

Transport in the 1960s





Lynn Armstrong

Lyn Armstrong has contributed this photograph of fire engines responding to a call-out to a Hall of Residence at her University.

Note the old-fashioned look of the fire appliances. Which cars of the era can you recognise? VW Beetle, Mini, Ford Anglia, Austin Healey Sprite (?)

Richard Carey writes

One of my earliest memories was being taken by my Mum & Dad to see the last Sheffield tram (old trams) at Beauchief on October 8 1960. I can remember my Dad's hands on my shoulder holding me whilst I put a penny on the track. This is one of the only three memories I have of my Dad who



British Trams On-line

died the following April. Whenever I go to the Tramway Museum at Crich and see that tram It always bring back that memory. It's probably the reasons why I have loved trams & transport ever since.

Nicky Husbands remembers travel in the Home Counties

Living in London and then suburban Hertfordshire from 1958 until 1966, we had no need of a car. We walked to school, the shops and the doctors, although of course, the doctor would visit you at home if you were ill in bed. Shops delivered your purchases if necessary – for example, we shopped at an early supermarket in our Hertfordshire town and it delivered our goods the mile or so to our house. We bought bread from a ‘Weetabix’ van which called regularly and also paraffin for our heaters (it was poured into our metal paraffin can from a tap at the back of the van), as well as having milk deliveries – on a sledge in the snowy winter of 1962/3.

We rarely went anywhere else, using a bus to go to Watford occasionally for our shoes or to see Mary Poppins at the cinema; my dad used the bus and then underground to get to his work in London.

When we went on holiday (to various places on the South coast) we travelled by train, having used a taxi to get to the station. I was terrified by the noise of steam trains as they pulled into the platform and let off steam with a whoosh and a whistle. My parents did not pack lightly and so we always had lots of bags. With two small children and so many bags, it was difficult to make sure we got off the train in time at our destination so my parents developed a system of dad passing bags out of the carriage window and mum catching them from the platform. Once, she failed to do so and we had to get help as a bag had gone onto the tracks.

I remember the upholstery on trains which was very scratchy on bare legs as the fabric had a long pile. Each carriage was made up of small compartments and had a net rack for luggage overhead. You walked along a corridor to get between compartments and to get on or off the train.

Stephanie Dixon recalls her time working at Lloyds Register of Shipping in London

Lloyd's Register of Shipping (as it was then) in Fenchurch Street, London is the company where all the records for every ship in the world are kept.



The Victorian Web

I was fortunate to have 10 months working for this very interesting company, unfortunately I did not really appreciate this experience and just saw it as a means of earning some money for 10 months, from leaving college to starting my career as a nurse.

I worked in the statistics department and at the time all the information in the registers was being transferred on to a very early computer system. Our work entailed looking at the details

of each ship and writing out the details in code ready for transfer. This included where it was built, registered, weight, height, length, capacity, usage. I can remember finding it rather boring and the degree of accuracy involved was rather tricky for me to properly comprehend. However, I managed to stick it out for the 10 months and I don't think anyone was surprised when I left. I can still visualize the office and work colleagues and overall it was a happy experience but did prove to me that a 9- 5 job in the city was not going to be for me. I travelled every day on the London underground and just could not imagine carrying on doing that every day.

I have memories of the fashion at the time and can remember wearing long tartaned patterned socks, with my comparatively short skirt. Why should this stay in my mind?

Lynn Armstrong recalls a flight to *Le Touquet*

Plane from Lydd to Le Touquet when my best friend's family invited me on holiday with them circa 1961. It held 3 cars underneath and only had about 12 passenger seats.

The stewardess dispensed duty free from a suitcase on her hands and knees in the aisle – probably not what she had in mind when she applied for what was at that time seen as a glamorous career.



Also, aircraft spotted from a train window on her way for a university interview in 1964



Lynn Armstrong

Space Travel

No-one has claimed a direct involvement in the development of the technology or participation in the space race. However, contact was made with both of the main protagonists.

Brian Clark writes

I was eight when Yuri Gagarin became the first man in space. During the next few years, I developed a real interest in both the American and Russian space projects. Roughly when I was eleven, I wrote to NASA enquiring whether it would be possible to become an astronaut. They kindly replied with both a brochure on their programme and a nice letter basically saying 'try again when you're old enough'! I wish I had kept this, but my mother (who was the opposite of a 'hoarder') threw it away. By the time of the first moon landing I was well into my 'hippie' phase and had lost interest in space flight.



Christine Welburn remembers

I attended a local grammar school and sometime during 1964 we had a visit from a small group of Russian teachers to observe lessons. They sat in (very quietly) on my RE lesson. Not religious myself I valued this teacher because he got us to discuss a wide range of topics and wasn't scared or shocked about where we roamed with our comments.



Christine Welburn

At the end of the lesson one of the Russian women thanked us (in excellent English) and handed out little pin badges to those who had contributed to the discussion. I was handed a tiny golden badge containing a photo of Valentina Tereshkova- the first female Soviet cosmonaut who had flown in the Vostok 6 mission in June 1963.

I've still got this little pin badge but still wonder to this day if their only objective was to observe lessons. It was odd that during this

Cold War era a group of Russians visited South London without an ulterior motive. Or was I too immersed in American propaganda to see the truth? I'll never know!

Christine Shepherd recalls

I saw the moon landing on television and held a sample of the moon rock as I was studying Geology Subsidiary at University. It was a fine-grained grey rock which reminded me of the drilling samples left lying around when a favourite field near where I lived as a child was subject to Open-cast mining.

A new public house on Quarry Hill Road, Wath-on-Dearne was named The Telstar after the satellite, so it must have been regarded as the important achievement which it was in communication.

Janet Taylor describes a memorable evening in 1965

In 1963 I joined the Sheffield Lambretta Club, the Cutlers, and I met my Husband, Howard, there the following year. All the Lambretta scooters had a banner across the front proclaiming that we were members of the Cutlers.



Lambretta Club

One winter evening on 1965 we all decided to go to the Silver Blades ice rink on London Road. We left our scooters on the road outside and had an enjoyable time mostly, on my part, falling over on the ice as I remember.

When we came out of the Silver Blades, Howard and I could not find our scooter; all the other members helped to look for it.

When we found our Cutlers banner discarded on the grass we realised that it had been stolen. Two friends gave us a lift on their scooters to the police station to report the theft and we were interviewed by a friendly policeman who took down all the details. He asked for the insurance information but I told him that the papers were at my parents' house in Coal Aston. He very kindly gave us a lift there where supplied him with the details.

Next morning, we received a telephone call from the police to say that the scooter had been found and we could go to see it in the pound where stolen vehicles were kept. My father gave Howard a lift on his motor-cycle. When they arrived, a policeman showed them our scooter tucked away in a corner, it did not seem to have suffered much damage, apart from a broken steering lock. The policeman shows Howard another scooter which had been smashed up and said that this was how they normally found them when they had been stolen.

Howard took off one of the side panels and took out our waterproof trousers, carried there in case of rain. They realised that when the scooter was stolen. The thieves had managed to start the engine by breaking the lock but it wouldn't go far because the trousers became wrapped round the rear wheel of the scooter. They dumped it at the side of the road where it was found. Howard rode the scooter back to Coal Aston and we realised how lucky we had been; it could have been a lot worse!

We married the following year, 1966, and went away on honeymoon to Bridlington on our faithful Lambretta.

Nicky Husbands remembers family cars from the 60s

I was born in Kilburn, London, and moved to Bushey Heath, Hertfordshire when I was three in 1961. My parents had never owned a car and had tales of transporting quite large items of furniture and other items, bought from antique shops, on the bus.



While in Bushey Heath we were visited by friends and relatives who did own cars. I was usually sick in them if we went out for the day. My grandad had an Austin A40 and would drive from Poole to see us; he once caught a huge turbot in his fishing boat and brought it to us in his car boot so that we could share it. I think mum cooked it in a zinc bath.

When we went on holiday we took the train but once we started travelling to North Wales for holidays, further than the south coast where we had been going, my father hired a car for the fortnight or three weeks of our trip. He always hired an estate car, a Cortina once I recall.

Dad had learned to drive a lorry in the army during the war. He had never taken a civilian test nor driven a car. He double de-clutched for most of his driving life, as taught in the army.

There were no seat belts in those days and my brother and I used to while away the boredom as the journey progressed by sitting next to each other in the middle of the back seat and lurching to one side in unison as we cornered, with sound effects. Inevitably, dad would eventually stop the car and tell us off.

In preparation for the journey, dad would ask the AA for a route. This would be prepared and posted to us, a long thin set of pages stapled at the top with detailed instructions for every road and junction we would

encounter from A to B. Mum would work her way through this as dad drove.

Many petrol stations had offers where customers could collect sets of goods – my parents in law used dessert glasses for years which had been a petrol station offer; we collected ‘coins’ linked to a sporting event (the World Cup or Olympics?) and also some small white plastic busts of British Kings and Queens which I still have. Petrol came as 2-, 3- or 4-star; all leaded of course.

When we moved to rural Oxfordshire in 1966 my dad bought a Morris Traveller, ‘YGO 19’ – a grey estate car with external wooden trim. Moss



grew along the felt trim to the sliding rear windows; there was woodworm in the wood. Instead of indicator lights it had ‘flickers’ – orange arrows which flicked out of the central pillar on the left or right to show which way you were turning. Our left-hand flicker stopped working and a passenger could bang the pillar from inside to make it flick out but had to retract it by reaching out of the window.

Hand signals were also encouraged – right arm straight out if turning right; arm out and circling if turning left; arm out and moving up and down if stopping.



In 1967 it failed its MOT and we bought a new one, green this time without woodworm and with ‘proper’ indicators. We sold the grey car to a Borstal for £1 so that the lads could learn mechanics.

More Family Cars of the 60s



Ford Popular

West End Classics



Ford Consul

Lynn Armstrong



Renault Dauphine

Lynn Armstrong



Morris 10

Lynn Armstrong



Ford Anglia

Stephanie Dixon



Hillman Imp

Telegraph.co.uk

KEEPING THE NOISE DOWN

With the first ten years of his working life spent at Crewe, Tony Spillane became involved in many fascinating aspects of Rolls-Royce engineering. In the second instalment of his story, he details how he set about reducing noise levels within the crucial new Silver Spirit

WORDS: TONY SPILLANE PICS: TONY SPILLANE / ROLLS-ROYCE MOTOR CARS

Once I had completed my graduate apprenticeship, I was appointed development engineer working on NVH (noise, vibration and harshness), one of my tasks being to reduce the level of road noise – sometimes described as ‘road rumble’. At that time, road noise was typified by driving at around 40mph on a smooth surface covered in tar and chippings; as other sources of noise (engine, wind and so on) were quite low at this speed, road noise was very dominant, especially in the rear of the car.

We used a specific road, speed and location for our tests to ensure repeatability, and employed interior

microphones, noise meters, a tape recorder and frequency analyser to obtain noise frequency plots. We knew that the Silver Shadow of the period was ‘less quiet’ than the Jaguar XJ12, the 6.9-litre Mercedes-Benz S-Class and the Chevrolet Caprice Classic – but we didn’t know why.

Previous ‘suck it and see’ experimental changes had proved inconclusive, so I wanted to use a more scientific approach. The first step was to determine how much of the noise was airborne transmission and how much was due to structure. On the test road, I also recorded the noise inside the front and rear wheel arches, as well as the vibration levels at each of the subframe and suspension connection

points to the bodyshell. The idea was to then recreate each of the noise and vibration levels to the ‘shell of a static vehicle in a quiet noise chamber, to see which were the dominant noise paths.

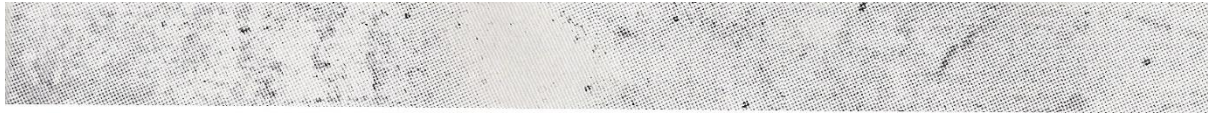
The problem was, Rolls Royce didn’t have a quiet noise chamber. I knew the factory site fairly well from my apprenticeship days, and knew that there was a disused air raid shelter that might do. It was made out of really thick bomb-proof reinforced concrete, and when inside with the door shut it was certainly quiet. Although it was just about large enough to get a whole car in, plus the necessary test equipment, it only had a pedestrian entry door and so I gained approval to have a vehicle-sized door fitted at the end of the bunker. Apparently, however, when the job was put out to tender, the contractor didn’t properly check the structure of the wall, resulting in what should have been a three-day job taking three weeks.

APPLIANCE OF SCIENCE

The assigned prototype Silver Spirit test vehicle (SZ3) was temporarily stripped of its powertrain, front and rear suspension and subframes. This left essentially a fully trimmed bodyshell that was suspended on very soft inflatable rubber air bags, giving access to the airborne and structural connection points to recreate each noise path in turn. A loud speaker recreated the airborne noise in each wheelarch, and an electromagnetic



Tony was a development engineer working on NVH (noise, vibration and harshness) issues for the new Silver Spirit



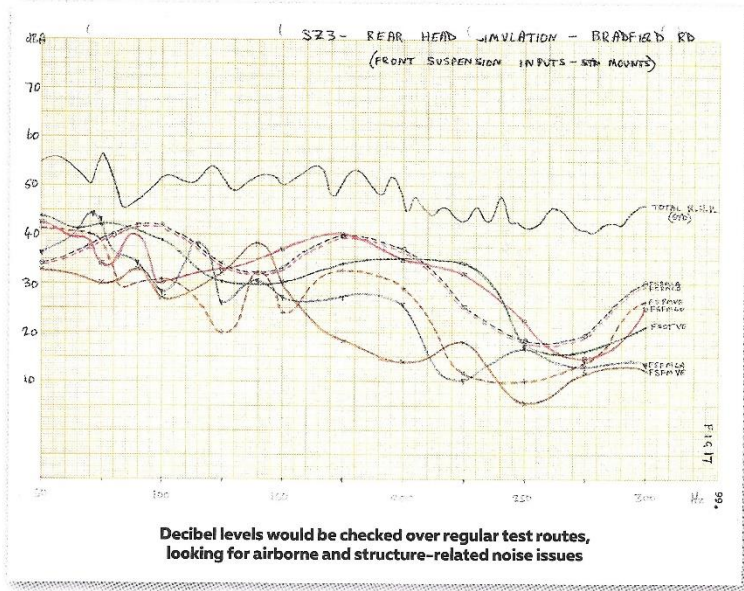
shaker recreated each structure-borne vibration, all done one at a time.

The results were very illuminating. The airborne noise was some 20-30dB lower than the structure-borne noise, which meant that the structural noise paths were dominant. Of those, it was possible to see which connection points dominated and in which direction (vertical, lateral or longitudinal), which gave great insight into how to effect an improvement.

Despite it being most apparent in the rear of the car, it was the front subframe mounts that transmitted the majority of the noise - particularly the front subframe front mount in the longitudinal direction, and the front subframe rear mount in both longitudinal and lateral directions. Using existing-type subframe mounts but with a much softer rubber compound gave a very significant improvement in road noise.

A more extreme change was made on an old experimental car, SBH 6879. As well as a totally different engine mount system, it had a radically different front subframe featuring cylindrical subframe mounts orientated longitudinally (instead of vertically, as on standard cars). This gave a further improvement but required significant changes to the vehicle.

Attention was then turned to engine noise, and a similar approach showed that the front engine mount in the



“The prototype Silver Spirit was temporarily stripped of its powertrain, front and rear suspension and subframes”

lateral direction was the guilty party. A simple softening of the existing mount was ineffective for two reasons. First, it was already quite soft, which meant

there wasn't much change available; and second, the consequent softening off in other directions brought extra issues, such as the fan fouling its shroud under certain conditions.

As the front mount connects to a bolt-on crossmember within the front subframe, it was relatively easy to design a new configuration of mount. A cylindrical rubber mount, with its axis laterally across the car, gave the required rates in the three directions. Also included was a tie bar system, to steady the engine laterally at the fan level. These changes (with improvements to the air cleaner system and others) gave useful reductions in engine noise and improved the perceptions of engine smoothness.

Although the car had become noticeably quieter, the ride had deteriorated due to a significant low-frequency 'shake'. (Standard cars had a slight tendency to shake, but it was now at a totally unacceptable level.) Again, trial and error changes in the past had not got to the root cause of this shake, and so a new scientific approach was required - something that I'll explain in the next issue. ■

Design Records

Part No.	Part Name	Material	Quantity	Weight	Volume	Cost	Lead Time	Supplier	Notes
100	Engine Mount	Rubber	1	1.5	1.5	1.5	1.5	1.5	1.5
101	Subframe	Steel	1	100	100	100	100	100	100
102	Engine	Cast Iron	1	200	200	200	200	200	200
103	Front Suspension	Steel	1	150	150	150	150	150	150
104	Rear Suspension	Steel	1	150	150	150	150	150	150
105	Subframe	Steel	1	100	100	100	100	100	100
106	Engine	Cast Iron	1	200	200	200	200	200	200
107	Front Suspension	Steel	1	150	150	150	150	150	150
108	Rear Suspension	Steel	1	150	150	150	150	150	150
109	Subframe	Steel	1	100	100	100	100	100	100
110	Engine	Cast Iron	1	200	200	200	200	200	200

Tony's hand-written chart shows how Rolls-Royce noise levels compared with those of the Jaguar XJ12, Mercedes S-Class and Chevrolet Caprice

Sue Beardon's only journey in a "Roller"

In 1967 I was unfortunately attacked on my way back to the university residences at Warwick University. I was quite badly beaten and of course very shaken up. The University phoned my family to come and pick me up. They lived in London and didn't have a car. But my father's older brother, who was quite wealthy, did. And as it happens it was a Rolls Royce! So, the following lunchtime my father and my uncle rolled up in the Roller and I was duly driven home down the M1. With the two men talking about dishing out vengeance to whoever had done this to me. I just curled up on the back seat nursing my wounds and hardly noticed my first, last and only trip in a Rolls Royce.