

**Coast to
Capital**



**Construction
Sector
Spotlight**

**Skills 360 Board
12 January 2022**

Construction Skills Spotlight

Research report produced by
Genecon and published in
November 2021

The full report can be found
under skills news and resources
on the Coast to Capital website



Purpose of the report



This research report was commissioned by the Skills 360 Board's Construction Champions as a part of the wider Construction Sector Spotlight

- To identify the **size and type of major construction infrastructure projects** and the **size of the labour market opportunity** in the Coast to Capital area over the **next 10 years**
- To raise the **awareness of construction** as an important economic sector in Coast to Capital and the significance of construction roles within the labour market
- To highlight the **economic, social and environmental drivers impacting the construction sector** and what this means for the kinds of roles that will be in demand and the skills that will be needed
- To encourage **collaboration** between education providers, construction companies and organisations responsible for large scale infrastructure projects

Target audience



The report has been disseminated amongst local partners for information and to support with awareness raising and curriculum planning

- Schools
- Colleges
- Training providers
- Universities
- Local Authorities
- Employment and Skills groups
- Other stakeholders

Organisations consulted



Each of these organisations had a 121 discussion with the consultants and several followed up with specific detail on future workforce and skills demands

- Network Rail
- Southern Water
- Gatwick Airport
- Highways England
- The Environment Agency
- Homes England
- Transport for the South East
- Brighton and Hove City Council
- Wilmott Dixon
- BAM Construction Training
- WSP
- Morgan Sindall
- Net Zero Collective
- Arcadis
- Thakeham Group
- Construction Industry Training Board (CITB)

Labour market supply and demand



There is currently a high demand for construction labour in Coast to Capital that is unlikely to fall within the next 10 years

Demand

- 16% growth in employment in the past five years
- growth of 4.4% predicted over the next five-years in the southeast
- significant levels of investment planned by the major stakeholders in the area

Supply

- a significantly ageing workforce
- labour supply limited by post-Brexit changes to the UK immigration system
- currently an additional short-term challenge of strong competition for labour, and especially for skilled workers, from other sectors

Key drivers of future demand for labour



The research report identified four key drivers of future demand which will require different skillsets and, in some cases, will supersede some of the lower-level job roles which currently exist

- Net Zero
- Environment and Biodiversity
- Offsite Manufacturing & Modern Methods of Construction
- Technological Advancement

Skills for Net Zero



The range of skills required to deliver Net Zero is diverse, comprising specialist technical roles with high-level skills (e.g. advanced engineering, software development, digital technology, etc.) as well as skilled trades

- CITB Net Zero Report (March 2021) estimates that **350,000 new roles will be created nationally by 2028**, including retrofitting of new buildings and other net zero projects
- Specific roles expected to be in demand are **project managers** (86,000), **plumbers and heating engineers, ventilation & air-conditioning (HVAC) workers** (59,000) and **building envelope specialists** (27,000)
- The **social rent housing sector** alone is likely to demand approximately **209 additional skilled workers** in Coast to Capital in the **next 10 years** to decarbonise their existing stock.

*“We are hitting a real blind spot on finding the **skills** let alone **experience in embedding cutting edge low carbon technology into our designs**. From a skills perspective, we are seeing a dramatic lack of knowledge in low-carbon technology.”*

- **The Environment Agency**



The Environment Agency also reported that they are looking for high level designers and consultants to deliver innovative technological solutions, including:

- 3-D printing of rocks for flood and tidal defenses
- The removal of plastics from the supply chain
- The creation of a circular economy for plastics

Skills for Environment and Biodiversity



The UK Government's Environment Bill sets out a requirement for developers to achieve an overall increase in biodiversity of +10% as a part of their planned development

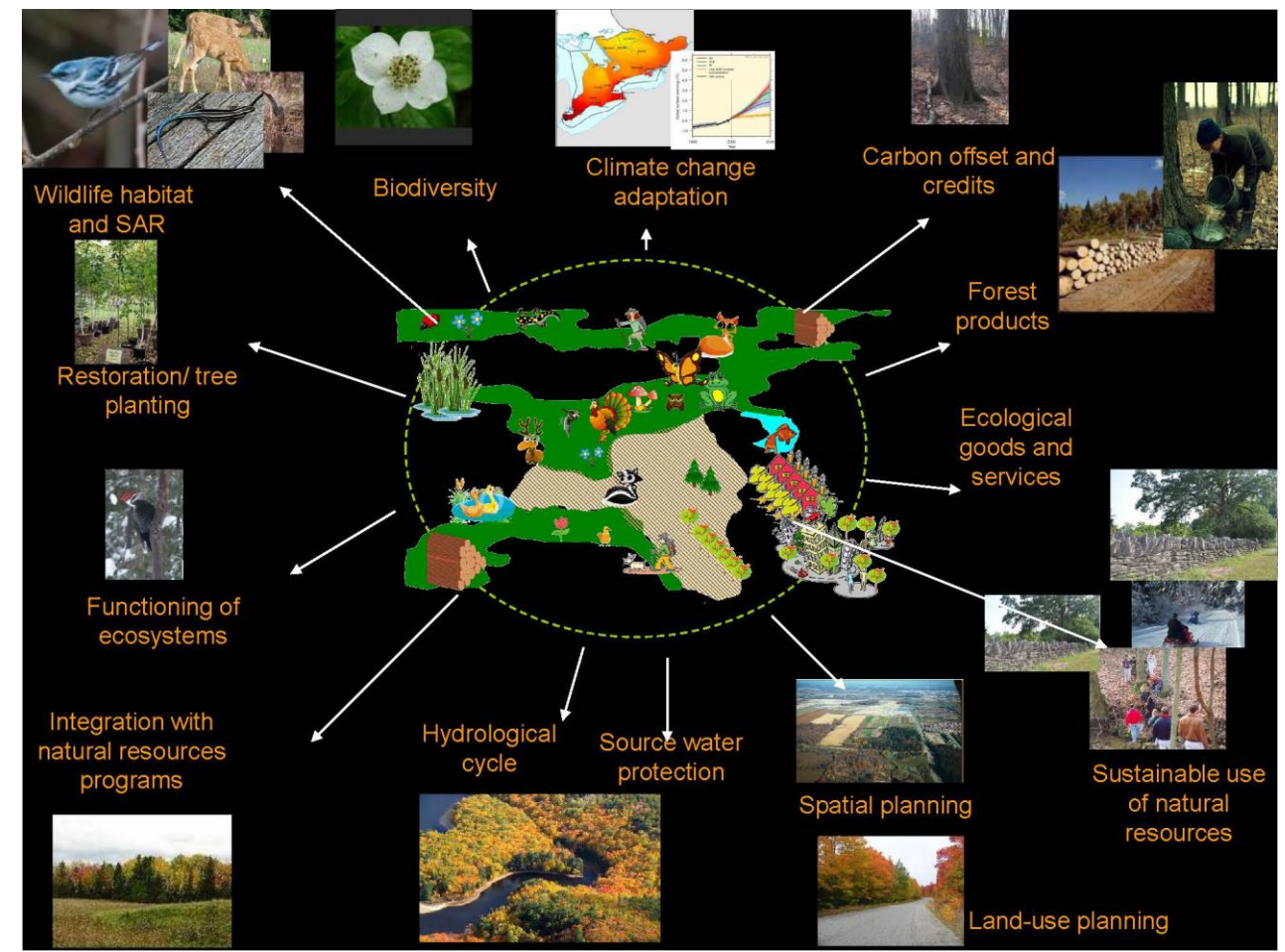
- The increase in activity that biodiversity net gain legislation will demand will require higher level skills including:
 - More **degree and post graduate level ecologists**, who are already in short supply
 - **Town planners** in local authorities and the private sector who are specialists in **environmental impact** and **biodiversity**
- The Chartered Institute of Ecology and Environmental Management (CIEEM) highlight the need to **improve ecologists' understanding of spatial planning** and **planners' understanding of ecology and habitat protection**
- Surrey Wildlife Trust reported current and emerging **shortages of skilled labour** to deliver **biodiversity net gain at a practical project level**

“Industry must improve its **skills in conservation planning**. Net Gain is not about minimising damage to wildlife or about the typical “shopping list” of species protected by law such as bats, great crested newts and dormice. We must get better at truly understanding **all biodiversity affected** by individual schemes, and by the combination of schemes within a landscape, as well as the linked social impacts of people’s use of nature.”

- **Balfour Beatty**

“...there is a **huge skills gap in nature and bio-diversity**”.

- **The Environment Agency**



Skills for offsite manufacturing and modern methods of construction



Modern methods of construction (MMC) and offsite prefabrication are reducing the time required onsite and increasing the pre-site planning phase, causing a shift in the occupations and skills required

- Stakeholders cite approximately **50% of jobs on major schemes are now office-based** including **planning occupations** with high **digital skills** content
- There is an increase in **construction manufacturing-based occupations** which are at **geographically fixed** locations.
- There is **more onsite demand for multi-skilled workers** to assemble prefabricated modules, and **less demand for unskilled labourers**
- There is likely to be an increase in onsite office roles in **planning, logistics** and **health & safety**



*“There is a move to **build as much as possible off-site** due to lower waste, fewer damages, lower risk, higher safety, higher productivity, etc. Modular methods provide the **same set-up every time in an environment that doesn’t change due to weather.**”*



*- **BAM Construction Training***

Skills for Technological Advancement



Digital skills and skills for new technology are growing in importance and generating a need for upskilling and multi-skilling the construction workforce

- There is potential **acceleration and expansion** in the use of **new and emerging technologies** over the next 10 years, particularly new **machinery for on-site delivery of construction activity**.
- It is likely that these machines will **replace mainly lower-skilled and unskilled workers** and will drive **demand for higher skilled roles to programme, operate and maintain** the new machines.
- According to Metsec, the **adoption of digital and manufacturing technology** could create **up to 90,000 skilled jobs** in the UK related to the **digital design of buildings**.



*“Increasing digitisation will drive new roles in the sector through increased use of technology and new tasks that stem from this technology. New tech such as **Drone Surveying**, remote GPS Bulldozers and site simulators to drive safety are current examples of tech that is changing sites so that there are more workers in the site office than outside.”*

- BAM Construction Training

Next steps

The report includes a set of recommendations that were developed collectively between the consultants and Coast to Capital.

The next step is to review and progress the recommendations with the Construction Champions, partners and stakeholders.

We are already exploring how we can translate the report content for use with various audiences in schools and colleges.



Coast to Capital

Coast2capital.org.uk