

Supporting Visual Research document – Confirmative Praxis M7X02024

Autonomous Vehicles & Jaguar GT Projects

MA Transportation Design

By Oakley Burton

Key Code:

- Self-led work
- Jaguar E-Type – Self-led
- Wooden spoon award project
- Autonomous Vehicles (AVs) Project
- Jaguar GT First Concept
- Presenting my Research praxis
- Paul Morrow's Message
- Jaguar GT Final Concept
- Syzygy Degree Show

Date	Event/Journal entry	Reflection (what went well/what could be better) avoid too much description)
21 st September 2022	Jaguar EV F-Type Concept restyling project	Playing on the name of the E-Type as an electric sports car based on the F-Type platform. This little project was left due to the projects that were started at the beginning of the course.
16 th October 2021	Aircraft Research	Made notes from aeronautical books from the library, for the possibility of a dissertation on aerodynamic research backed with sketches.
20 th January 2022	Continuing the Jaguar EV sports car project	After completing the Collaborative Dialogues assignment, the continuation of the Jaguar EV E-Type was continued whilst I was setting up my studio space.
26 th January 2022	Booking a studio space	Before the start of the self-led assignments, the need for booking and organising a studio space took place by visiting Alex Studio space AA205.
5 th February 2022	The book "Beautiful Machines: An Era of Elegant Sports Cars" arrived in the post.	A book that summarised some of the most elegant sports cars in history for self-led research. The desire for an aerodynamic sports car was desired which was at the back of my mind.
6 th February 2022	Wooden Spoon Award Brief – Delivered by Paul Morrow	Assignment targets and wooden spoon blueprint for reference when creating initial sketches of the model. The deadline was the 22nd of February.
7 th February 2022	Created the front, side and rear-view sketches supported by a blueprint diagram	Developed full-scale front, side, and rear-view sketches of the Clay Model statue.
8 th February 2022	Started work on the clay model with Ian Mathews	Printed full-scale blueprints to support the clay model process and add clay onto the wooden spoon structure.

9th February 2022	Finished adding clay to the wooden spoon	This was completed with the use of a paint stripper to heat up the cooled clay on the model to apply more heated clay. Paul Morrow delivered the Autonomous project where the modular triangular concept was envisioned.
10th February 2022	Received my Dust Coat	This helped replace my temporary plastic apron. The clay model resumed working on the Mask Bid of the Fencing mask.
11th February 2022	Carving the neck and sculpting the mask	Ian advised making the neck first, then adding the clay onto the neck to make the bib. Once this was done, Ian demonstrated how to use the slick to sculpt and smoothen the mask into a round shape.
14th February 2022	Smoothering the body structure and adding the arm detail.	Using the slick from the top to the bottom of the Clay Model to car and finish off the body structure.
15th February 2022	The last details	Adding and smoothering the arm of the clay model, polishing off any imperfections, and adding black paint to the mask. After finishing the model, I got a kebab stick for the sword blade.
16th February 2022	The finishing touches	Adding another coat of paint for the mask detail and the kebab stick for the sword blade. Once the paint was dry. Photos of the model were taken, and the model was placed in a safe space with a foam cube on top of the blade.

17th February 2022	Start of Self Led research	Organising my studio space by setting up a University PC and getting my 20" graphics tablet up and running on my laptop as the PC did not have Photoshop.
--------------------------------------	-----------------------------------	---

24th February 2022	Learning to use Alias 360 and making notes on elegant cars	This was a refreshing session to learn how to convert Alias Autodesk files into Alias 360 model files.
25th February 2022	Plasticine experiments	As advised by Ian, plasticine models were created from the influence of mood boards.
28th February 2022	Story Board and Questionnaire	The Autonomous Vehicles (AVs) project started with developing a story for the use of AVs and a questionnaire was developed to gather primary data on the opinions towards AVs. Rolls Royce also visited it was intriguing to learn from one of the most successful students who work as part of Rolls Royce.
3rd March 2022	Paul Morrow Tutorial	Had a meeting with Paul Morrow to discuss the conclusion of the clay model and his approval of the Questionnaire to send to my friends and family to find out their opinions on AVs, which met with his approval.
4th March 2022	Batman Premier	I went to Nottingham for the Batman premier where I was met with a mock-up Tumbler outside the cinema, which brought back my fascination to develop the Jaguar GT.
14th March 2022	Free-form sketch experiments and E-Type design studies	The use of free-from-sketch experiments was explored for the creation of organic forms, along with conducted stech studies of the E-Types form conducted with the use of pen and sketches.
16th March 2022	Wind tunnel and race car research	Organised with Tim Tudor and the staff at IQ, the exploration of racing and aerodynamic research was for the development of the Jaguar GT.
17th March 2022	Meeting with Paul Morrow	This meeting discussed the development of the Jaguar GT with the use of modular diagrams, along with competitor sizes and the use

		of free-form sketches. Which was intrigued by Paul.
21st March 2022	Marker Render experiments	Using a YouTube tutorial on marker renderings was used to explore how to sketch the Jaguar E-Type and render it.
22nd March 2022	Citroen DS study	To further progression of Marker Renderings came from sketching and rendering the Citroen DS.
23rd March 2022	Life Drawing Session	One of my peers introduced me to a life drawing session which took on for Influence of sex appeal for the Jaguar GT.
24th March 2022	Paul Morrows Jaguar XJS	With it being a lovely day, Paul came to our session in his Jaguar and was eager to show me it after our session for inspiration of the Jaguar GT.
29th March 2022	Sketch Development	The Exploration of both the Jaguar GT and the AV projects influenced the development of each other having modular layouts.
26th April 2022	The birth of the Jaguar GT	The Jaguar GT was refined from the initial sketches and was developed from a refined side-view sketch to a refined side-view marker pen rendering. After creating the side view, the front and rear-view perspectives were created.
27th April	Meeting with Paul Morrow	Before the meeting, a side view, tip-top perspective of the Jaguar GT was created for the development sketches. During the meeting. Paul discussed what needed to be ready for the presentation of the Jaguar GT.
2nd May 2022	Swansea Car Show	Attending the Swansea Car Show to learn about the quirks and features of classic cars as well as the automotive community's passion for their wheels. Which could be explored and incorporated into the Jaguar GT.

3 rd May 2022	Jaguar GT Door Opening	Working on finding out how the door will open on the Jaguar GT.
4 th May 2022	Starting the Jaguar GT foam sketch model	Enquiring with Adam Shelton about how to start the foam model, he helped glue two pieces of foam to make a large block to carve. This was also the day I had to pack up and remove my belongings from my work space in Alex.
6 th May 2022	Carving the foam model	After the model was set, the block needed smoothening with a disk sander and cutting out on the band saw to create the roof line. The edges were rounded off with sandpaper.
9 th May 2022	Making the Wheel pods	Making the wheel pods started with carving out the wheel arches to slot in the wheels. The wheel pods were then created and had slits cut into them to slide the wheels up and down the vehicle.
10 th May 2022	Adding the Wheel pods to the car	The following day, the wheel pods had nails glued to the base of them to slot into the main body of the foam model.
11 th May 2022	Finishing off the foam model	Paint was applied to the model, which was bought the following day. To add contrasting details for the DLOs, and the wheel details to the model. The rest of the day was used to collect all my work and include it in a PowerPoint presentation.
12 th May 2022	Preparing the model for the presentation	Once the paint was dry the tape was used to cover the areas of the model that were not painted. Afterwards, preparation was needed for a 20-minute presentation.
13 th May 2022	Presenting my Research Praxis	I arrived 1 hour early and set up my presentation for Paul and Collin Telford to present my work, which was met well

		and had some much-needed advice needed.
26 th May 2022	Rough Ideation	Further exploration of the previous Jaguar GT was explored.
27 th – 28 th May 2022	BSMC Show - London	Attending the show with Keith Geary, was interesting to learn about the global bike community that was sharing their creations. This helped me learn how to modify engines and bike components to make a unique creation.
30 th May 2022	Email from Paul Morrow	Unexpectedly, there was an email from Paul stating it was his last day as our tutor. Had made an impact on the project, however, this circumstance initiated the focus of revisiting the Jaguar GT project and dropping the AV project.
3 rd June 2022	EV Fair in West Bridgford, Nottingham	From attending this show with Wendy Burton, it was an eye-opener to see what EV vehicles are being offered by a variety of automotive brands.
19 th June 2022	Swansea City Centre Car Show	This was another point of inspiration as it offered the opportunity for more classic cars. For a friend's birthday, I drew an Audi TT and marker pen rendered it, which gave me the spark to sketch other fancy sports cars.
24 th June 2022	Visiting Bristol	A day in Bristol with Ethan Griffiths gave insight into the rich history of Bristol's shipbuilding, automotive and aircraft background and gave insight into how such vehicles were created. This gave me the inspiration to revisit the Book "Beautiful Machines...." to take up sketching classic cars like the Bugatti Atlantic.

26 th June 2022	Purchased a white highlight in pen in Cardiff	Whilst visiting Cardiff with Ethan, I came across an art store and found a unique highlight pen for bright reflections when working on my automotive sketch and rendering studies to learn about how the reflections would work.
27 th June 2022	Viewing the Final Year BA Automotive and Transportation Students' work.	Such an opportunity to view their work on display gave me inspiration and a reference point for displaying my work for my degree show.
2 nd July 2022	RAF Day - Swansea	Going to RAF day was an insight into aerodynamics as the Biplanes had influenced the front Wheel fender wings to attach them to the main body of the car.
7 th July 2022	Refined initial Jaguar GT concept	Roughly sketching a refined version of the Jaguar GT, gave a focal point to refine the new design of the Jaguar GT with a fixed layout. Having a fixed layout proved to be too difficult to produce and visualise without the support of Paul and to fully develop it in the time frame for the end-of-course degree show.
10 th July 2022	Study sketch of the Maserati A6GCS Berlinetta	As a study to sharpen my sketching skills, I sketched the Maserati A6GCS Berlinetta as an experiment with the use of blue and orange markers for experimenting with body colour and environment reflections. This was one of the many marker pen studies I recreated with the use of the white highlight pen.
13 th July 2022	Front and Rear-View perspective sketches of the Jaguar GT	These sketches explored the fully defined appearance of the Jaguar GT to develop an appearance that would best suit it.

24 th July 2022	Photoshopped side view proposal of the Jaguar GT	Using the Initial Sketch that was developed on the 7 th of July, gave direction for the initial design proposal that was needed for creating the next step to a well-developed proposal.
13 th August 2022	Purchasing a 1:18 scale Lamborghini Miura model	While I was in Sorrento, I purchased a scale model of a Lamborghini Miura that I wanted to use for sketch studies. As this was a technique I had learnt from Claudio Fassini while I was at SPD in Milan.
20 th August 2022	Making a Start on my studies of the Lamborghini Miura	Upon arriving back in the UK from Italy, I started making studies on the Lamborghini Miura by sketching it from different angles to confidently sketch the well-acquainted proportions of the Lamborghini Miura.
17 th September 2022	Pushing myself with developing the Jaguar GT	Working on my hand sketching skills whilst developing the Jaguar GT concept, I decided to push myself by creating a concept with turning wheel fenders/pods; then to go the extra mile, I did a floor reflection of the Jaguar GT with the creating the illusion of a reflected floor and to have lights shining on the floor.
23 rd September 2022	Developing the Front and Rear perspectives	The Jaguar GT side view was scaled up with a Lamborghini Aventador front and rear to compare the size of a 2000mm wide platform.
4 th October 2022	Thomas Henwood's meeting message	This confirmed that Thomas was our new supervisor and had asked to fill him in about the Jaguar GT project for our meeting. I sent Thomas the latest rear, and front sketches with the side view photoshop render, plus the blueprint of the Jaguar GT.

5 th October 2022	Tape Drawing	The final design side view was recreated in Illustrator with the use of black, white, and grey as a graphic illustration of the light reflections of the final proposal.
6 th October 2022	Thomas's Teams meeting	After meeting Thomas, he seemed to like the 3-curve appearance of the Jaguar GT, one for the roof, and 2 for the wheel's fenders/pods. However, Thomas felt the design appeared to be static which needed amending, putting the tape drawing on hold. Also, the foam model was modelled with my flatmate, (Thomas Stockton) to create a 3D-printed model for wind tunnel testing.
7 th October 2022	3D Printed Model	Thomas Stockton left me the 3D-printed model that I trimmed for wind tunnel testing. This would enable data to be gathered on how to make amendments to the original design for a more efficient design proposal in response to Thomas Henwood's suggestion.
9 th October 2022	Further initial redesign proposals	Using Thomas Henwood's feedback, a more dynamic proposal was explored by hand sketches, which some did not reflect the design package, which was put into photoshop as a reference for a new design proposal. However, this did not resolve the design issue. As a solution, I printed off 6 package side views for reference when creating the new design.

11 th October 2022	New Design Proposal	Desperate to have a design proposal agreed upon by Thomas Henwood, a side view proposal was created that felt best reflected the design intention. Which was sent over to Thomas Henwood via Email. The Email to Tim Tudor regarding the wind tunnel and 3D printed model was enquired for booking along with messaging Thomas Henwood about the new proposal.
12 th October 2022	Tim Tudor's email	Tim responded stating that the model was not up to standard as it needed amending. Tim said the readouts would not be completely accurate due to the small size and the 3D model file needed amending. With limited time and aiming to get in the clay room, the 3D model and wind tunnel testing were abandoned due to time constraints. Thomas's message seemed positive as he seemed to approve, however, the one bit of advice he gave was to pull out the shoulder line as it was disrupting the fluidity of the design.
13 th October 2022	Further study of the perspective views of the Jaguar GT.	Thomas Henwood requested to have a section line drawing for the clay model to be created however I was confused with construction lines, so I started making sketches of the front and rear views of the Jaguar GT to experiment with enclosed wheels or exposed. Which exposed wheels were agreed upon for the final design.
14 th October 2022	Creating the Clay Model Section Lines and Wheel sizes	Once clarifying with Tom about the need for the Clay Model Section Lines diagram, the diagram was completed with the need of sizing the

		tyres which was resolved with a diagram from my car helpline showing the measurement references. The Tyre size was calculated for what the model needed with the size of 26" Front and 27" rear tyres which were needed for Ian Mathews when creating the clay model buck.
16 th October 2022	Prepared refined side-view sketch	Getting things ready for the clay room before going to Nottingham, I managed to create a revised side-view proposal using the influence of the agreed proposal to a well-defined package ready for marker rendering.
28 th October 2022	Printing full-size 1:10 scale clay model	Once returning from Nottingham, I went to the print shop and printed off a 1.2-meter blueprint ready for Ian.
30 th October	Working on a new Photoshop high-end render	Using the sketch of the final design proposal refined sketch from 16 th Oct, this was used for making the new photoshop proposal for a well-defined proposal ready for meeting Ian the following day.
31 st October 2022	Meeting Ian	With all the proposals and the blueprint ready, I met with Ian and spent a couple of hours with him to discuss the stages of creating the clay model. In particular, the clay buck was the integral structure of the model that needed to be developed; however, this had to be made at the Swansea Alex Building workshops (and not at the IQ campus), which involved a lot of back-and-forths.
3 rd November 2022	Starting Point of the clay model buck	At Alex, assistance was given for making the main base plate and glueing blocks of wood to make the wheels and the

		support beam ready for the following week.
7 th November 2022	Further progress of the clay model body buck	Once the components were set, they were brought to Ian who marked up the wheels for sanding and marking up the printed templates to make the guides to make the clay model. The middle base plate was drilled to the bottom base plate and held up by the support brackets.
8 th November 2022	Mistakes discovered	Showing Ian the progress of the buck, he pointed out that the model was completely aligned which needed to be re-drilled and the wheels needed to be further refined with sandpaper as they were not completely round arches.
14 th November 2022	The next steps	After recovering from being unwell, the buck was fixed by sizing up foam structure pieces ready to stick to the wooden buck structure.
15 th – 16 th November 2022	Gluing the foam	Once the bottom foam was stuck, Ian helped size up the top bit of the body buck which was it was taken to Alex and cut out ready. This was brought back to IQ and glued by Ian and weighed down; then the plastic templates were cut out and brought to IQ, where the wheels were wrapped in grease-proof paper.
17 th – 22 nd November 2022	Adding the clay	When the buck was ready, the clay was applied onto the main body buck in thin layers to prevent cracking. Though there was difficulty figuring out how much clay was needed, which was resolved with the plastic templates that allowed to make clay wall structures as a guide topped off with white Tippex spots for when needing to take the clay off.

		The clay was filled in with the use of a wooden stick to see if it has been filled in properly. Whilst doing this process, Ian asked me to find out from Thomas how to make visual reference guides for creating the overall model. This was resolved by Thomas suggesting the use of Sketch Overlay as this is something does to improve his shoe designs.
23 rd – 24 th November 2022	Sculpting the clay model	As a reference point, Ian showed me how to create the top and side DLOs in how to create a well-defined model; this took a long time to master as it took a balance of focus and firm use of the clay slicks to smoothen the main volume of the model. The use of masking tape and back tape was used for reference guides and to protect the achieved areas of the model as a guide for improving the rest of the model. To overcome the issue of estimating the amount of clay needed to be removed, Ian let me use a red adjustable template that can adapt itself to one side of the model and be a reference guide for the other side. Using this technique helped reduce the stress of the tedious process which was not helped as I was struggling to visualise certain features of the model that were hidden. The use of a notebook helped sketch out the issues and difficulties to overcome which became fruitful.
25 th – 29 ^h November 2022	Finishing the main model volume	The main volume was helped with the continuous progress

		of taking off and applying clay back on again to obtain a well-defined model, it was hard to know when to stop and was an ongoing trial-and-error process. Ian had cut out and prepared 1 front wheel and rear wheel template as a reference of how the model would like with these features added. Further paper templates helped place the accurate plastic templates onto the model as it was hard to visualise, which was backed by more sketch overlayed.
30 th November 2022	A break in Bath	When on a break in the city of Bath, the museum of Bath made light and importance of sketch models and clay structures of the details of making the temple of Aquae Sulis in honour of the Goddess Minerva/Athena. This brought comfort and understanding to the clay model process that I was undergoing.
31 st November – 2 nd December 2022	Adding the wheel pods/fenders	Using the templates from Ian of the plastic wheel member templates that are nailed into the wheels as a structure to fill in the clay to make up the wheel pods. Once the clay was filled in and set into place, the templates would be removed, and the slicks were used to make a straight even surface that is blocky. This is because the clay would slightly distort the templates due to the high pressure of the clay built up when stuffed in. These were continuously smoothed to accommodate

		and respect the fluidity of the design.
3 rd – 9 TH December 2022	Polishing off the Model	After the wheel's pods were well-defined, the surfaces of the wheel pods and the main body were smoothened to make sure no imperfections were left. During this period, I got in touch with Gavin Kerby to organise my presentation boards which were printed very quickly and ready for me to pick up the following day. All of this was done in preparation for the show as was preparing the decal graphic details for the clay model which were sized up from masking tape on the clay model to make the decals at the right size.
12 th – 13 th December	Fishing the Model	The following week, the decals were created in photoshop and printed in the morning to be ready to apply. However, Ian was not in to help assist, so it had to be assisted by Adrien Dix for access to the spray booth at IQ was needed to spray mount the details onto the model. Once the deals were stuck on, the model was taken back to the clay room and was finished off with the use of black tape to reference the roof DLO. This did seem a success however the determination for a spoiler ended up not making the back end of the car look professionally appealing.

14 th – 15 th December 2022	Preparation for the Show	Feeling somewhat satisfied with the progress of the clay model, the bits for the show were needed as I had to quickly prepare my Boards with the help of Raghav. Also, I needed to get an A2 lightbox for illuminating the clay model that would be placed on a plinth. Once these were done, I had to paint both the plinth for my clay model and the other one for the A5 flyers for the show. This had to be done quickly as they needed poly filling, sanding and then painting. After completing these, I could not put up my boards, so I helped put up one of the transfer stickers before meeting my family at the station on 15th Dec.
16 th December 2022	Show Time	That morning, I went to get my things printed at the print shop such as the A5 flyers, 1.2 Meter blueprint, Specifications board and inspiration board along with a portfolio for people to view my work. Then going to university, I got to my booth to put everything up, however, there were not enough hands to help put my things up and I had to call my family to help set up my show as Izabella and I did not have enough hands for setting up both booths. With all the boards stuck in place, I went with my family TO COLLECT my model from IQ which was placed on my Mum's lap and was taken to Alex in time for placing it in situ in the clay model booth.

17 th December 2022	First Day Showcasing	Unfortunately, it was a poor turnout as there were two students monitoring the show and they told me that two of my friends came to view the show. They later told me that there were hardly any signs to let them know about where my work is located and accessing the lighting was difficult as the reading room was in darkness.
12 th January 2023	Feed Back from a tutor at Coventry	One of Raghav's contacts came to have a look at our work and he liked the look of our work. He was curious about me doing mostly hand sketches than mostly digital sketches as well as intrigued by why I had done a supercar concept. He felt with the clay model was not a part of my work as there was not a noticeable link between the clay model and the visual work. However, they liked that the Clay model had its own space to view it 360 as they felt it would not have been able to be appreciated that much if it was in a single booth; which was the original plan as I was not able to have 2 booths originally.