held a carving of a loved one's face, maybe even the Emperor, presumably it had been inserted into a niche in the temple. Hopefully, when Penrith's museum future is determined it will form part of a Roman display.

This easterly road from Tirril Hall was joined by a 10m wide road running south from Yanwath Hall near the south end of Bobs Lonnen at its junction with the modern road from Yanwath village to Askham, a Roman shortcut.. This Easterly double carriageway also accessed and serviced Glendowlin, the site of remarkable 15ha (36acre) Roman iron ore exploitation operation, with two forts, two workers compounds, granary compounds and smelters. The 100m long smelter ramp can be seen from the Yanwath-Askham road, the severe road dip marks the site of the canal, this linked ultimately to the River Eamont. The 5m twin roads from Tirril split at Glendowlin, into two further double carriageways, Routes 7 & 8.

GLENDOWLIN TO BEACON EDGE via SOUTHWAIT GREEN. ROUTE SEVEN

From Glendowlin this double carriageway ran North Easterly, East of the railway, in the field opposite the Yanwath Gate pub, an agger is visible heading southwards, this linked into Route Seven.) Route Seven then ran northerly to the River Eamont crossing at Southwaite Green, the stonework of the bridge is still in mid river position, upstream from the M6 bridge. This road also served the c 6ha (14.5acre) fort alongside the River Eamont. The modern road from Eamont Bridge to Yanwath has to bend around the end this fort's huge ramparts. The section of Route Seven from Southwaite Green, Skirsgill to Penrith was destroyed when the M6 and Junction 40 was constructed. The route was located crossing in the area by Penrith Cricket Club site to link in to the Roman road (A6 route ex Eamont Bridge), then via Old London Road area to Beacon Edge where it linked to the road to Carlisle.

Around Penrith's Beacon Edge cemetery area, was a multi junction of roads, another Spaghetti Junction. From this point the major road ran North to Carlisle.

One ran North Easterly to Lazonby

From the Beacon Road, by Roundthorn Hotel, a road ran Eastwards to Langwathby and bridged the River Eden, then ran to Melmerby a walled settlement, its economy based on ore exploitation. The road then ran Eastwards over Hartsop, servicing several ore exploitation sites and continued eastwards.

One road ran Southwards via the Penrith Rugby ground to the R.Eamont, crossed Westmorland Holme, to the R.Lowther and Lowther Bridge and to the North- South Roman Road (A6route) and linked Westwards to Tirril etc. (Route Eight).

One road Southwards to Frenchfield harbour, and Brougham then split to Stainmore (A66), and Southwards via Orton Fell.

One road ran Southwesterly via the bottom of Carleton Hill to Sceugh Farm, through the fortress and Easterly to link to the Stainmore Road.

One road ran South Westerly to Eamont Bridge and the A6 Route south to Shap etc. This split near London Road, Penrith and the Westerly leg ran via Penrith Cricket Club, to Southwaite Mill, Tirril (Route Seven).

At Beacon Edge a small fort and harbour NY5335-2975 An adjacent walled annexe (a motel) contained granaries and barracks for 480men (cohort) to house troops on the march. This site was supplied via a canal which linked in Voreda Fort (ore exploitation) River Petteril and the huge Carleton Fortress adjacent to the River Eamont.

GLENDOWLIN. EAST TO LOWTHER BRIDGE. ROUTE EIGHT

From Glendowlin Route Eight ran Easterly to the Lowther Bridge, another large road junction, and linked into the Roman A6 North-South road which bridged at Eamont Bridge. Mayburgh Henge at one time formed a Roman quick fix fort. Two forts, Arthur's Round Table and the larger one above it, at some period guarded this junction. There is actually a sunken Roman 10m x 3m craft in the eastern harbour of the fort (Round Table). In 927AD, the Saxon Chronicle recorded that King Athelstan met his Northern Kings at Eamont, a great Roman Road junction. (Michael Woods "In Search of the Dark Ages". Pg 134). In the 18th cent the foundations of a Roman gyrus, a cavalry training ring where still visible opposite Lowther Bridge. In the adjacent field, Penrith Show Ground are the ramparts and foundations of two forts, the remains of the toilets are still visible in the river bank, but only from the river. I waded down the river in high boots at low water. Many users of the car park opposite the show ground will be aware of it's undulating surface. This site was the harbour for an adjacent trapezium shaped turreted praetorium, the residence of a Roman governor, the site was rebuilt to form Brougham Hall. One Roman gateway remains.

ROUTE EIGHT then split east of Lowther Bridge. One leg bridged the River Lowther, crossed Westmorland Holme, bridging the River Eamont, stonework of the two bridges is still visible, and then via Penrith Rugby Club ground, linked into the Roman road from the A66 Stainmore and Brougham which ran via Frenchfield Harbour, Hunter Hall to Beacon Edge and to the Carlisle Road north. A fort on Westmorland Holme controlled the bridges and also the two adjacent harbours. The sandstone walls of one of these harbours, in echelon to the River Lowther are still visible. From this sandstone harbour, a canal crossed Westmorland Holme and linked into the two Frenchfield harbours, one was in the Swimming Pool field, the other is now the Sports Field..

One leg of Route Eight continued on to the Brougham area, another multi road junction, from this junction. One road ran north to Beacon Edge via Frenchfield Harbour.

One ran southwards to Orton, High Borow Bridge etc and southwards

One ran eastwards to Stainmore.(A66 Pennine Route)

One ran into the Carleton Hall – Honeypot Fortress, until recently this agger could be seen at Sceugh Farm NY 5415-300 alongside a now infilled Roman Harbour. Sceugh Farm was the site of the armoury , complete with smelters, for Penrith's fortress, it even has it's own supply canal direct to the River Eamont still marked on the OS map, to service the site. Northwards, the road from Sceugh cut across the bottom of Carleton Hill on it's way to Beacon Edge.

At Brougham there is a site of a large Roman vicus (village) possibly a town, mainly destroyed by the A66 road widening. This very large civilian site serviced the 250ha (600 acre) Roman fortress which ran from Carleton Hall Farm to Honey Pot Farm and possibly the first Brougham fort, 5.8ha (14 acres) whose foundations are immediately west of Brougham Castle. This fort had single barracks which prove it's early construction, the castle is built onto the first Roman fort's granaries. The River Lowther was diverted by the Romans northwards to enable the river bed to be used as a harbour for the first Brougham Fort. The 1.6ha (4acre) fort now called Brougham fort, was constructed in the fourth century, it's double barracks (living rooms and bedrooms) confirm it as a late construction fort.

ROMAN LINEAR FORTIFICATIONS. THE ANGELUS LINE and THE PETTERILL LINE.

Whilst this paper is designed to record the routes of High Street and it's offshoots, my surveys have also located two previously unsuspected Roman linear defences in the area. I have included a basic explanation of the routes of these defences because the various legs of High Street pass through gatehouses in these linear defences and the surveyor encountering them for the first time may be somewhat puzzled. (As I was when I first saw them).

THE PETTERIL LINE. HADRIAN'S WALL, SOLWAY to SOUTH CUMBRIA.

This linear defence 45km (30mile) was mainly built as parallel rammed earth dykes set on an overlapping stone base, (an identifier) and provided with intermediate forts, ie Wreay and Voreda (Plumpton). The

linear defence ran southwards from Bousteads, (Solway) a non recorded Roman Fort on Hadrian's Wall. The road arced around Carlisle to the west, thus forming Carlisle's outer depth defences, then via Dalston's "Bishop's Dykes" eastwards to Junction 42 M6, then ran southwards flanking the River Petteril on the East bank, via Voreda, (an ore exploitation site) to Plumpton (originally called Plumpton Wall) to Penrith. Then southwards, Clifton Church was built on the gatehouse through the line, then following the A6 south via Thrimby and Shap etc. This frontier divided Cumbria from England as Offa's Dyke (Really Severus's Dyke) divided Wales from England.

.THE ANGELUS LINE. PENRITH to ULLSWATER CITY and RETURN to The RIVER EDEN.

This 30km (c18mile) long horseshoe shaped line consisting of a parallel mixture of stone wall and rammed earth dykes both set on an overlapping stone base, (an identifier) enclosed c 5,000ha (12,000acres) and appeared to be designed to defend the many ore exploitation sites it enclosed. It ran from Penrith westward through Yanwath flanking the Roman Town of Sockbridge, then to Barton, the church is built on one of the gatehouses (fortlets) to near Pooley Bridge connecting into the City of Ullswater's walls. The frontier then returns via High Winder, flanked the Roman Town of Old Askham, Yanwath Woodhouse, crossed the R.Lowther, just upstream from the railway bridge. Then via Clifton, Clifton Dykes, (Hence their name) flanked the Roman Town of Old Clifton, and swings around west of Cliburn, one of the twin dykes was used for the now disused railway line, then locked into the River Eden, downstream from Temple Sowerby. There are also several intermediate walls providing depth defences. The legs of High Streets double carriageways pass through The Angelus Line at gated ways. Many of these gateways now remain are a distinct mound some 2metres high and 30m –40m square. For further details See T.C.Bell's "Penrith's Roman Heritage" available in Penrith Library.

SUMMARY.

ROMAN HIGH STREET was not just a quaint road system of little value, as it has been depicted by those who it appears had not bothered to walk it's full length and investigate it's many side roads and ore exploitation sites, nor had surveyed the multi double carriage links at the northern end by Tirril,, Sockbridge, Barton and Yanwath.etc..

High Street was designed as a critical part of a vast, integrated transport system, comprising, roads, canals, harbours, defensive forts, accommodation and supply warehouses, (granaries) for the area. The integrated transport system included direct road links to the Roman town of Windermere, to the Roman City of Ullswater, to the Roman Town of Penrith, to Cumbria's major ore exploitation sites and to Cumbria's major west coast deep sea harbours. The canalized major eastern rivers where connected via Carlisle and two canal routes and the Solway, to the major deep sea harbour at Skinburness c1,600m x 200m, NY1423-57173. The Skinburness harbour walls are still complete, but buried by sand, a smaller harbour existed at Silloth, (now destroyed by the modern harbour), together with a large walled fortification. These west coast deep sea harbours could handle 30m x 6m ships, and transferred their cargoes to the two inland harbours at Carlisle via 10m x 3m vessels, these shallow draft vessels could operate in a canal or river estuary.

High Street's c25mile long elevated roadworks, the equivalent of the present day M6 motorway, consisted of parallel double roads, each c5m wide (kerb to kerb), with flanking ditches.. The section between the two roads was unpaved and designed for the use of cavalry. Paralleling this system a "Transportation Highway" was constructed, this was designed to carry heavy goods, mining equipment, food supplies, etc. This "Highway" was formed by canalizing all the rivers and becks adjacent to the route of "High Street". To service the road users, specially designed accommodation and food stores were provided, such sites have been located at the north end at Newbiggin (Stainton), Fell Lane and Beacon Edge, (Penrith), Tirril, Thorpe and Soulby (by Ullswater) together with fortlets from Dubbs Road , which we take as the southern end High Street, and others at Yoke, Kidsty Pike, Mardale, Ill Bell, Rigginsdale, High Raise and Loadpot. Surprisingly nobody appears to have remarked on the remaining stone heaps marking these fort sites.

HIGH STREET. The factors that influenced the immense expenditure entailed in constructing an integrated transportation system in Cumbria's hostile terrain appear to be.

Firstly; To connect South Lakeland to Penrith, the hub of all northern routes and the centre of the northern government and create a transportation network by providing a high level, direct, north- south major road system, virtually ambush free route for both troops and labour battalions, with links to the numerous east west, mountain pass routes, numerable ore exploitation sites and most importantly with high quality road links to the frontiers. This road network enabled troops to be rushed to any part of the country to deal with any disturbance or invasion etc.

Secondly, Cumbria was one of Britain's and hence the Roman's richest sources of copper, iron, and lead with its by product silver, essential for use as currency. Therefore it was critical that the sites being exploited could be accessed both by road and water. It is no chance that High Street and its connections served every military site, including Penrith's 600acre (250ha) Fortress, all the industrial sites and the population centres, including the 800acre (330ha) City of Ullswater and the Roman towns of Windermere and Galava's vicus (Ambleside), Keswick, Penrith, Sockbridge, Brougham, Clifton Dykes and Lowther. The importance and permanence of these sites can be gauged by their infrastructure. In Ullswater City the sites of five forums, two theatres and an amphitheatre have been located. I hired the same company who survey for Time Team to carry out a full geophysics survey over this amphitheatre. Penrith's theatre and amphitheatre sites have also been located. The amphitheatre site NY5140-2906, now an amenity area, is overlooked by the ramparts of the governor's residence now The Crescent old folks home. As yet the amenity area has not been built over, sadly as the local council appears to prefer concrete to grass, I have no doubt it will soon be built over. Lowther, an ore exploitation site with a small town, the ore exploitation operator's housing, had two riverside theatres and at the castle site a governor's residence. South of Lowther Castle is Britain's only known 500m x 50m wide long chariot race track, the size of Rome's first Colosseum. The track site was firstly excavated for iron ore along the hill side contour, then ten rows of seats were inserted in the eastern face of the excavation and special spectators buildings constructed on the top of the eastern face and a formal gateway and central spine constructed. The track site can be seen in a walk around the gardens, now in the process of being restored to their former glory. It is not generally appreciated that Penrith had a walled Fortress between Carleton Hall Farm and Honey Pot Farm. Drumlanrig Castle, Dumfriesshire has a fortress of the same design, which I also located, but at 125ha (300acres) was half the size. Carleton Fortress covered over 250ha (600acres) and contained eighteen forts and fortlets, external granaries and harbours interlinked by road and canal. The internal forts include a central command fort, (At rear of Hunter Hall and visible from the car park at the bottom of Carleton Hill), four 17acre forts and the 12 acre Carleton Hall Farm fort, this contains the foundations of 66 barrack blocks, capable of housing a Legion. The ramparts of this fort tower over Frenchfield sports ground. Immediately to the west of Brougham Castle, are the foundations of a 12acre fort, again holding 66 barracks blocks, Brougham castle was built on its granary compound. The small fort south of the castle is a 4th cent ie "modern" Roman fort. Possibly one day, excavation will confirm if Carleton Hall Farm's 12acre fort provided the home in the North West for the 20th Legion, around 79AD-84AD, as suggested by Dr Graham Webster. In his book "The Roman Imperial Army".

Finally. It was known that in Scotland and Ireland, further mineral wealth, including gold, existed. The author's surveys have located Roman ore exploitation operations; On the Isle of Mull, Isle of Arran, Isle of Skye, Isle of Lewis, Sutherland. Argyll. In Glen Moriston, north of Loch Ness. Around the Spey.. Immense sites on the Moray Firth (Cullen and Portsoy). Even on Inishmore, Isle of Aran, Galway Bay, Ireland. But, prior to exploitation of all these sites, Rome had to control them. Policing required the availability of large numbers of back up troops (hence such fortresses as Penrith's.) with a fast road systems to the exploited areas and also to the deep sea port, Skinburness to enable forces to be sent by sea. Penrith had large granaries to store foodstuffs and also a manufacturing base for tools, weapons and craft. The boat building was carried out on Penrith's Swimming Pool Field, some vessels are still in place. Sceugh Farm was the armoury site, complete with still visible smelters. Penrith as the gateway to the North, was the vital hub, from here the Roman Governors and their army controlled both Cumbria and the North..

T.C.Bell C.Eng. MIMarEST.

Tirril. Penrith. January 2008, updated October 2011

Acknowledgements.

To Dr Paul Hindle The only author who appears to have actually walked High Street and appreciated the Yoke route etc.

To the many landowners, agents and farmers, who have both provided access and assistance over the years.

To Dr A. Bell, Geologist, for his guidance and tolerance of an engineer (marine variety).

Notes and References.

Dr T.M.Allan. The Roman Route Across the Northern Lake District.

Georgius Agricola, De Re Metallica. A German Miner's Handbook.

T.C.Bell Penrith's Roman Heritage.

T.C.Bell Northern Scotland's Roman Heritage.

T.C.Bell Arran's Roman Heritage.

T.C.Bell Stone Circles, Avenues, Temples and Souterains.

(Summaries of the latest surveys on Moor Divock),

British Geological Survey. Glossary of the minerals of the Lake District and adjoining rivers.

.R.G.Collingwood. Notes on High Street.

Dr Paul Hindle Ancient Roads and Byeways of Cumbria..

G.A.L.Johnson Geology of Hadrian's Wall

The Rev Ragg. Baron of Kendal. Transfer of Hunting Rights. Cumberland & Westmorland Antiquarian & Archaeological Society. Year Book 1898

Drs. A Richardson & T.M.Allan. The Roman Road over the Kirkstone Pass. C&WA& Society

Dr Graham Webster. The Roman Imperial Army.

Note;

All survey information regarding Cumbrian Forts, Governor's residences, towns, mineral ore exploitation sites, roads, harbours, canals and river navigation, including the Scottish, Irish and Drumlanrig Fortress surveys are by T.C.Bell, unless stated otherwise.

Thomas Cedric Bell



Thomas Cedric Bell (who referred to himself usually as “Cedric Bell” and occasionally as “T.C. Bell”) was born on 21 April, 1931, and died on 10 March, 2025, at the age of 93. He lived in Sockbridge, Penrith, UK, but has family around the world, including in New Zealand. He worked as a Chartered Engineer, with eight years at sea from Junior to Second Engineer; he spent seven and a half years as a surveyor, around eighteen years as a Works Engineer, two and a half years with Delta Metal, Birmingham, that employed c. 1,000 employees, and 26 years with Castrol Oil, which employed c. 450 and was the largest Lube Oil Factory in Europe, where he worked around fifteen years as Works Engineer and eleven years as Production Manager and Deputy Works Manager.

Cedric Bell’s hobby was Roman, Chinese, Norse, UK, Irish and New Zealand history. Exploring rammed earth dykes, stone gateways, river navigation, etc., he spent c. 26 years working on Roman sites. He actually lived in an ex-Roman town that is still surrounded by visible Roman sites. He has written two long survey reports on Roman Penrith and its region (“Penrith's Roman Heritage”:

<https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.glenriddingcybercafe.co.uk%2Fdocs%2FTCBell%2FPENRITH%2520ROMAN%2520TOWN%2520EVIDENCE..doc&wdOrigin=BROWSELINK> and “The Route, the Guarding Forts & the Roman Towns and Cities and major highways it linked from Windermere to Ullswater & Penrith”:

<https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.glenriddingcybercafe.co.uk%2Fdocs%2FTCBell%2FHIGH%2520STREET%2520ROMAN%2520ROAD.doc&wdOrigin=BROWSELINK>), and another on Roman Scotland (“Scotland's Roman Heritage”:

<https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.glenriddingcybercafe.co.uk%2Fdocs%2FTCBell%2FPORTSOY%2520-%2520NORTH%2520SCOTLAND%2560S%2520ROMAN%2520HERITAGE..doc&wdOrigin=BROWSELINK>); he has also spent six years training with the U. K. expert on Roman river navigation; he has given

c. 150 site survey reports to U. K. museums and libraries. In addition, he has written a survey report comparing Roman with Chinese engineering and another on Roman and Chinese river and canal engineering. He also researched the ancient Chinese canal in Nicaragua, which linked the Caribbean Sea to the Pacific Ocean (pre-Panama Canal). The actual survey on site was carried out by Col. John Blashford-Snell, Britain’s best-known explorer. Cedric Bell’s surveying experience extends to one survey on Cape Breton Island in Canada, five surveys in New Zealand, one in Ireland, and hundreds in Scotland and the Isles, and Northern England over a 30-year period. This includes using magnetic anomaly survey (MAS) and hiring expert geophysics surveyors.

Unfortunately, Cedric Bell was largely ignored by the academia and governments he reached out to. In fact, his notes mentioned which of the sites he found ended up being deliberately destroyed. Cedric Bell carried out these surveys at his own expense for no monetary gain. He did not seek fame either. His dedication came from the love of finding the truth. He was generous to people who shared the same faith with him by patiently explaining his findings and mailing his survey reports to them. Cedric Bell's discoveries and spirit will live forever in our minds and hearts through his memorable words:

We can but leave our stepping stones for others to follow.

It is hoped that publishing these surveys will attract people with an open mind to view information not publicly available before. It is hoped that this information will not be used to deliberately destroy other sites and instead will further Cedric Bell's theories, whether to confirm or refute findings with more modern methodologies.

Cedric Bell's ORCID ID, for contacting researchers working in this field (and who knew him), is <https://orcid.org/0009-0002-1189-3433> . We will happily answer your enquiries on Cedric Bell's behalf. Cedric Bell and his estate own full copyright to all his works.



Bell's ORCID ID