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Using **MS Project** to plan the construction of a solar power station

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What is MS Project?

It is a tool to help you run large projects. It helps you:

- Assign resources to tasks
- Track the progress of your project
- Manage your budget
- Analyze Workloads

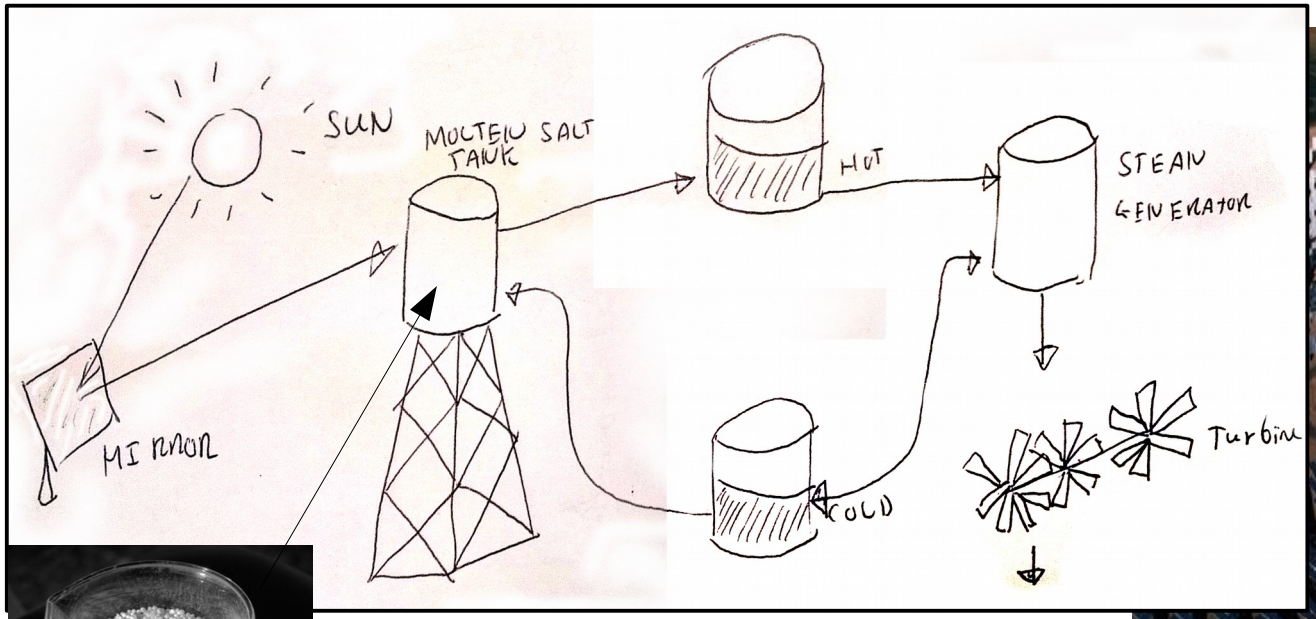
http://en.wikipedia.org/wiki/Microsoft_Project

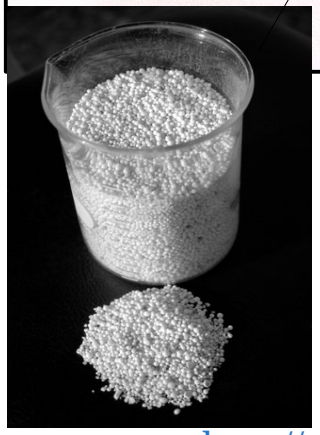
We are going to build a:
Molten salt solar power station

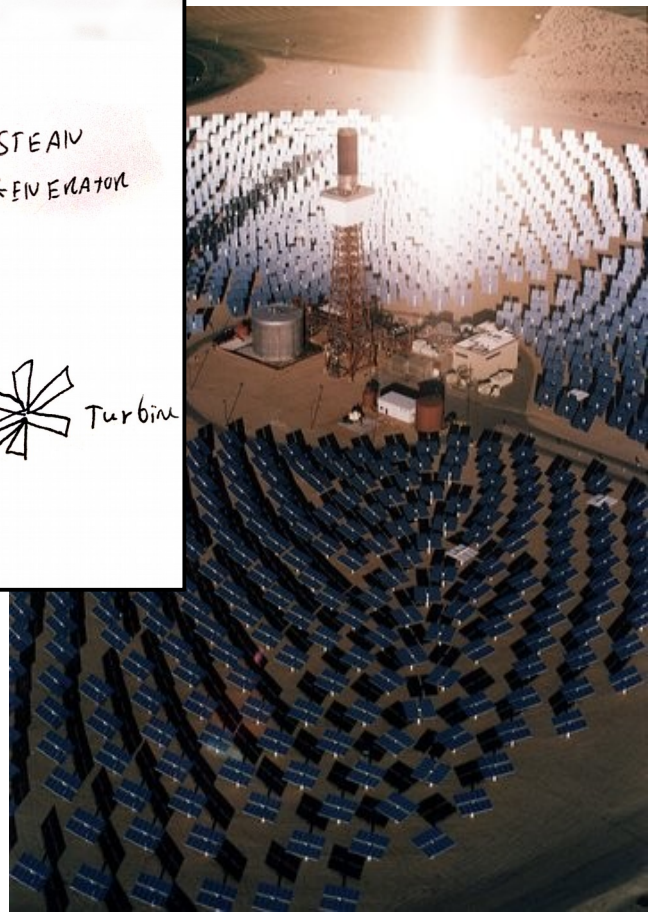
Picture: Barstow, CA; Solar One, NREL

http://edition.cnn.com/video/?/video/international/2011/10/02/ecosolutions-spain-solar-plant.cnn

How does it work?







http://edition.cnn.com/video/?/video/international/2011/10/02/ecosolutions-spain-solar-plant.cnn

Interesting facts about solar energy.

- There is a lot of energy in sunlight
  - Max power flux 1.5 kW m^{-2}

- Typical solar cell efficiency 15%

- Average electricity demand per person is in the UK is 700 W we therefore need 40 m^2 per person.

Planning our project

Tasks:

- Clearing land of rocks
- Install foundations
- Install supports for mirrors
- Construct tower
- Install salt pumping equipment
- Install computer control equipment
- Connect to grid

Planning our project

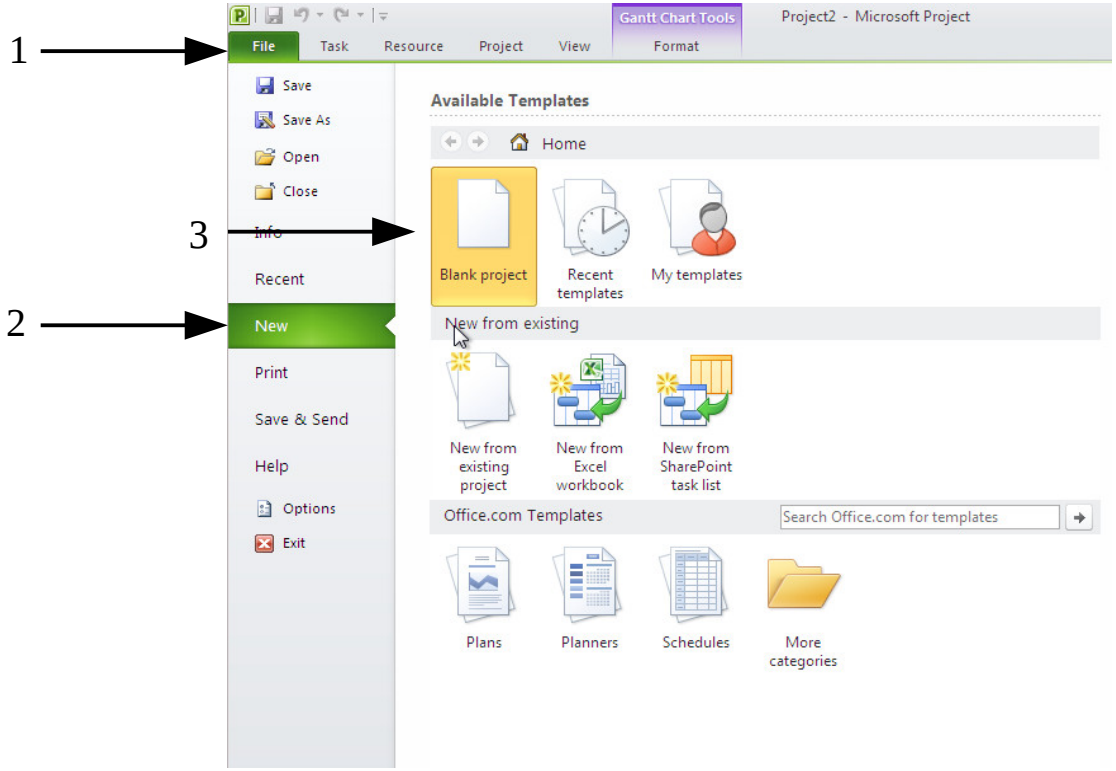
Resources:

- Bulldozers
- Concrete pumps
- Mettle working team
- Turbine installation team
- Electrical Engineers

Making a new project

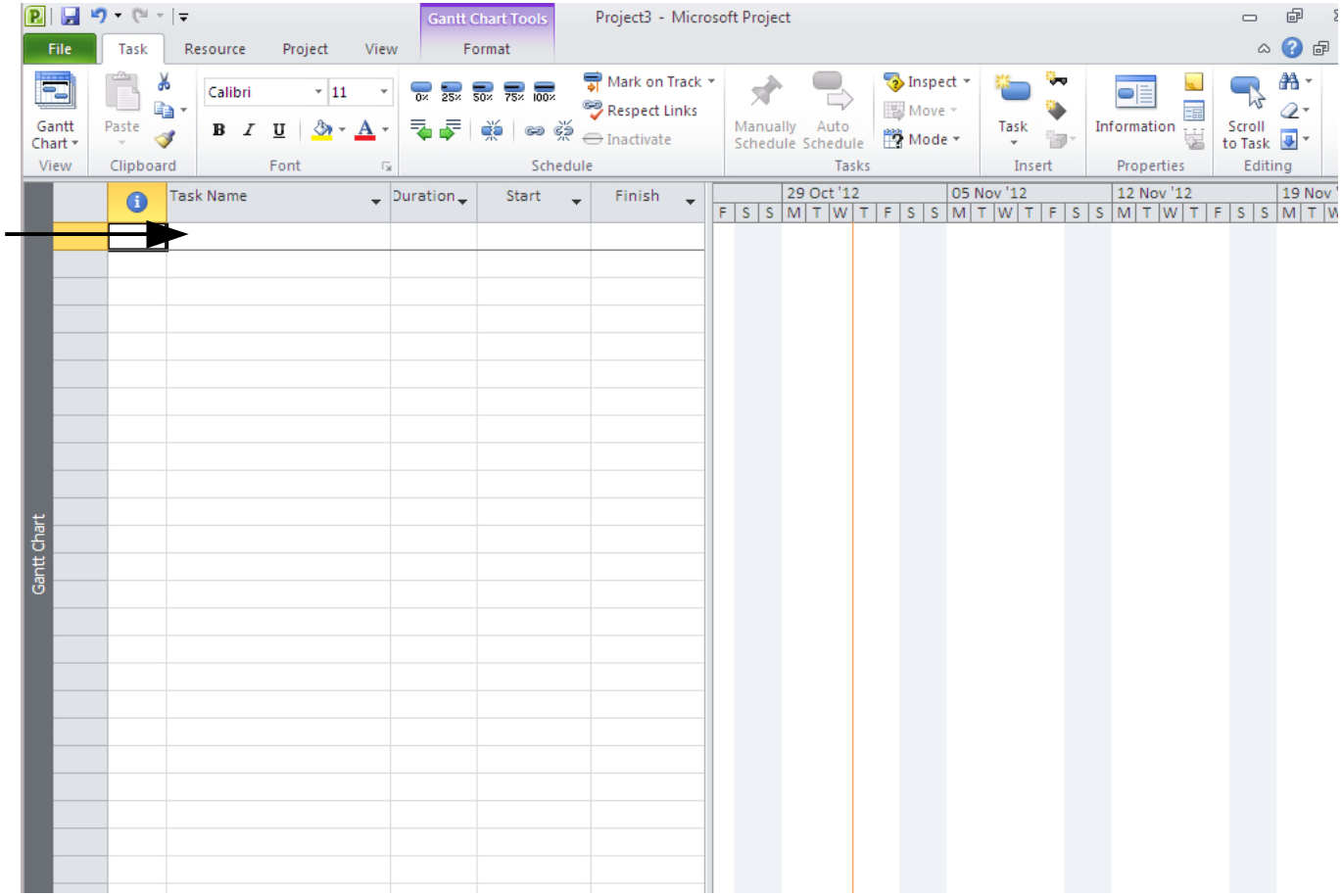
Run MS Project then:

- Click on file
- New
- Blank project

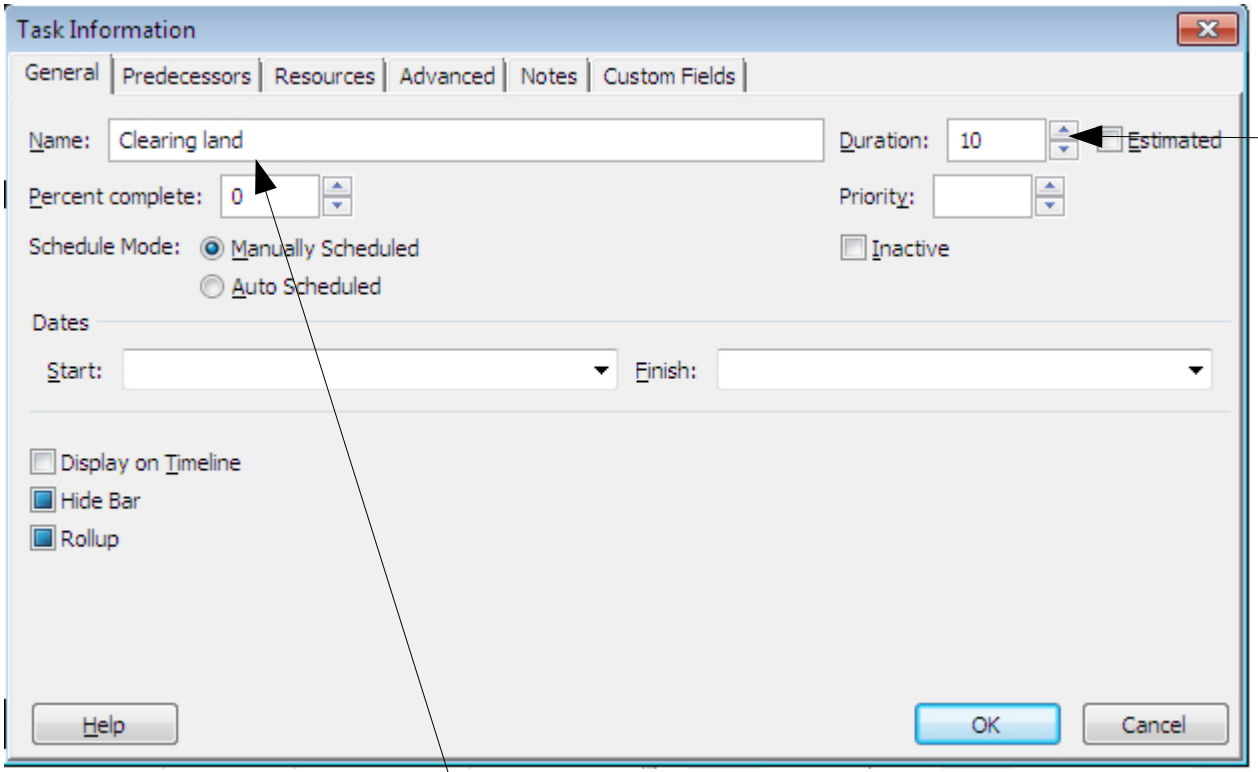


Our blank project

Double click
on the first row



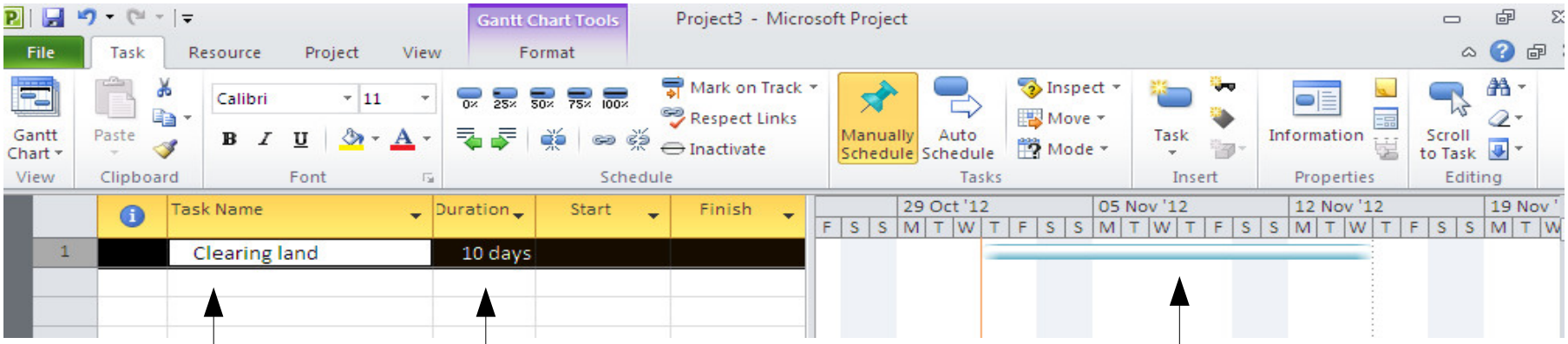
Adding our first task



Time it lasts

Task name

Building the project task-by-task

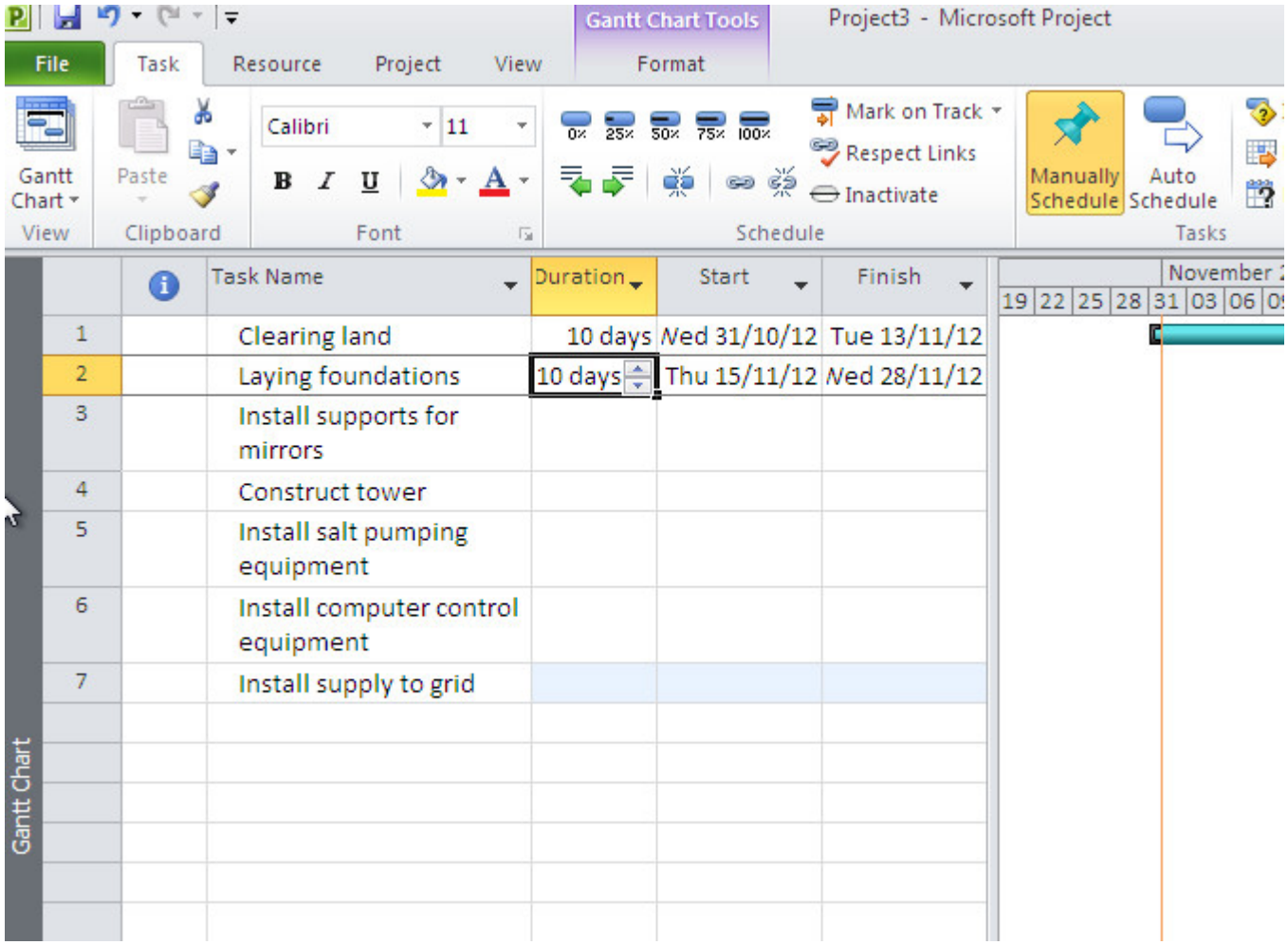


The task

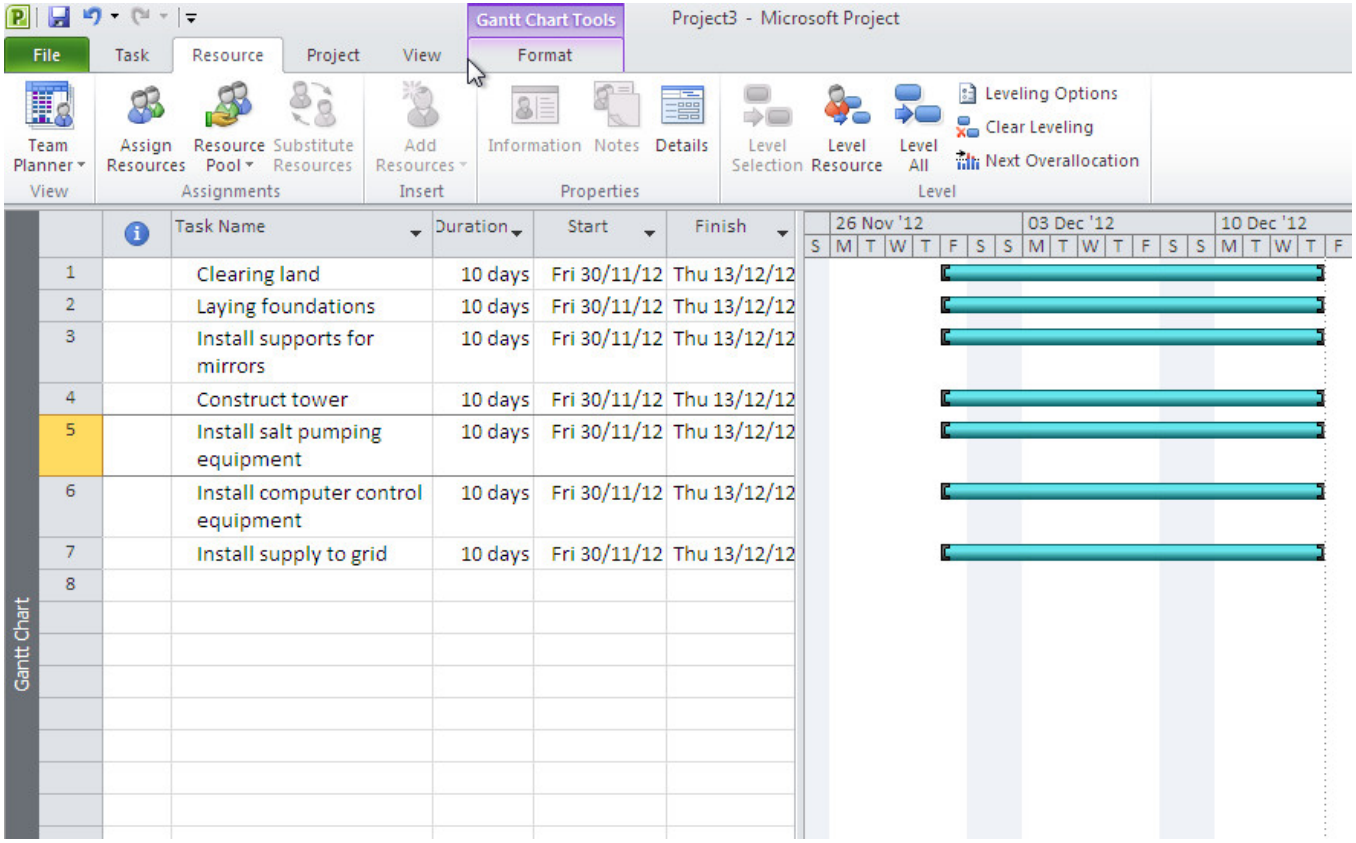
Duration

First bar on gantt chart

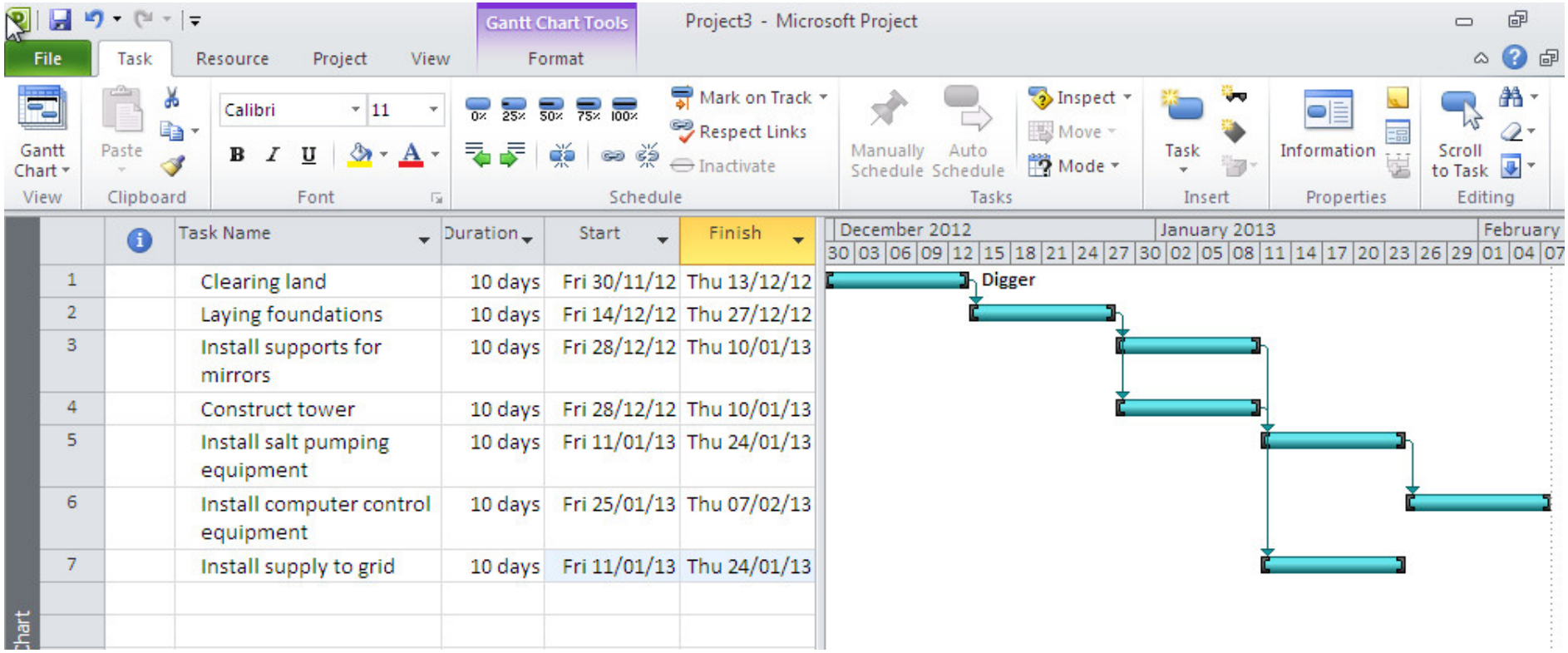
Add the duration of all the tasks



The project plan will look like this

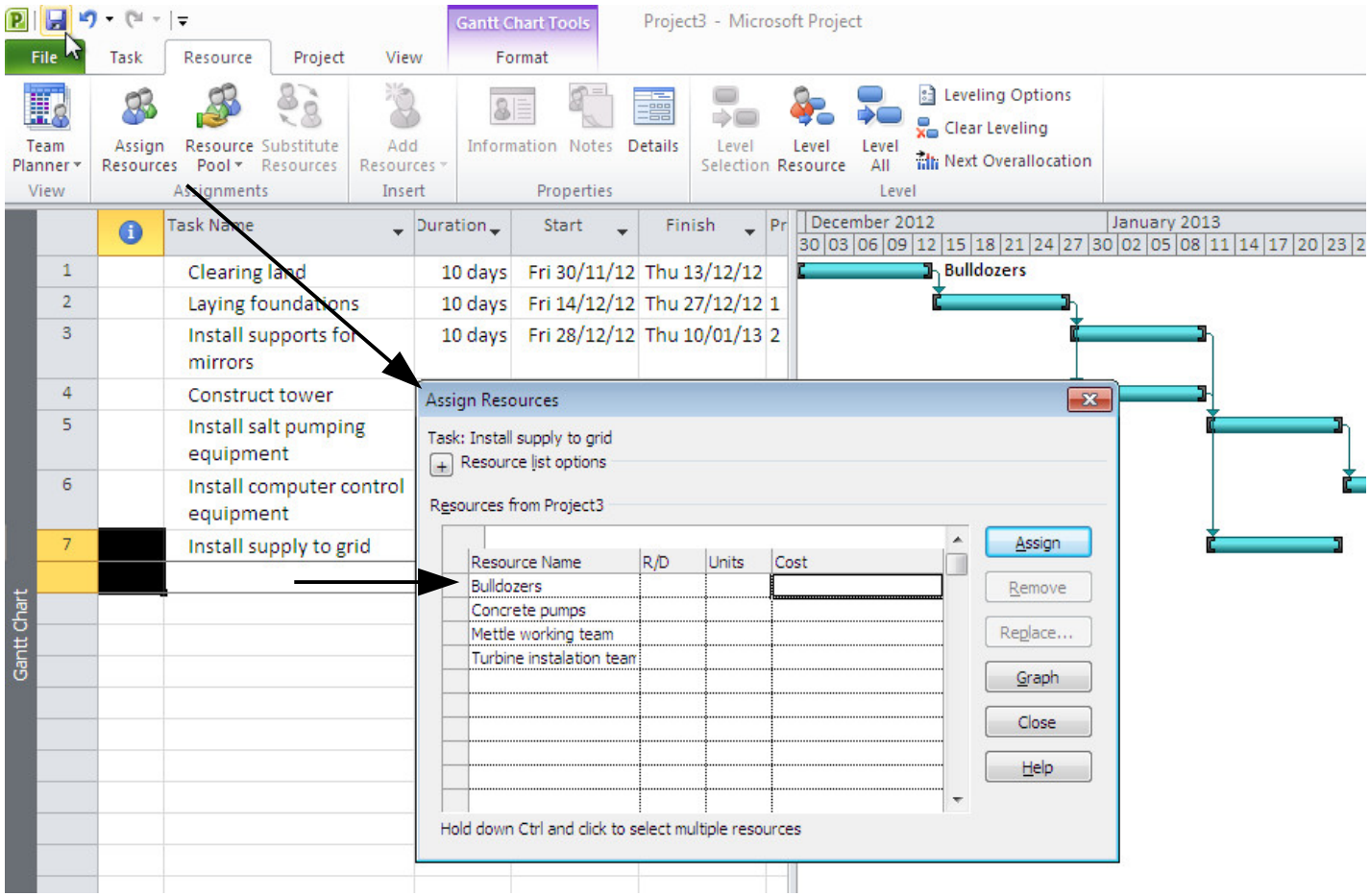


Setting task dependencies (links)

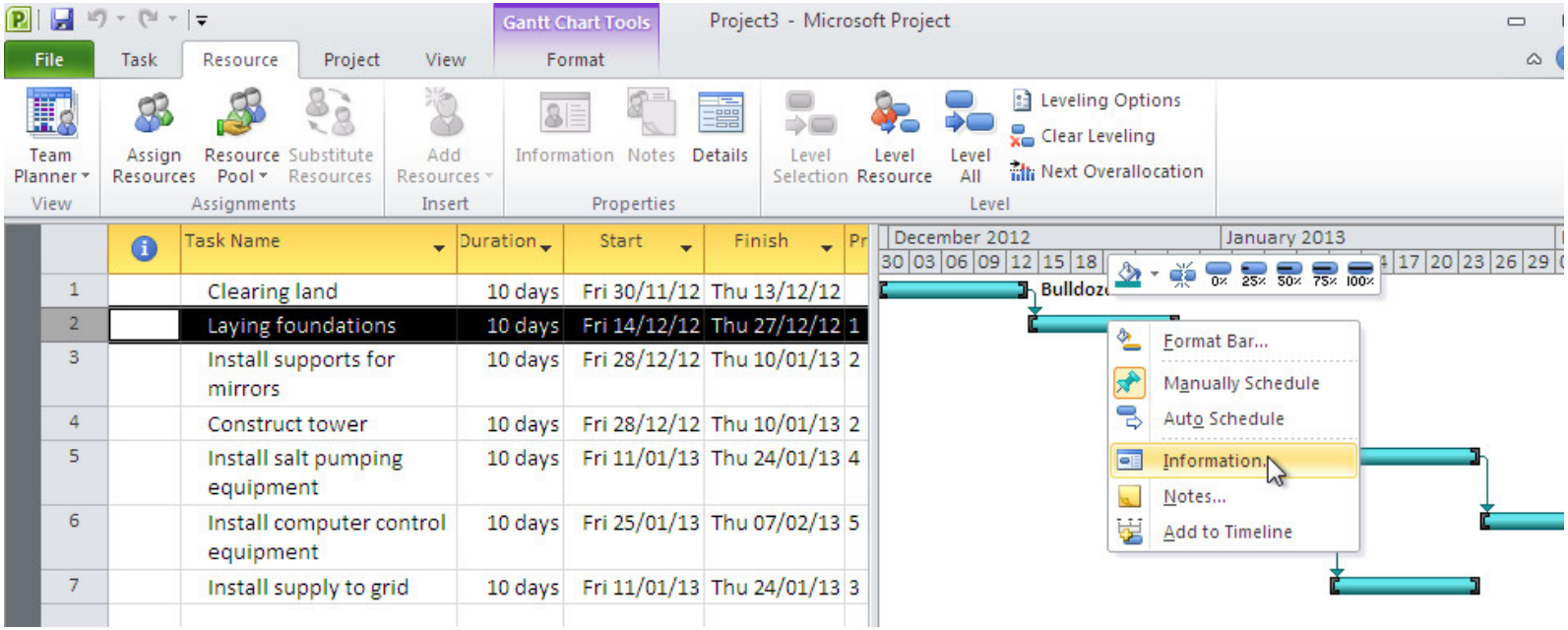


Drag drop arrows between the bars to link the tasks

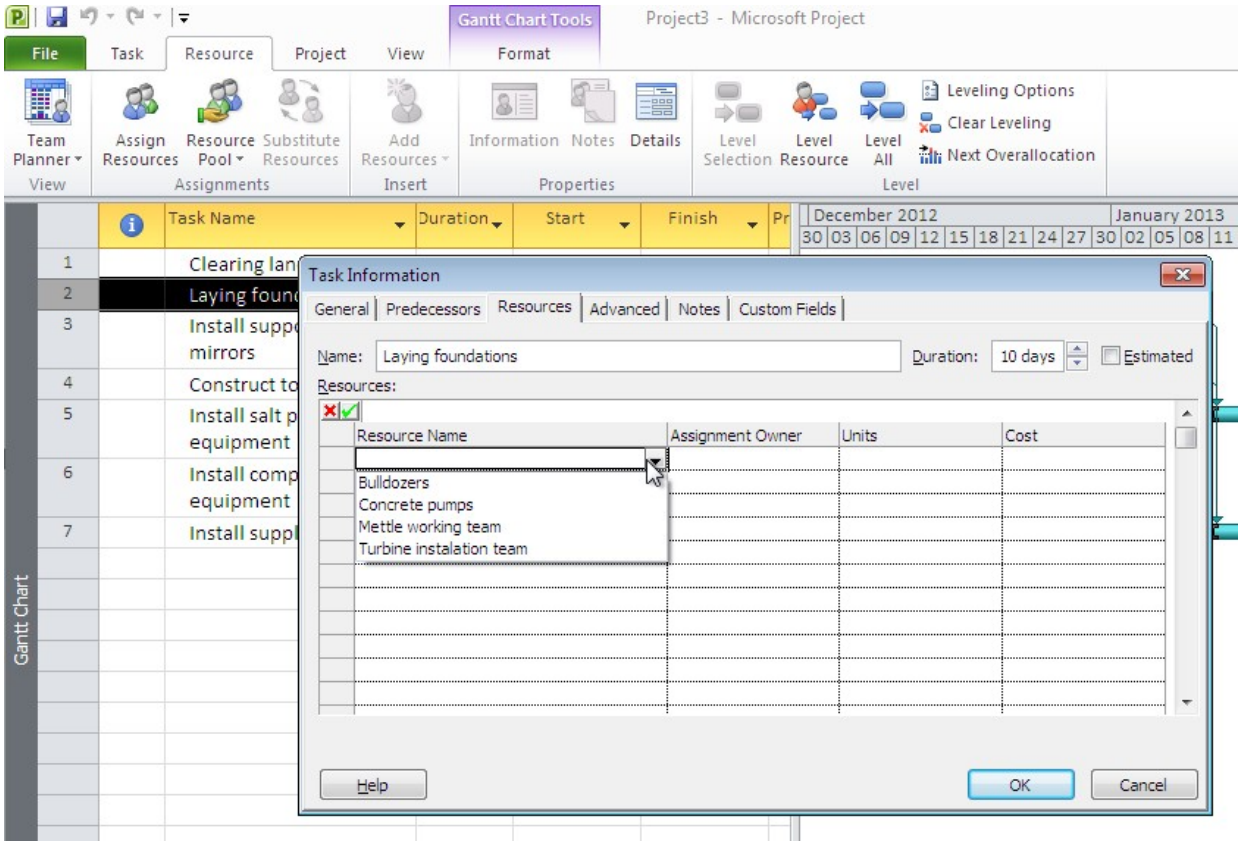
Adding resources to the proejct



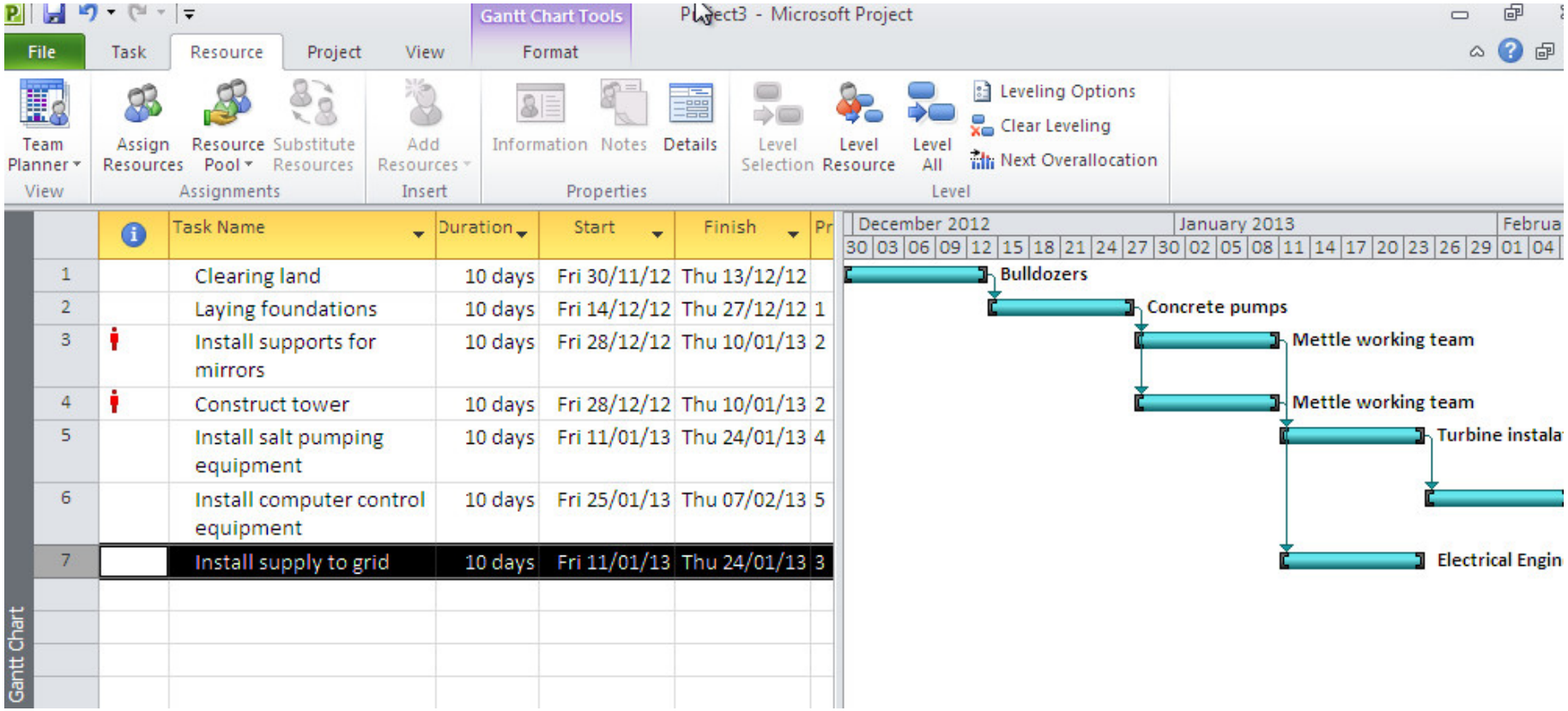
Assigning resources to our tasks



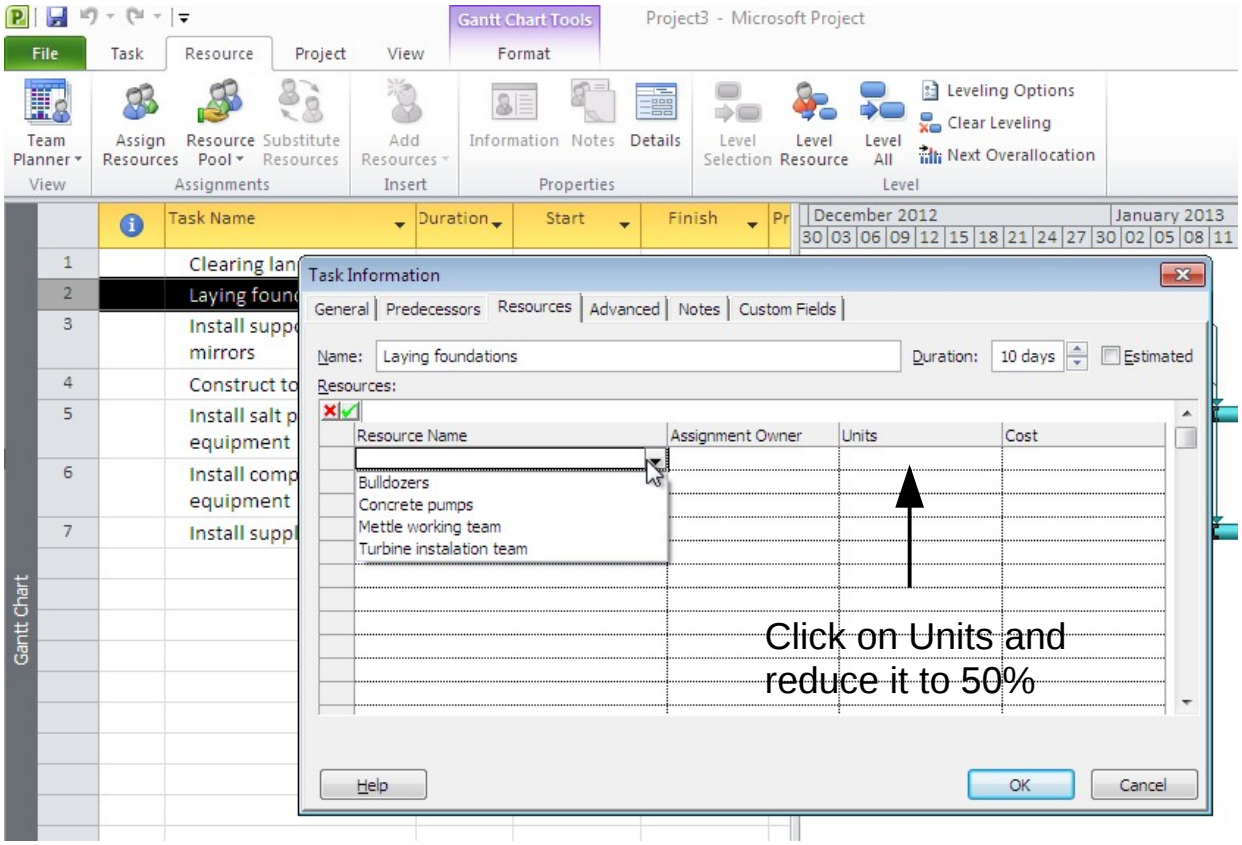
Select the resource to assign



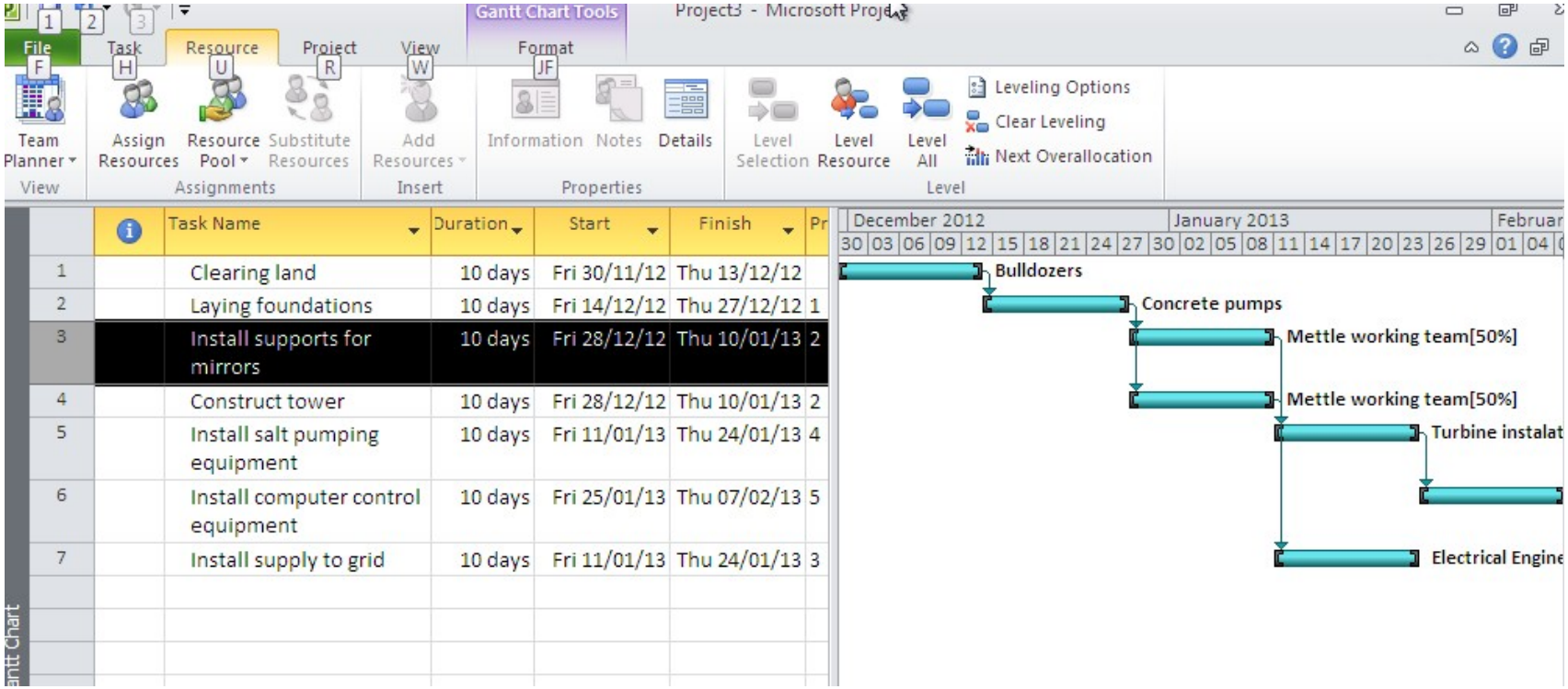
We have assigned the resources but the mettle working team has too much work



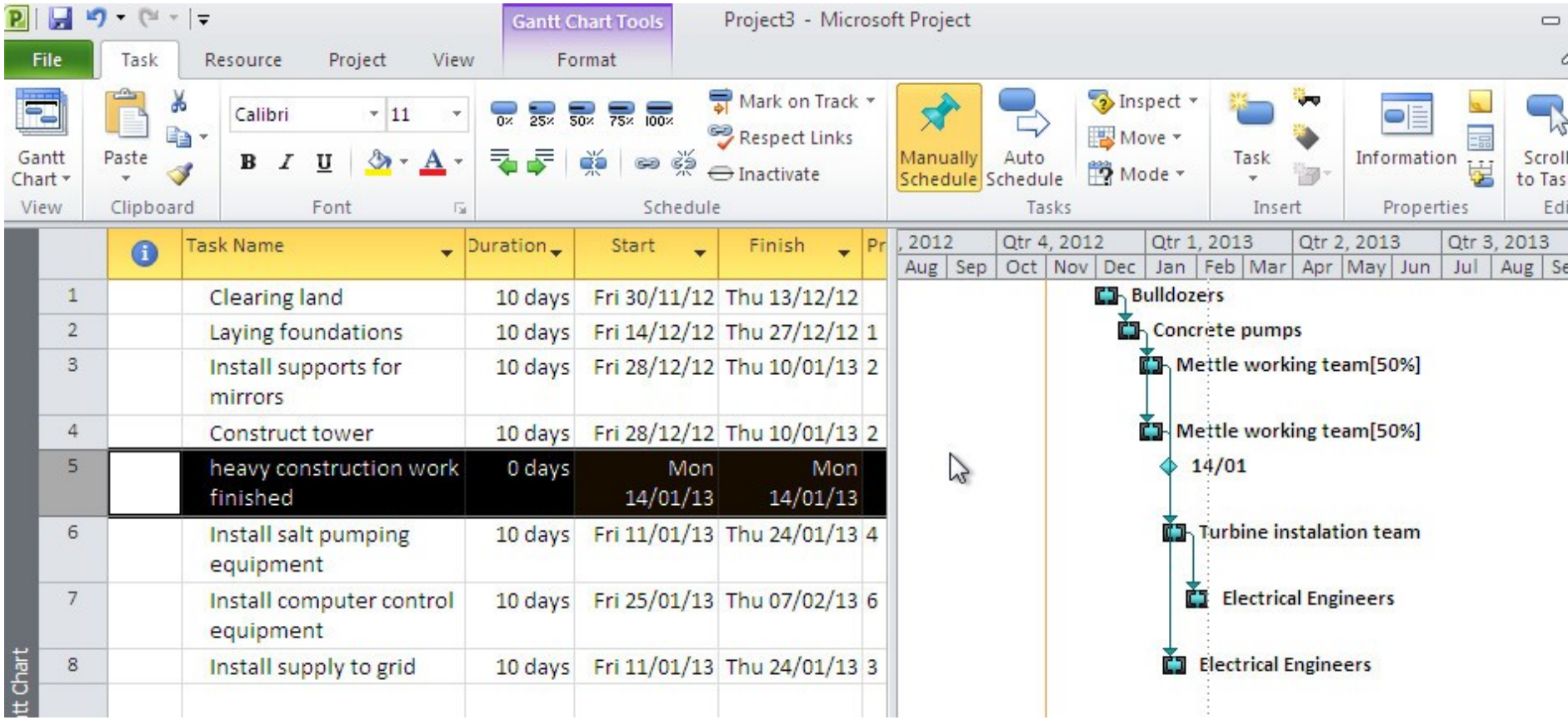
Go back to the Task information box and reduce the work load for the mettle working team.



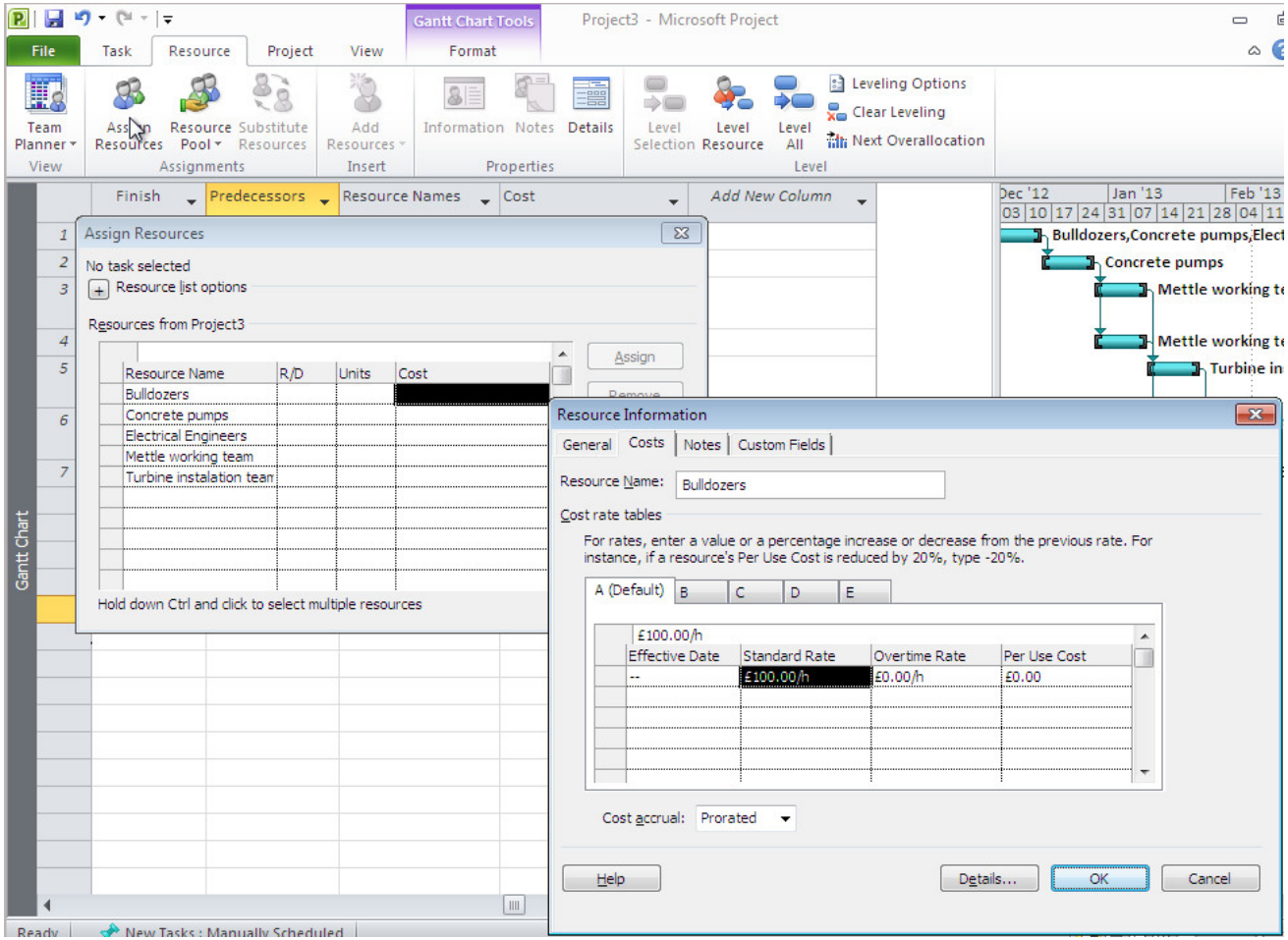
Now we are not overworking the mettle working team.



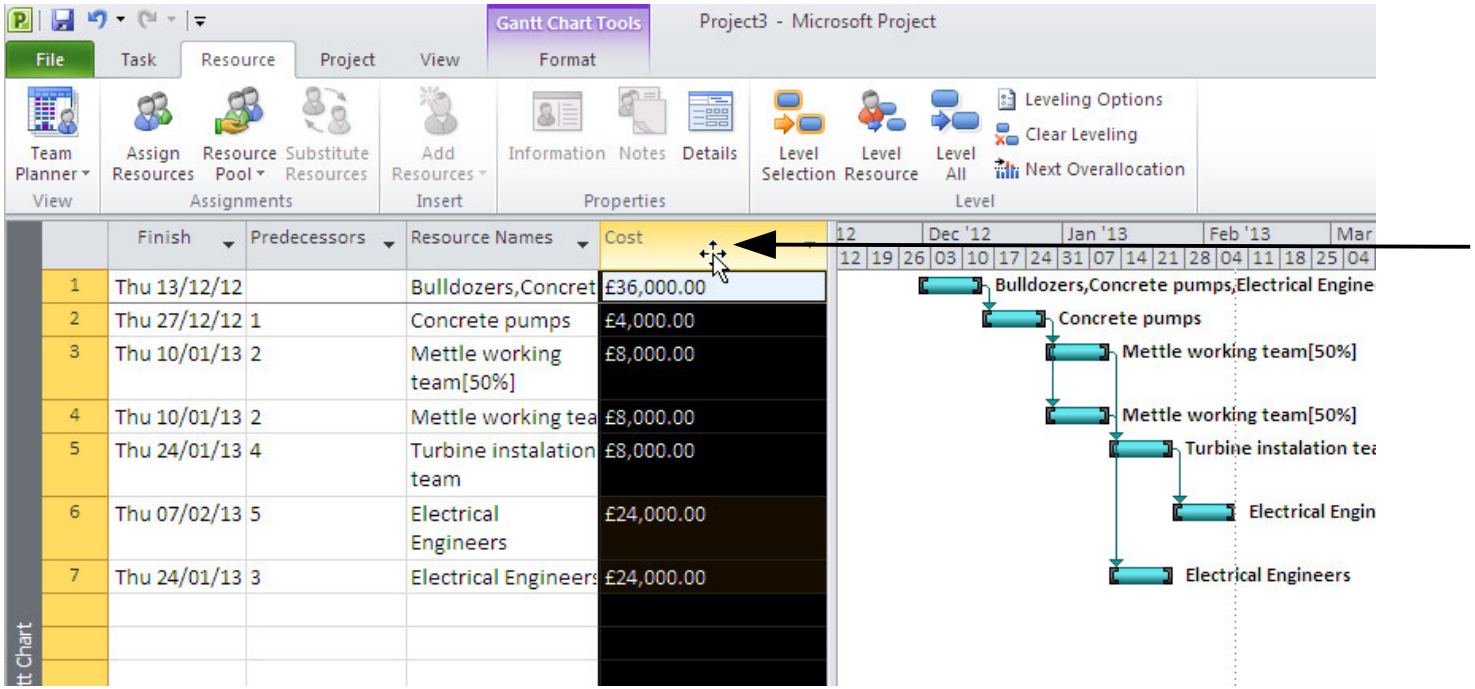
Adding a mile stone:
This is a task with no length



Adding costs for the resources

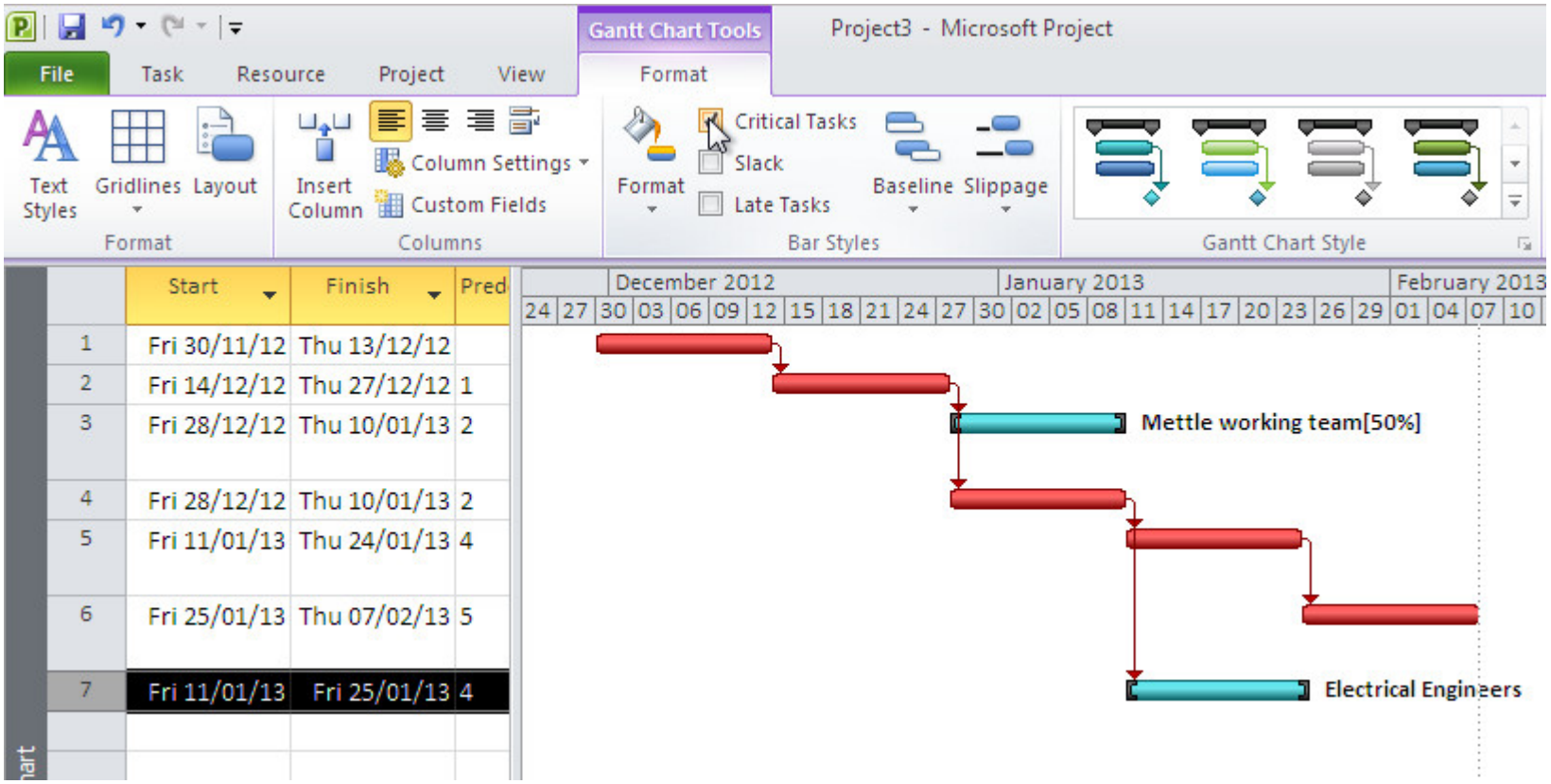


Add a new column called costs



Right click and add Costs

Critical path analysis



A critical path finds tasks which if delayed will extend the duration of the project.

Your turn!

- Your task is to plan the construction of an Offshore wind farm. The details can be found on moodle.

Image: Martin Pettitt