**Base Build GDD**

* Building repair – When buildings are destroyed, they can be repaired by followers for a lower resource cost than the full build cost
* Larger buildings (4 tiles)
* **Save game**
* Fog of war
* Focus on selected follower with F key
* Spawn creatures over time (up to a maximum number)
* Separate world into chunks

Functionality

* Land corruption and healing – healthy land can be corrupted by enemies, and corrupted land can be healed by priests
* Resources that are mined in corrupted areas draw more enemies and drop fewer resources
* Land healing draws far more enemies (priests must be heavily defended to heal land)
* Enemies can only be spawned in corruption
* Spawners appear in corrupted lands, the player must find them and destroy them before they grow
* Enemies target the home building (firepit etc.) until they are hit or are blocked by a wall
* More enemies and tougher enemies spawn as the player progresses
* Squads – allows soldiers, archers and priests to be commanded as groups rather than as single units. Combine squads to create armies

Buildings

* Guard tower – allows for archers to fire over walls when assigned to the tower
* Spikes – deal damage to enemies that walk over them
* Barracks – Convert followers to soldiers
* Temple – Convert followers to priests
* Archery range – Convert followers to archers
* Lumberyard/Mine/Farm – allows for resources to be gathered over time indefinitely
* Roads – Followers move faster on roads
* Bridges

Follower types

* Priests – priests can heal corrupted land over time, they must be defended while healing (more enemies attack priests while healing)
* Archers

Enemy types

* Undead – followers and soldiers can be raised from the dead by enemy necromancers. Standard undead followers have low health and damage, but soldiers have higher health and damage
* Necromancer – Raises followers and soldiers from the dead in an area around them (can only raise the dead in corrupted land)
* Corruption spreader – Spread corruption to uncorrupted tiles
* Explosive – moves really slowly but deals AOE damage when in range of followers or buildings. They must be killed in time

Stretch goals

* Play as the other side (spreading corruption) – possibly multiplayer, possibly AI

Bugs:

* Hitting creatures from far away
* Directing follower with full inventory to gather resource sends them to the storage, then sets to idle (FIX LAST TARGET THING)
* Bunnies outside map
* Sometimes doesn’t hit bunnies (not sure why)

Inspector

* Add building description
* Add follower details to the inspector
  + Health
  + Profession
* Add building damage to the inspector for all constructed buildings
* Add squad details and management

Pathfinding

* Update path if wall is built or the target moves
* Separate pathfinding with multithreading (or job system)
* When in squad instead create squad path
* Update everyone’s path whenever a building is built or destroyed
* Update every frame?
  + Instead update more often when close to the target and less often when further away.
  + Check if target is static, if so there is no need to update every frame
* **Need to improve enemy pathfinding efficiency**

Corruption

* Prevent starting in water
* Ensure distance to start is greater than minimum value
* Add enemy squad spawning in corruption

Followers/Squads

* Update follower count on UI when follower dies
* Drag select multiple followers into a squad instead of right clicking on each one
* Squad management (removing followers)
* Buildings can call nearby followers to defend it?

Worker improvements

* Find new build target when finished construction (continue building wall sections etc.)
* Followers store a list of previous commands and targets

Improved building system

* Drag build for some building types
  + Walls – click to begin drawing, then click again to build
  + Bridges
  + Roads
* Destroy/remove building
* Larger buildings
  + Select multiple tiles
  + Check all selected tiles are clear before building

Priest

* Command to heal followers when not in a squad by right clicking
* Recharge restoration pillars
  + Pillars lose charge over time
* Move away from enemies when too close (find path able tile far enough away)

Necromancer

* Necromancer movement
  + Move towards target unless there are corpses in range and the raise dead ability is off cooldown (if so move towards corpses)
* Check if target already has a shadow effect on them, if so attempt to find a new target

Tile effects

* Freeze effect – Freezes any follower on the tile, slowing them down until eventually freezing in place

To do:

* Fix followers (and enemies) walking through wall corners in 8D pathfinding
  + Think it happens because follower’s start position when pathing IS the wall position, so it doesn’t check it for obstacle
  + Need to ensure follower is always pathing from the correct place
* Fix inspector
* Allow destruction of buildings
* Prevent starting in water
* Save game
* Bring back rabbits (not spawning at the moment)
* Find way to show followers behind structures (maybe shader)

**Save**

Less cheaty - JsonUtility

More cheaty - <https://github.com/jacobdufault/fullserializer>

Maybe separate saving/loading into separate partial classes (keeps classes tidy)

Store each follower in order of the followers list

When serializing squads – serialize the index numbers of each of the followers to allow for the correct followers to be selected (same with enemies)

Give each object type an index so it can be more easily read and written

Any instanced objects need to be indexed so that they can be referenced more easily

* Building/resource – tile structure

1. Squads
   1. target
   2. Member numbers
2. Enemies
   1. Status effects
   2. Health
   3. Target
   4. Squad
   5. Position
   6. Type
3. Followers
   1. Status effects
   2. Health
   3. Target
   4. Squad
   5. Position
   6. Type
4. Structures
   1. Health
   2. Position
   3. Type
5. Tiles
   1. Corruption
   2. Location
   3. Type