

# Julian Leslie Bonfield

Chief Engineer



## Profile

Julian is a Chartered Mechanical Engineer and a Fellow of the Institute of Mechanical Engineers with over thirty years experience in the specification, design, manufacture, erection and operation of material handling machines. As technical director of Butterley Ltd he was the lead engineer on the Falkirk wheel coordinating the design teams. He has 25 years experience of developing category 1 and 2 cranes for the nuclear industry as well as cranes for steelworks and commercial dock environments.

## Key Experience

- Mechanical, electrical and structural engineering
- Nuclear related projects
- Cranes
- Moveable structures

## Profession

Mechanical Engineering

## Joined Atkins

October 2008

## Nationality

British

## Qualifications

BSc (Hons) Agricultural Engineering

FIMechE, CEng

## Professional Associations

Chartered Engineer, Fellow of the Institute of Mechanical Engineers

## Experience with Atkins (*January 2009 - Present*)

**Job Title:** Chief Engineer

- Responsible as technical lead for design validation to Lloyds Register Code for Lifting Appliances in a Marine Environment of a 650 kg jib crane
- Responsible as Hazid Chairman for Generic Hazard identification Study of Vessel mounted Crane (500t)
- Responsible as technical lead for design and detailing of exploration vessel flare boom deployment system
- Responsible as the clients Chief Engineer for the detailed design of a category 1 nuclear crane
- Responsible as the clients Chief Engineer for the coordination of dynamic validation, including seismic, of a category 1 nuclear crane

## Experience with MG Bennett & Associates Ltd (*2006 to December 2008*)

**Job Title:** Principal Consultant

- Mechanical, electrical and hydraulic design for Dock Gate BAe Scotstoun, Glasgow
- Concept craneage design for carbon fibre wing handling, Airbus
- Structural assessment of cranes at a sensitive nuclear installation
- Design of replacement cranes
- Nuclear defuelling crane, scheme design

## Experience with Butterley Limited (*2000 – 2005*)

**Job Title:** Technical Director

Designers and suppliers of Heavy Structural Steelwork, Bridges, Moving Structures and Cranes

- Responsible for all engineering functions from concept design, detail design, design for manufacture/erection including CDM requirements and testing/commissioning
- Responsible for the company Quality Assurance systems to ISO 9000

- Role required personal development to keep pace with the changes. This was undertaken with a combination of training courses in quality assurance and safety, as well as research into published documents and standards.

#### **Key Projects: -**

##### **Movable Structures:**

- Mechanical, electrical, hydraulic and structural design for Holyhead Terminal 5 Ro-Ro, Stenna Ports
- Mechanical, electrical, hydraulic and structural design for Falkirk Wheel Boat Lift, British Waterways
- Mechanical, electrical, hydraulic and structural design for Goole Dutch River Swing Bridge, East Riding

##### **Cranes:**

- Mechanical, electrical, hydraulic and structural design of 250t Ladle Crane, Corus Aldwarke
- Mechanical, electrical, hydraulic and structural design of Ingot Stripper Crane, Corus Aldwarke
- Mechanical, electrical and structural design of 40t Container Handling Crane, British Nuclear Fuels

##### **General Engineering:**

- Mechanical and structural design of bearing system for linkspan, submarine X berth facility, Faslane
- Seismic and Fatigue Assessment of Sellafeld B30 Skip Handler, British Nuclear Fuels
- Seismic Assessment 130t Flask Bogie and Flask Lid Lifter, British Nuclear Fuels
- Mechanical and structural design of drum tipping system, British Nuclear Fuels
- Electrical design of Safety enhancements 80t SRC Crane, Devonport Management
- Mechanical, electrical and structural design of 2off tilting Coil Hooks, Corus Aldwarke

#### **Experience with Butterley Limited (1985 – 2000)**

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##### **Job Title:** Chief Engineer

- Responsible as Chief Engineer for all engineering functions from detail design, design for manufacture/erection including CDM requirements and testing/commissioning
- Responsible as Chief Engineer for the training and mentoring of graduate engineers
- Role as Chief Engineer required personal development to keep pace with the changes. This was undertaken with a combination of training courses in personnel training and safety, as well as research into published documents and standards

#### **Key Projects: -**

##### **Movable Structures:**

- Mechanical, electrical and hydraulic design for Holyhead Terminal 3 Ro-Ro Stenna Ports
- Mechanical, electrical and hydraulic design for Dover Terminal 2,3 & 7 Ro-Ro's Dover Ports
- Mechanical, electrical and hydraulic design for Dublin Port Terminal 3 Ro-Ro Dublin Ports
- Mechanical, electrical and hydraulic design for Dover Catamaran Berths Dover Ports
- Mechanical, electrical and hydraulic design for Trowse Rail Swing Bridge British Railways
- Mechanical, electrical, pneumatic and structural design of Biological Shield Door British Nuclear Fuels

##### **Cranes:**

- Mechanical, electrical and structural design of Dockside Jib Cranes, Devonport Management
- Mechanical, electrical and structural design of Flask Handling Cranes, British Nuclear Fuels
- Mechanical, electrical and structural design of Nuclear Store Charge Machines, British Nuclear Fuels
- Mechanical, electrical and structural design of Ladle Cranes
- Mechanical, electrical and structural design of Steelworks Cranes
- Mechanical, electrical and structural design of High Integrity Nuclear Cranes

##### **General Engineering:**

- Mechanical, electrical, pneumatic and structural design of Transfer Bogie, British Energy Sizewell
- Mechanical, electrical and structural design of 130t Flask Handling Bogie, British Nuclear Fuels
- Mechanical, electrical and structural design of 60t High Integrity Erection Tower, British Energy Hartlepool &

**Bulk Materials Handling:**

- Mechanical, electrical and structural design of Bucket wheel Stacker Reclaimer, British Coal Wooley Colliery
- Mechanical, electrical and structural design of Circular Scraper Stacker Reclaimer, Northern Ireland Electricity Kilroot
- Mechanical, electrical and structural design of Bridge Scraper Reclaimer and Boom Stacker at Blue Circle Industries, Dunbar and British Coal Asfordby.

**Experience with Butterley Limited (1983 – 1985)**

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**Job Title:** Senior Design Engineer

- Responsible as Senior Design Engineer for undertaking mechanical and structural engineering functions including project management, detail design, design for manufacture/erection and testing/commissioning
- Role as Senior Design Engineer required personal development to keep pace with the changes. This was undertaken with a combination of training courses and research into published documents and standards

**Key Projects:** -

**Bulk Materials Handling:**

- Mechanical and structural Design of Bucket wheel Reclaimer

**Cranes:**

- Mechanical and structural design of Nuclear High Integrity Trolley

**Experience with Ruston Bucyrus (1976 – 1983)**

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**Job Title:** Development Engineer

- Mechanical and structural design of Hydraulic Back Hoe
- Mechanical and structural design of Hydraulic Shovel
- Trouble shooting Structural Fatigue Electric Walking Draglines
- Mechanical and structural design of Hydraulic Crawler Mounted Crane
- Mechanical and structural design of Hydraulic Offshore Jib Crane

**Experience with David Brown Tractors (1974 – 1976)**

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**Job Title:** Design Draughtsman

- Mechanical design of tractor components

**Experience with David Brown Gear Industries (1972 – 1974)**

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**Job Title:** Stress Analysis Engineer

- Mechanical and structural analysis of marine gearboxes, gears and shafts
- Specific training in the design and manufacture of heavy gearing

**Experience with David Brown Corporation (1970 – 1972)**

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**Job Title:** Post Graduate Trainee

- Workshop experience
- Manufacturing technology, South East Essex technical college

**Safety Related Courses**

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Safety for Senior Executives (IOSH)