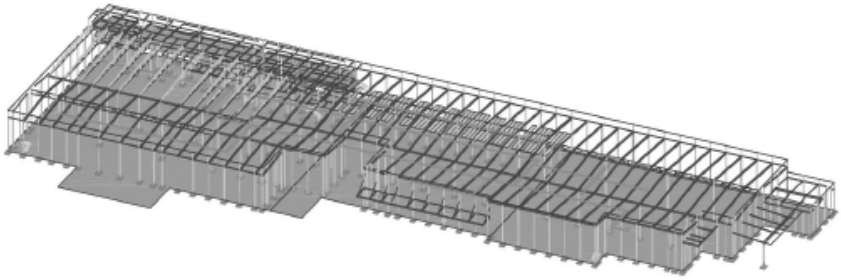
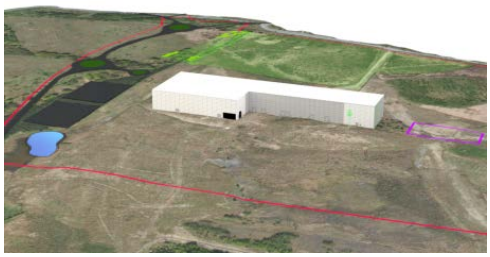
Albert Bartlett Food Processing Facility

Airdrie, Scotland





Client:

Albert Bartlett

Architect:

None - PUNCH acted as Lead Consultant

Services Provided:

Civil & Structural Engineering Services

Project Duration:

Ongoing

Project Description:

The development is located just outside Aidrie in Scotland. The potato food processing facility will consists of frying and frozen zones, along with packaging areas. The facility incorporates loading dock areas, pallet storage areas and office space.

The development overall scheme consists of following approximate sizes:

- 1950m^2 freezer area with mobile racking for pallets
- 18000m^2 food packaging and processing areas
- 2,800m^2 office space including a food demonstration area
- Plant rooms of 500m^2
- 12m^2 single storey gatehouse
- New vehicular access road
- Weight bridge
- 200 no. car parking spaces
- Associated site works and connections including landscaping, 3 no. attenuation areas and boundary treatment.
- The site was a previous coal mine working area and will require consolidation

The structural scheme for the development is currently being detailed using Revit and BIM software. Lessons learnt from other food processing developments ensure that M&E services and secondary steel elements can be incorporated into the main structural steel frame. This ensures a fully coordinated scheme prior to arriving on site.

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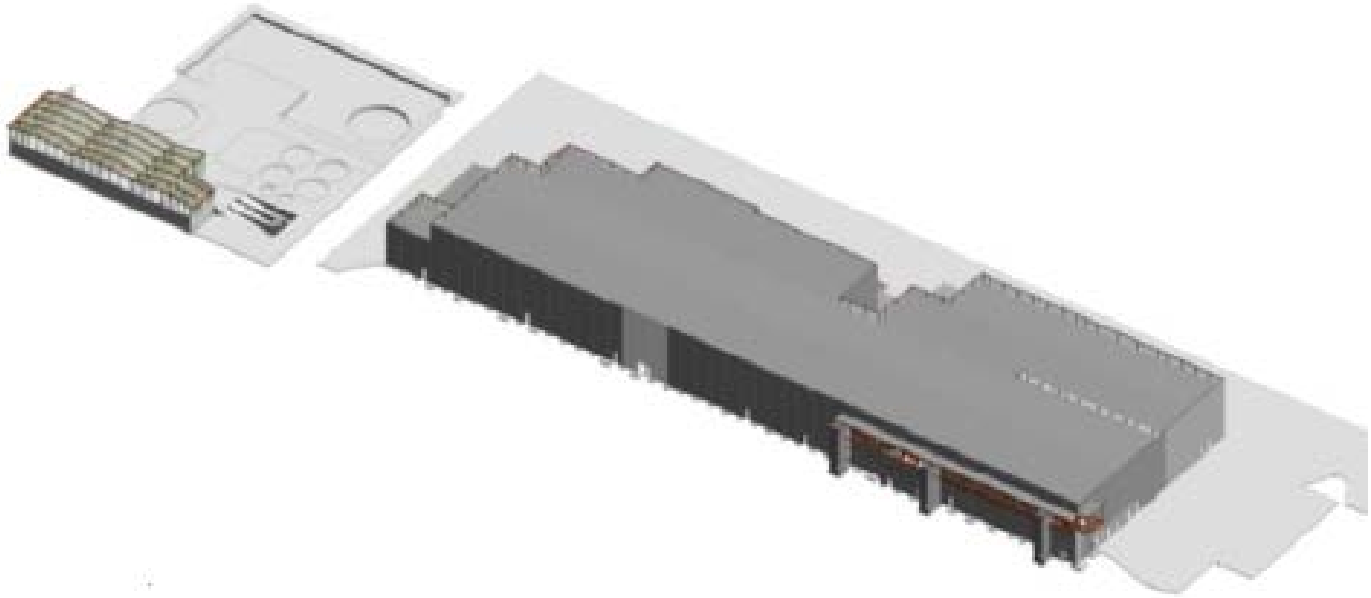
The site geotechnical is quite complex. The design challenges with the site are:

- A large area of the site requires consolidation due to coal mix workings.
- Unconsolidated ground has been placed over a large area of the site which is required to be moved.
- The allowable bearing capacity of the existing soil is poor and would produce an uneconomic foundation solution. It is currently being proposed to use lime stabilisation to increase allowable bearing capacity and reduced the amount of material being moved off site.
- The topographic of the site is quite steep in places. To mitigate this issue, PUNCH have carried out a 3D cut and fill exercise to determine the most effective formation level which will minimize excavated material being moved off site.

Due to the large site development, attenuation ponds are being utilised to reduce the rate of discharge of storm water into the public system. It is intended than any unwanted material that cannot be used during the lime stabilisation process will be used to form the ponds in the area of site where the levels needed to be built up.



3D views of processing facility and water treatment area