Superstructures

Project Showcase

October 2022

Who we are

About us:

We are a structural engineering and design consultancy. We undertake the design and detailing of a wide range of building structures. We have extensive experience in projects big and small, working in the domestic, commercial, educational, and industrial markets.

Our core attributes:

Exceptional value for money

Robust, reliable systems

Timescales and deadlines

Engineering expertise

Design Approach

Excellent customer service

Overall aims for your project:

- Produce a structural solution that has intrinsic buildability, will be economical and, where necessary, aesthetically pleasing
- Fewer unknowns, lower risk
- Promote a smoother, more streamlined construction process
- Save you money at the same time as delivering a fantastic building
- Design your building structure, not just engineer it

What we do

We understand the importance of timescales and how valuable they are to our client's projects and their businesses. We aim to work to all project programmes and deadlines and react quickly to project variations.

As much as we try to eliminate all of the unknowns involved with the structural side of a project, occasionally variations occur. We aim to visit site with 48 hours of a request if an issue arises. Our practical knowledge allows us to work with building contractors to provide solutions to problems as quickly as possible.

The Quality of Service We Aim To Provide

We are extremely passionate about providing a very high quality of service to our clients. We strive to add value to a project rather than just satisfy the 'red tape' requirements.

The information that we produce and the way we work:

A full package of structural information including calculations, and full CAD construction drawings and details.

Our information should allow the structural elements to be constructed in co-ordination with all other elements of the building.

The information will also be suitable for a Building Regulations Submission.

We are great communicators – via phone, email, video, or in person.

We like to work with all members of the design and construction team to promote a collaborative design approach.

New Library Building

Newmarket Academy

Education

Project Features

Two storey open space with large sliding partitions to provide smaller compartments for teaching space.

Thermal breaks required to ensure no cold bridging due to external steelwork.

The new steel frame is designed to be visible externally with decorative bracing and sway frames to provide lateral stability.

Additional Information:

Key Personnel:

Craig Carr
Darren Noller
James Potter

Awards:

RICS: Social Impact Award 2020 Shortlist
RIBA Design Awards 2020 Highly Commended

Client:	Newmarket Academy	**Location:**	Newmarket
Architect:	Wincer Kievenaar	**Project Budget:**	£1m
Contractor:	SEH French		

Aircraft Hangar

Essex & Herts Air Ambulance

Healthcare

Project Features

Two story building comprising hangar facility, offices and visitor centre. New helipad and external parking. Foul and surface water systems were both designed with on-site attenuation.

Helipad landing area designed with minimal falls and incorporates heating ensuring the area remains clear of frost and snow for increased functionality.

Curved section of the roof utilises curved principal beams.

The large open plan hangar adopts cellular beams and a 15m long lattice truss to keep the area column free.

Complex assessments of the wind loading as a result of the shape, location and downdraft effects from helicopters.

Additional Information:

Key Personnel:

Mark Hayward

Other Information:

Important to remember the unexploded ordnance survey!

Client:	Essex & Herts Air Ambulance Trust	**Location:**	Northweald Airfield
Architect:	Hurley Porte & Duell	**Product Budget:**	£4.5m
Contractor:	Barnes Construction		

Lift Tower

University of suffolk

Education

Project Features

A slender, steel frame structure with the primary structural and bracing elements expressed in bright yellow and clad in glass panels. This building forms a new lift tower at the Health and Wellbeing building at the University of Suffolk, visible from Ipswich's historic Waterfront.

Ground conditions were poor, therefore a piled solution was chosen that had the added benefit of counteracting any uplift forces caused by the narrow building footprint.

Due to the narrow footprint of the building, horizontal deflection due to wind loads was a challenging factor to overcome.

As the steelwork was to be exposed, careful consideration was given to the aesthetics and appearance of any structural connections.

Additional Information:

Key Personnel:

Simon Howes

Mark Hayward

Client:	University of Suffolk	**Location:**	University of Suffolk, Ipswich
Architect:	KLH Architects	**Project Budget:**	£5m
Contractor:	Barnes Construction	**Completed:**	February 2022

UPS Bury St. Edmunds

Commerical

Warehouse and Distribution

Project Features

Client is a worldwide package delivery company who required a significant package handling facility.

Superstructures designed a new steel portal frame and 2No. Conveyor belt finger building extensions.

Raised reinforced concrete plinths and floor slab facilitate level loading to delivery trucks.

New extensions house state of the art conveyor systems to upgrade the facility and increase delivery capacity.

The new buildings required piled foundations and cast in-situ suspended floor slabs due to poor ground conditions and contaminated ground.

Additional Information:

Key Personnel:

Simon Howes

Mark Hayward

Client:	UPS	**Location:**	Bury St. Edmunds
Architect:	Rees Pryer	**Project Budget:**	£2.5m
Contractor:	Bury Developments		

Meadow Cottage

New Contemporary Dwelling

Residential

Project Features

Structural design services for a replacement dwelling which achieved client's dream of a modern home.

Cantilevering roof overhangs and balconies with bespoke staircase with cantilevering threads and polished concrete finish.

Sliding glazing with no corner posts to provide open aspects.

Double height atrium with high level glazing.

Stunning Contemporary Home with primary steel frame with masonry infill and concrete upper floor.

Additional Information:

Key Personnel:

Craig Carr
Darren Noller
James Potter

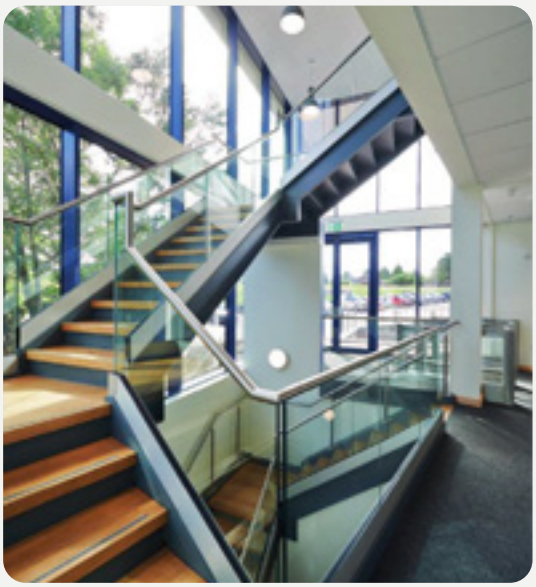
Awards:

IStructE East Anglia Award for Structural Excellence 2017

Client:	Private	**Location:**	Private
Architect:	Wincer Kievenaar	**Project Budget:**	Undisclosed
Contractor:	Gipping Construction		

BUUK - Extension

Office



Project Features

The new steel frame is designed to cantilever over the awkward form of the existing building to save disruption during the build and allow the business to function as normal for as long as possible.

Sections of the steel frame were designed to cantilever as deep trusses.

Foundations were designed to mitigate against sulphate attack beneath the ground.

Suspended precast ground floor slabs.

Composite first floor construction.

Superstructures were also appointed as the retained consultant Engineer by the client to ensure the works were completed to the employers requirements.

Additional Information:

Key Personnel:

Craig Carr
Darren Noller
James Potter

Client:	BUUK	**Location:**	Woolpit, Bury St Edmunds
Architect:	Wincer Kievenaar	**Project Budget:**	£5m
Contractor:	Barnes Construction		

Seaside Café

Felixstowe Seaside Café

Project Features

Iconic building that is part of the regeneration works at Felixstowe South Seafront.

Suspended cast in-situ concrete slab with allowance for uplift should tidal flooding occur.

New steel frame building to allow full height glazing up to 7m high. Moment frames were used across the principal elevation to negate any bracing. This allowed unobstructed views across the sea front.

Additional Information:

Key Personnel:

Craig Carr
Darren Noller

Awards:

RIBA Suffolk Design Awards 2022
Highly Commended

Building Awards 2022 - Finalist

Client:	East Suffolk Council	**Location:**	Felixstowe
Architect:	Plaice Design	**Project Budget:**	£1.25m
Contractor:	Barnes Construction		

Sealeys

New warehouse and offices

Project Features

Approximately 12,800m² on plan steel frame building comprising 17.5m high ridge portal frame warehousing.

4 storey office space to the front and 5 storey warehouse storage to the rear using composite flooring with minimal columns to maximise storage area.

Used cut and fill to maximise the site's gradient enabling part basement to rear storage area and raising of ground levels to main warehouse.

Additional Information:

Key Personnel:

Craig Carr
Darren Noller
Chris Sheehan

Client: Sealey

Location: Bury St. Edmunds

Architect: Wincer Kievenaar

Testimonial

EHAAT engagement with Superstructures

RE: New Aircraft Hangar, North Weald Airbase

Pre-Construction Phase
Superstructures worked cohesively with all appointed parties within the Principle Design Team. Superstructures were exceptional at handling the requests for information and offering suggestions and guidance throughout. The outcome of this collaborative relationship was a successful project delivered within budget and early.

Construction Phase
Construction at North Weald commenced in February 2020. Superstructures developed key relationships, building on the primary stakeholder engagement prior to commencement. This proved invaluable throughout the construction phase and post completion.

Superstructures have been professional, considerate, proactive and mindful throughout these projects. Superstructures have identified the need for a personal and professional stakeholder balance, and this has been achieved. Superstructures have proven commercially attentive and have sought to offer best value and extract best savings throughout the design and construction phase.

James McInroy
NEBOSH TechIOSH
Head of Workplace & Infrastructure


Barnes
CONSTRUCTION


BEARDWELL
Construction


BUUK
infrastructure


East of
England
COOP


NHS
East Suffolk and
North Essex
NHS Foundation Trust


WINCER
KIEVENAAR
CHARTERED ARCHITECTS


University
of Suffolk


MORGAN
SINDALL


Suffolk
New
College


CARTER
BUILDER


ROSE


SEALEY


KLH


STANLEY BRAGG
architects


Hill
The Hill Group


EVERS
building contractors


French
SEH
Construction


Castons


Essex & Herts
Air Ambulance
Your local life-saving charity


Horizon Construction
Group

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