

Planning stage engineering



Anchorwood Bank

Hydrock is providing complete multi-disciplinary service delivery from due diligence to planning approval to construction supervision for a phased 16 hectare mixed-use development, one of the most significant brownfield regeneration sites in the south west.



About Hydrock

Hydrock is a national, multi-disciplinary engineering consultancy.

We deliver engineering services at each step of the development and construction process. From initial site appraisal, where our focus is on land quality, flood risk, transport and highways access and buildability, through initial designs, planning and on to detailed design and construction monitoring.

Our ethos is that when challenges present themselves, we step forwards not backwards. We pride ourselves on a track record of innovative and strategic solutions, helping to unlock complex sites, maximise space, create energy efficient buildings and secure planning for our clients.

The value of early engineering input

Embracing engineering criteria during the early masterplanning and optioneering stages is crucial to maximising land value - and it starts with establishing an appropriate strategy for access and circulation.

We offer a wide range of planning support engineering services on all types and sizes of developments, both in the private and public sectors across the UK.

Our expertise is often instrumental to shaping a masterplan that works, ensuring clients avoid costly unforeseen issues further along the planning process.

From site due diligence and scheme feasibility, to comprehensive support for a planning application, we draw upon our UK-wide teams to manage and co-ordinate the disciplines and services best suited to your needs.

Hydrock: key facts

- 500+ staff
- 20 offices UK-wide, including London, Heathrow, Bristol, Birmingham, Manchester and Cardiff
- Winner of Best Business Partner at the Airport Operators Association (AOA) awards for our role as a trusted advisor to Bristol Airport
- Ranked in the top 30 of the Sunday Times 100 Best Companies to Work For list, 3 years running
- Our Safety Management System is UKAS accredited to OHSAS 18001 standard
- Four Gold RoSPA Awards in 2017, plus a prestigious Gold Medal for receiving Gold awards for five consecutive years, bringing our total since 2013 to 15 Gold awards.
- Winner 'Best Place to Work' at the 2016 Construction Investing in Talent Awards

Transportation

For developers seeking to clarify the viability of a site, we answer your key questions concerning ease of site access and the likely requirements for off-site measures.

Our UK-wide team provides development planning and highway design services to both private and public sector clients.

We assist from design development, through planning, to the implementation of obligations including highway works and travel plans. We also have an outstanding track record supporting our clients giving evidence at appeals and public inquiries.

We also understand the priorities of

different sectors, for example, educational facilities will prioritise sustainable access, parking, and safety; whilst for energy and power facilities, route modelling will be a key factor to ensure that large construction materials can reach remote locations.

A key service at planning stage is our transport and pedestrian microsimulation offering. We use the preferred software of Highways England, Transport for West Midlands, and many other local authorities.

Key aspects of our transportation support:

- Transport Assessments
- Travel Planning
- Strategic Land Promotion
- Access & Junction Design
- Traffic Modelling
- Micro Simulation Modelling
- Planning Condition Discharge
- Local Plan Representations
- Planning Appeal Support
- Road Safety Audits

Case study: Gladman Developments

We've worked with Gladman, one of the largest promoters of strategic land in the UK, to support planning applications for over 100 residential developments across the UK, ranging from 50 to 1,000 dwellings.

Hydrock predominantly provided transport and highways design, flood risk assessment

and drainage design, and ground condition studies.

The result is a significant contribution to the Government's ambition to build one million new homes by 2020, providing key housing to support economic growth across the UK.



Geotechnical and geo-environmental pre planning services

Our geotechnical and geo-environmental team uses a range of assessments, studies and investigations to determine site viability to support every stage of the planning process.

From due diligence assessments, to outline planning Phase 1 desk studies, to detailed and full planning Phase 2 intrusive ground investigations, Hydrock's early engineering input is critical to understanding and delivering a masterplan that works.

At an early stage, we assess portfolios and advise on the potential viability for a development, providing a high level assessment that helps you to understand key site constraints and 'showstoppers'.

Case study: Rivar Homes

Our Geotechnical team helped secure outline planning permission for a proposed 157 dwelling residential development in Newbury.

Appointed by Rivar Homes, we have undertaken a significant assessment exercise as part of the planning application to West Berkshire District Council for the proposed development site on a former gravel quarry and landfill. Our work included a peer reviewed detailed desk study and the presentation and agreement of the proposed investigation methodology with

At outline planning stage, our commercial and detailed site assessment allows the development of a preliminary conceptual site model and discussion with regulators.

Intrusive ground investigations are usually carried out to support a detailed or full planning application and involve a variety of techniques depending on the complexity and size of the site. The resulting report provides recommendations for foundations, structures and an outline remediation strategy if required.

the local authority Environmental Health Team.

Due to the nature of the site, Hydrock presented at the planning committee meeting to reassure the councillors that the geo-environmental and geotechnical risks present at the 9.76-hectare site were understood and able to be mitigated.

The next stage of works, a significant geo-environmental and geotechnical investigation and assessment, is currently underway.



Infrastructure

Our contribution at planning stage ensures the right commercial decisions are made and that the masterplanning strategy is defined and developed appropriately.

We support clients through planning and detailed engineering design by contributing and leading on aspects of key design elements to demonstrate that a site is viable, sustainable and will bring benefit.

Our comprehensive due diligence appraisal identifies potential design constraints ahead of site acquisition, providing

mitigation measures against potential planning issues.

We address the complex issues that might impact your site, from challenging access to sites earmarked for significant vehicular movement, to severe site gradients that might render a residential development unviable.

Key aspects of our infrastructure support:

- Flood Risk Assessments
- Drainage Strategies
- Highway Design
- Levels Analysis
- Vehicle Tracking

Case study: Mulberry Park

Our engineering planning support and design expertise helped secure outline planning approval and a 'reserved matters' consent for a significant mixed-use development in Bath, ultimately helping the city to meet its housing needs.

Working with Curo Enterprise Ltd, a not-for-profit housing and support organisation, Hydrock's first role on the project was to carry out an engineering appraisal which provided the developer with the reassurance they were seeking to purchase

the site. We also provided comprehensive infrastructure design services, including on-site and off-site highways design, surface and foul water drainage strategies, plot engineering and an assessment of cut and fill volumes.

Working closely with the local sewerage and highway authorities, we were able to introduce sustainable drainage systems and recycle demolition material, helping our client to realise achievable sustainability targets and substantial cost savings.



Building performance engineering

From acoustics to air quality, utilities to lighting and energy assessments - understanding these elements at the earliest stage can unlock even the most constrained of city-centre sites.

As part of our building performance engineering business, we offer an extensive range of services which can transform the viability of your site and successfully achieve planning permission.

This suite of assessments, surveys and sophisticated modelling techniques allows us to demonstrate to planning authorities how a development will meet or exceed design requirements, particularly in constrained or city-centre sites where strict regulations govern energy consumption, air quality and acoustic standards.

Key aspects of our support:

- Noise and vibration assessments
- Air quality / construction dust assessments
- Utilities
- Sunlight/daylight modelling
- Sustainability reports
- Energy statements
- Ventilation and extraction statement
- Wind studies and computational fluid dynamics (CFD)
- Microclimate simulations
- IT and broadband capacity study
- BREEAM / Home Quality Mark / WELL standard pre-assessment

Case study: UK Hydrographic Office (UKHO)

The UKHO is the UK's agency providing hydrographic and geospatial data to mariners and maritime organisations across the world.

As part of our multi-disciplinary appointment to deliver the new 11,000 sq m office development, we successfully supported UKHO and architects, AHR, through the planning process.

The structure was designed to allow a 'one team' approach, with collaboration being

central to the design concept.

Passive sustainable features, maximum natural light, natural ventilation, and access to outdoor space create a high quality space for occupants.

A Transport Assessment, revised Travel Plan and re-designed site access arrangements all contributed to the local planning authority granting permission to this BREEAM Excellent building.



Photo credit: AHR Architects

Hydrock 



Proud to be ranked 29th in the Sunday Times 100 Best Companies to Work For list, 2017