MEHRDAD BAHARI

Phone: (+44) 07427-415387
m.mehrabani@adkinsconsultants.com

Maidstone, Kent
UK

Chartered Civil & Structural Engineer
MCIOB, CIWEM, CEng MICE, MIStructE,

I am Adkins' Technical Director. I am a chartered Structural & Civil Engineer with over 7 years of experience in disciplines on a variety of projects in the UK and abroad.
The experience mainly comes from working on a wide range of mainstream design projects on healthcare (NHS projects), environment agency (TE2100), commercial, industrial, residential, and historic building.
I am well-versed in structural design, civil engineering design, leading design team, technical drawings, design project management, interface and liaison with stakeholders including the client, contractor and sub-contractors from commencing to handover of both large & small-scale projects.

KEY EXPERIENCES

- Design project management
- Planning applications and discharging conditions.
- Critical analysis and decision making
- Feasibility Studies
- Proficient in technical construction or concept drawings
- Leading the design process of all form of construction
- Interface and liaison with clients
- Complying with designer duties under CDM regulations
- Building Information Modelling (BIM)

EDUCATION

PhD Civil Engineering (Coastal Flood Defence), University of Greenwich (UK), 2018

MSc Advanced Engineering Design (Structural Eng.), Brunel University (UK), 2013

WORK EXPERIENCE

Technical Director, 2022-present
Senior Engineer, 2018 - 2022

Adkins Consultants Ltd (UK)

- **NHS projects**: I worked as a lead civil and structural engineer on several projects for NHS
  - Barnet Hospital & Wycombe hospital
    - Technical review on the proposed design of A&E extension including civil, drainage and structural design
  - Corydon Hospital
    - Mental Health Clinic, single story steel frame on raft foundation. With civil engineering and drainage design.
  - West Middlesex University Hospital:
    - 2No. AHU units (6x10m) to be installed on top of existing roof. Reinforcement of the existing structure was required.
    - Extension of A&E: piling, steel frame
  - North Middlesex University Hospital:
    - A new 20-bed Covid-ward with 60m corridors to connect it to existing wards.
    - Civil engineering design (drainage, retaining walls) and structural design was required (modular building).
  - Prince Royal Hospital:
    - A new bed-store unit (60-beds). Steel frame structure.

- **DEFRA projects (2016-2018):** I led the research and engineering team on assessing the coastal defence structure at Sheerness and Thames Estuary as part of TE2100 scheme and to propose a maintenance strategy for the next 100 years.

- **Residential and commercial projects:** I worked as a lead civil and structural engineer on the following projects:

  - **Gravesend Police Training Centre (£9.4m):** 5 Story blast proof concrete frame located at the river side, piled raft foundation, limited access, including drainage design, including steel mezzanine floor
  - **Heritage Court (£4m):** 5-storey steel frame structure with a concrete box basement (carpark). The project involves steel frame design, composite concrete floors, concrete retaining walls, transfer slab, raft foundation, bar-bending schedule, steel connections.
  - **Naildown Road (£2.5m):** 3-storey concrete frame structure at sea-side on a slope site. The project is situated adjacent to a public road with London Clay soil and 6m difference in site levels. The project involves secant curtain piling, concrete frame, temporary structure, slope stability analysis, bar-bending schedule, raft foundation, retaining walls, planning application and condition discharge.
  - **Breton Court (£3.5m)**: A new care home with 38 studios. Timber frame structure, piled foundation, drainage strategy, drainage design (surface and foul), Planning application discharging condition (drainage design and strategy).

- **Rook Lane, Bobbing (£9.5m)**: A new care home with 78 studios on a slope site. The project involves delivering drainage strategy and design to discharge planning application. Due to the constraint of the site e.g. flood risk, unsuitable for soakaway, not close to watercourses, and no access to public drainage system; the project was complex. A deep bore soakaway system with a retention pool is proposed to overcome the constraints of the site.
- **Purely Oaks (£4.5m)**: 3 detached residential buildings on a slop site including a 3-storey concrete frame, and 2No. 3-storey semi-detached masonry houses. The project involves concrete frame, traditional masonry structure, raft foundation, retaining walls, civil engineering design (roads, surface water drainage, foul drainage), bar-bending schedule.
- **Parkside (£2.2m):** 3-storey traditional masonry structure with a concrete basement. The site is situated on London Clay with a high-water table. The project involves curtain pile retaining structure, transfer slab, temporary structure, bar-bending schedule.
- **Bush Hill (£3.7m):** A new detached 4-storey residential building to create 9 luxury flats. The project involves a combined steel frame and traditional masonry structure, a complex timber-steel roof, strip footing, surface and foul drainage design, retaining walls.
- **Grove Stratford (£4.5m):** A new 6-storey irregular shape commercial building in a conservation area (high street). The project involves designing concrete frame, piled raft foundation, diaphragm slabs on concrete beams, bar-bending schedules.

- **Industrial projects:**
  - **Wozair- BP (British Petroleum):** I have designed several technical structures to support industrial units (AHUs). These units are installed on off-shore sites e.g. (Caspian sea- BP oil rig). The projects involve:
    - Seismic resistance multi-storey steel frames
    - Blast proof multi-storey steel frames
    - Considering shipping loads to transfer the units to a 60m height (offshore)
  - **MJ-Allen:** in collaboration with the company to design steel-steel connection, industrial portal frames, mezzanine floors, irregular shape steel structures.
  - **Polypipe:** in collaboration with the company to design civil engineering works e.g. heavy duty roads, drainage strategy, steel portal frames.

Lecturer in Civil Engineering, part-time 2017 - present
College of Contract Management (UK)

- Accredited by the Chartered Institute of Building (CIOB).
- To teach:
  - Structural Analysis.
  - Fundamentals of Engineering Drawings.
  - Engineering Mathematics and Modelling.

HONORS AND AWARDS

Distinguished PhD Thesis 2018
University of Greenwich. UK.

Santander Research Grant 2016
Research excellence award for journal publication. UK.

Teaching Learning and Assessment (TLA) award 2015
Award for best feedback or teaching, University of Greenwich.

Research Excellence Framework (REF) Scholarship 2014
Research excellence award for MSc dissertation to cover PhD funding. UK.

Finalist at Brunel Engineers (BE) 2013
Award for the best design optimisation in civil engineering structures. Brunel University UK.

PUBLICATIONS

Full list of publications available at:
https://scholar.google.co.uk/citations?user=KrEGMq4AAAAJ&hl=en

Reliability analysis and optimum maintenance of coastal flood defences using probabilistic deterioration modelling
HP Chen, MB Mehrabani - Reliability Engineering & System Safety, 2019
Mehrabani, M.B., Chen, H.P. and Stevenson, M.W., 2015. Overtopping Failure Analysis of Coastal Flood Defences Affected By Climate Change. In Journal of Physics, Vol. 628, No. 1, pp. 120-132. IOP Publishing.

Mehrabani, M.B. and Chen, H.P., 2016. Grading-Based Deterioration Models for Future Performance Predictions of Coastal Flood Defences. In International Conference on Smart Infrastructure and Construction (ICSIC). Cambridge University, UK.

Chen, H.P., Nepal, J., and Mehrabani M.B., 2016. Lifetime Performance Assessment of Flood Defence Structures Utilising Condition Grading Data, Journal of flood and coast.

Lifetime wave overtopping risk analysis of sea defences subjected to changing operational conditions, submitted to Journal of Engineering Failure Analysis, June 2018. minor corrections.

REFERENCES

Available on request.